FORMER GASTOWN MGP SITE SITE NO. 915171

2019 LAB REPORTS FOR THE GROUNDWATER COLLECTION & TREATMENT SYSTEM

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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: 480-148113-1 Client Project/Site: Gastown WWTP #915171

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

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Authorized for release by: 1/30/2019 9:31:38 AM

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@testamericainc.com

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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.

Orlette Johnson Senior Project Manager 1/30/2019 9:31:38 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	5
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	J
General C	hemistry	
Qualifier	Qualifier Description	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	7
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
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-148113-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-148113-1

Receipt

The samples were received on 1/18/2019 1:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-455755 recovered above the upper control limit for Dichlorobromomethane, Chlorodibromomethane, 1,1,2-Trichloro-1,2,2-trifluoroethane and Carbon tetrachloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Post CARBON 2 (480-148113-1) and Pre CARBON (480-148113-2).

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-455755 recovered outside control limits for the following analytes: cis-1,3-Dichloropropene and Ethylene Dibromide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: Post CARBON 2 (480-148113-1) and Pre CARBON (480-148113-2).

Method(s) 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone (MEK) in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) associated with batch 480-455755 The following samples were affected : Post CARBON 2 (480-148113-1) and Pre CARBON (480-148113-2).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre CARBON (480-148113-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre CARBON (480-148113-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 9040C, 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 2 (480-148113-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post CARBON 2

Lab Sample ID: 480-148113-1 Matrix: Water

5

Date Collected: 01/18/19 12:30 Date Received: 01/18/19 13:00

Method: 8260C - Volatile Organ Analyte	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L			01/19/19 17:47	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			01/19/19 17:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			01/19/19 17:47	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			01/19/19 17:47	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			01/19/19 17:47	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			01/19/19 17:47	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			01/19/19 17:47	1
1,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			01/19/19 17:47	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			01/19/19 17:47	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			01/19/19 17:47	1
1,2-Dichloroethane	ND	1.0	0.21	-			01/19/19 17:47	1
1,2-Dichloropropane	ND	1.0	0.72	-			01/19/19 17:47	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	-			01/19/19 17:47	1
1,3-Dichlorobenzene	ND	1.0	0.78	-			01/19/19 17:47	1
1,4-Dichlorobenzene	ND	1.0	0.84	-			01/19/19 17:47	1
2-Butanone (MEK)	ND *	10		ug/L			01/19/19 17:47	1
2-Hexanone	ND	5.0		ug/L			01/19/19 17:47	1
4-Isopropyltoluene	ND	1.0	0.31	-			01/19/19 17:47	1
4-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			01/19/19 17:47	1
Acetone	3.2 J	10		ug/L			01/19/19 17:47	1
Benzene	ND	1.0	0.41				01/19/19 17:47	1
Bromoform	ND	1.0	0.26	-			01/19/19 17:47	· · · · · · · 1
Bromomethane	ND	1.0	0.69	-			01/19/19 17:47	1
Carbon disulfide	ND	1.0	0.19	-			01/19/19 17:47	1
Carbon tetrachloride	ND	1.0	0.27	0			01/19/19 17:47	· · · · · · 1
Chlorobenzene	ND	1.0	0.75	-			01/19/19 17:47	1
Dibromochloromethane	ND	1.0	0.32	0			01/19/19 17:47	1
Chloroethane	ND	1.0	0.32	-			01/19/19 17:47	1
Chloroform	0.71 J	1.0	0.34	-			01/19/19 17:47	1
Chloromethane	ND	1.0	0.35	-			01/19/19 17:47	1
cis-1,2-Dichloroethene	ND	1.0	0.81	-			01/19/19 17:47	1
Cyclohexane	ND	1.0	0.18	-			01/19/19 17:47	1
Bromodichloromethane	ND	1.0	0.39	-			01/19/19 17:47	1
Dichlorodifluoromethane	ND	1.0	0.68	-			01/19/19 17:47	· · · · · · · 1
Ethylbenzene	ND	1.0	0.74	-			01/19/19 17:47	1
1.2-Dibromoethane	ND *	1.0	0.73	0			01/19/19 17:47	1
Isopropylbenzene	ND	1.0	0.79	-			01/19/19 17:47	1
Methyl acetate	ND	2.5		ug/L			01/19/19 17:47	1
Methyl tert-butyl ether	ND	1.0	0.16	-			01/19/19 17:47	1
Methylcyclohexane	ND	1.0	0.16	-			01/19/19 17:47	1
Methylene Chloride	ND	1.0	0.44				01/19/19 17:47	1
m,p-Xylene	ND	2.0	0.66	-			01/19/19 17:47	1
Naphthalene	ND	1.0	0.43	-			01/19/19 17:47	
n-Butylbenzene	ND	1.0	0.40	-			01/19/19 17:47	1
N-Propylbenzene	ND	1.0	0.69	-			01/19/19 17:47	1
o-Xylene	ND	1.0	0.76				01/19/19 17:47	
sec-Butylbenzene	ND	1.0	0.75				01/19/19 17:47	1
Tetrachloroethene	ND	1.0	0.36	-			01/19/19 17:47	1
Toluene	ND	1.0	0.50	-			01/19/19 17:47	· · · · · · · · 1

Client Sample ID: Post CARBON 2 Date Collected: 01/18/19 12:30 Date Received: 01/18/19 13:00

Lab Sample ID: 480-148113-1 Matrix: Water

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			01/19/19 17:47	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			01/19/19 17:47	1
Trichloroethene	ND		1.0	0.46	ug/L			01/19/19 17:47	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			01/19/19 17:47	1
Vinyl chloride	1.9		1.0	0.90	ug/L			01/19/19 17:47	1
Xylenes, Total	ND		2.0	0.66	ug/L			01/19/19 17:47	1
cis-1,3-Dichloropropene	ND	*	1.0	0.36	ug/L			01/19/19 17:47	1
Styrene	ND		1.0	0.73	ug/L			01/19/19 17:47	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			01/19/19 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		77 - 120					01/19/19 17:47	1
4-Bromofluorobenzene (Surr)	105		73 - 120					01/19/19 17:47	1
Toluene-d8 (Surr)	100		80 - 120					01/19/19 17:47	1
Dibromofluoromethane (Surr)	102		75 - 123					01/19/19 17:47	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.15		0.010	0.0050	mg/L		01/23/19 10:45	01/23/19 12:48	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.4	HF	0.1	0.1	SU			01/21/19 15:42	1
Temperature	20.1	HE	0.001	0.001	Degrees C			01/21/19 15:42	1

Client Sample ID: Pre CARBON Date Collected: 01/18/19 12:35

Date Received: 01/18/19 13:00

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
,1,1-Trichloroethane	ND	50	41	ug/L			01/19/19 18:14	50
,1,2,2-Tetrachloroethane	ND	50		ug/L			01/19/19 18:14	50
,1,2-Trichloro-1,2,2-trifluoroethane	ND	50		ug/L			01/19/19 18:14	50
,1,2-Trichloroethane	ND	50		ug/L			01/19/19 18:14	50
,1-Dichloroethane	ND	50		ug/L			01/19/19 18:14	50
,1-Dichloroethene	ND	50		ug/L			01/19/19 18:14	50
,2,4-Trichlorobenzene	ND	50		ug/L			01/19/19 18:14	50
,2,4-Trimethylbenzene	ND	50		ug/L			01/19/19 18:14	50
,2-Dibromo-3-Chloropropane	ND	50		ug/L			01/19/19 18:14	50
,2-Dichlorobenzene	ND	50	40	ug/L			01/19/19 18:14	50
,2-Dichloroethane	ND	50		ug/L			01/19/19 18:14	50
,2-Dichloropropane	ND	50		ug/L			01/19/19 18:14	50
,3,5-Trimethylbenzene	ND	50		ug/L			01/19/19 18:14	50
,3-Dichlorobenzene	ND	50		ug/L			01/19/19 18:14	50
,4-Dichlorobenzene	ND	50		ug/L			01/19/19 18:14	50
-Butanone (MEK)	ND *	500		ug/L			01/19/19 18:14	50
-Hexanone	ND	250		ug/L			01/19/19 18:14	50
-Isopropyltoluene	ND	50		ug/L			01/19/19 18:14	50
-Methyl-2-pentanone (MIBK)	ND	250		ug/L			01/19/19 18:14	50
cetone	ND	500		ug/L			01/19/19 18:14	50
enzene	2900	50		ug/L			01/19/19 18:14	50
romoform	ND	50		ug/L			01/19/19 18:14	50
romomethane	ND	50		ug/L			01/19/19 18:14	50
arbon disulfide	ND	50		ug/L			01/19/19 18:14	50
arbon tetrachloride	ND	50		ug/L			01/19/19 18:14	50
Chlorobenzene	ND	50		ug/L			01/19/19 18:14	50
ibromochloromethane	ND	50		ug/L			01/19/19 18:14	50
hloroethane	ND	50		ug/L			01/19/19 18:14	50
hloroform	ND	50		ug/L			01/19/19 18:14	50
hloromethane	ND	50		ug/L			01/19/19 18:14	50
is-1,2-Dichloroethene	ND	50		ug/L			01/19/19 18:14	50
Cyclohexane	ND	50		ug/L			01/19/19 18:14	50
Bromodichloromethane	ND	50		ug/L			01/19/19 18:14	50
ichlorodifluoromethane	ND	50		ug/L			01/19/19 18:14	50
thylbenzene	160	50		ug/L			01/19/19 18:14	50
,2-Dibromoethane	ND *	50		ug/L			01/19/19 18:14	50
sopropylbenzene	ND	50		ug/L			01/19/19 18:14	50
lethyl acetate	ND	130		ug/L			01/19/19 18:14	50
ethyl tert-butyl ether	ND	50		ug/L ug/L			01/19/19 18:14	50
lethylcyclohexane	ND	50		ug/L			01/19/19 18:14	50
lethylene Chloride	ND	50		ug/L			01/19/19 18:14	50
n,p-Xylene	120	100		ug/L			01/19/19 18:14	50
aphthalene	230	50		ug/L			01/19/19 18:14	50
Butylbenzene	ND	50		ug/L ug/L			01/19/19 18:14	50
-Propylbenzene	ND	50		ug/L ug/L			01/19/19 18:14	50
				ug/L ug/L				50
-Xylene	60 ND	50 50					01/19/19 18:14	
ec-Butylbenzene				ug/L			01/19/19 18:14	50
etrachloroethene oluene	ND 560	50 50		ug/L ug/L			01/19/19 18:14 01/19/19 18:14	50 50

Lab Sample ID: 480-148113-2 Matrix: Water

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Client Sample ID: Pre CARBON

01/19/19 18:14

01/19/19 18:14

Lab Sample ID: 480-148113-2

Date Collected: 01/18/19 12:35 Date Received: 01/18/19 13:00

Matrix:	Wator
Matrix.	valei

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		50	45	ug/L			01/19/19 18:14	50
trans-1,3-Dichloropropene	ND		50	19	ug/L			01/19/19 18:14	50
Trichloroethene	ND		50	23	ug/L			01/19/19 18:14	50
Trichlorofluoromethane	ND		50	44	ug/L			01/19/19 18:14	50
Vinyl chloride	ND		50	45	ug/L			01/19/19 18:14	50
Xylenes, Total	180		100	33	ug/L			01/19/19 18:14	50
cis-1,3-Dichloropropene	ND	*	50	18	ug/L			01/19/19 18:14	50
Styrene	42	J	50	37	ug/L			01/19/19 18:14	50
tert-Butylbenzene	ND		50	41	ug/L			01/19/19 18:14	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		77 - 120			-		01/19/19 18:14	50
4-Bromofluorobenzene (Surr)	105		73 - 120					01/19/19 18:14	50

80 - 120

75 - 123

Method: 200.7 Rev 4.4 - Metals (ICP)

100

103

Toluene-d8 (Surr)

Dibromofluoromethane (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	125000		500	100	ug/L		01/21/19 09:40	01/21/19 23:00	1
Magnesium	45600		200	43.4	ug/L		01/21/19 09:40	01/21/19 23:00	1
Potassium	3810		500	100	ug/L		01/21/19 09:40	01/21/19 23:00	1
Sodium	90900		1000	324	ug/L		01/21/19 09:40	01/21/19 23:00	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	143		2.5	1.4	mg/L			01/21/19 20:01	5
Sulfate	116		10.0	1.7	mg/L			01/21/19 20:01	5
Alkalinity, Total	373	В	40.0	16.0	mg/L			01/24/19 16:10	4

50

50

Lab Sample ID: 480-148113-1

Lab Sample ID: 480-148113-2

Matrix: Water

Matrix: Water

Client Sample ID: Post CARBON 2 Date Collected: 01/18/19 12:30

Date	Received: 01/18/19 13:00	

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	455755	01/19/19 17:47	KMN	TAL BUF
Total/NA	Prep	Distill/CN			456263	01/23/19 10:45	AEF	TAL BUF
Total/NA	Analysis	335.4		1	456275	01/23/19 12:48	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	456038	01/21/19 15:42	KEB	TAL BUF

Client Sample ID: Pre CARBON Date Collected: 01/18/19 12:35 Date Received: 01/18/19 13:00

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	455755	01/19/19 18:14	KMN	TAL BUF
Total/NA	Prep	200.7			455766	01/21/19 09:40	KMP	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	456005	01/21/19 23:00	EMB	TAL BUF
Total/NA	Analysis	300.0		5	455961	01/21/19 20:01	EMD	TAL BUF
Total/NA	Analysis	310.2		4	456532	01/24/19 16:10	SAH	TAL BUF

Laboratory References:

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

Laboratory: TestAmerica Buffalo

SM 4500 H+ B

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

Water

Authority New York	Program NELAP		EPA Region	Identification Nui	mber Expiration 03-31-19	Date
The following analyte the agency does not	s are included in this repo offer certification.	ort, but the laboratory	is not certified by the	e governing authority	 This list may includ 	de ana
Analysis Method	Prep Method	Matrix	Analyt	e		
335.4	Distill/CN	Water	Cyanic	de, Total		
SM 4500 H+ B		Water	Ha			

Temperature

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

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8
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Method	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	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	рН	SM	TAL BUF
200.7	Preparation, Total Metals	EPA	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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. None = None

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

Sample Summary

TestAmerica Job ID: 480-148113-1

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

Lab Sample ID	Client Sample ID	Matrix	Collected Received
480-148113-1	Post CARBON 2	Water	01/18/19 12:30 01/18/19 13:00
480-148113-2	Pre CARBON	Water	01/18/19 12:35 01/18/19 13:00

Buffalo

10 Hazelwood Drive



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Amherst, NY 14228

phone 716.504.9852 fax 716.691.7991																			TestAmerica Laboratories,	Inc.
Client Contact	Project Ma	nager: Gle	nn May (NY	YSDEC)		Site	Cont	act: T	Thom	as Pa	almer			Date: 1/18	110	1			COC No:	
Groundwater & Environmental Services, Inc	Tel/Fax: (7	16) 851-722	20			Lab	o Cont	act: (D. Jo	hnso	n			Carrier:		1			of COCs	
495 Aero Drive Suite 3		Analysis T	urnaround	Time							8021								Job No.	
Cheektowaga, NY 14225	Calendar	(C) or Wo	ork Days (W)(_				-V					11				
(800) 287-7857 Phone	TA	T if different f	from Below				thod				2				1	1 1	1	1		
(866) 902-2187 FAX	X	2	weeks				I Me				list .									
Project Name: NYSDEC Gatown WWTP		1	week				Loca				ARS				11					
Site: 915171			2 days				Loca	h.			ToT									
P O # Callout 120597 GES Project #0901691-05-220			1 day			ample	W) (a)	calini		=	(OD)	[d-+F							ain of Custody	
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered S:	300.0_28D (MOD) Local Method 200.7 - (MOD) Local Method	310.2 - Alkalinity		200.7 - Iron	8021B - (MOD) STARS list - VOA - 8021 315 4 - Cronida Tatal	SM4500_H+-pH			4	80-14	18113		Sample Specific Notes	s:
Post-Carbon 2	1/18/19	1230	Grab	w	86	N				x	-	x x			T					
Pre-Carbon	1/48/19	1235	Grab	w	6	N	X X	x x			x									
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Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=N Possible Hazard Identification	aOH; 6= Othe	r				-	Same		lisno	621/	Afo	o may	(ho	accored if	same			tain	ed longer than 1 month)	
Non-Hazard Flammable Skin Irritant	Poison E		Unknown					7	um T			e may	-	Disposal By L					ee For Months	
Special Instructions/QC Requirements & Comments: Refer Zafflam SUMIEL.												1				L M	3.3	3	c /# 3	
Relinquished by:	Company: Gl Company:	35		Date/Ti 1/18/ Date/Ti	ime: 19 30	0	Receiv	16	in	t	H	the	>	Com	pany:	K	3		Date/Time: 1/18/19 130 Date/Time:	60
	Company.			Cate I					5.					Com	pully.				Pater Time.	
Relinquished by:	Company:			Date/T	ime:		Recei	ved b	y:					Com	pany:				Date/Time:	
Relinquished by:				1			L]	Form No. CA-C-WI-002, dated (04/07/2

Chain of Custody Record

Client: New York State D.E.C.

Login Number: 148113 List Number: 1 Creator: Harper, Marcus D

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 (Excluding tests with immediate HTs)	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	

List Source: TestAmerica Buffalo



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 480-149106-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

······ Links ······

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Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Phlette & Charon

Authorized for release by: 2/28/2019 7:48:34 AM

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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.

Orlette Johnson Senior Project Manager 2/28/2019 7:48:34 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	5
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	J
General C	hemistry	
Qualifier	Qualifier Description	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	7
В	Compound was found in the blank and sample.	

Glossary

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
Percent Recovery
Contains Free Liquid
Contains No Free Liquid
Duplicate Error Ratio (normalized absolute difference)
Dilution Factor
Detection Limit (DoD/DOE)
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision Level Concentration (Radiochemistry)
Estimated Detection Limit (Dioxin)
Limit of Detection (DoD/DOE)
Limit of Quantitation (DoD/DOE)
Minimum Detectable Activity (Radiochemistry)
Minimum Detectable Concentration (Radiochemistry)
Method Detection Limit
Minimum Level (Dioxin)
Not Calculated
Not Detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Relative Error Ratio (Radiochemistry)
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-149106-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-149106-1

Comments

No additional comments.

Receipt

The samples were received on 2/15/2019 3:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC/MS VOA

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-149106-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-459460 recovered above the upper control limit for Chlorodibromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: Post-Carbon 2 (480-149106-1).

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-459460 recovered outside control limits for the following analytes: trans-1,3-Dichloropropene, Chlorodibromomethane and Bromoform. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-149106-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 310.2: The results reported for the following sample do not concur with results previously reported for this site: Pre-Carbon (480-149106-2). Reanalysis was performed, and the result(s) confirmed.

Method(s) 9040C, SM 4500 H+ B: This analysis is normally performed in the field and has a method-defined holding time of 15 minutes. The following samples has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon 2 (480-149106-1) and (480-149079-C-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Lab Sample ID: 480-149106-1 Matrix: Wastewater

Client Sample ID: Post-Carbon 2 Date Collected: 02/15/19 12:15 Date Received: 02/15/19 15:35

Method: 8260C - Volatile Organ	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	-			02/18/19 14:07	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			02/18/19 14:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			02/18/19 14:07	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			02/18/19 14:07	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			02/18/19 14:07	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			02/18/19 14:07	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			02/18/19 14:07	1
1,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			02/18/19 14:07	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			02/18/19 14:07	1
1,2-Dibromoethane	ND	1.0	0.73	ug/L			02/18/19 14:07	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			02/18/19 14:07	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			02/18/19 14:07	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			02/18/19 14:07	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	-			02/18/19 14:07	1
1,3-Dichlorobenzene	ND	1.0	0.78	-			02/18/19 14:07	1
1,4-Dichlorobenzene	ND	1.0	0.84	-			02/18/19 14:07	1
2-Butanone (MEK)	ND	10		ug/L			02/18/19 14:07	1
2-Hexanone	ND	5.0		ug/L			02/18/19 14:07	1
4-Isopropyltoluene	ND	1.0	0.31	-			02/18/19 14:07	1
4-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			02/18/19 14:07	1
Acetone	ND	10		ug/L			02/18/19 14:07	1
Benzene	ND	1.0	0.41	-			02/18/19 14:07	1
Bromodichloromethane	ND	1.0	0.39	-			02/18/19 14:07	1
Bromoform	ND *	1.0	0.26	-			02/18/19 14:07	1
Bromomethane	ND	1.0	0.69	0			02/18/19 14:07	1
Carbon disulfide	ND	1.0	0.19	-			02/18/19 14:07	1
Carbon tetrachloride	ND	1.0	0.27	-			02/18/19 14:07	1
Chlorobenzene	ND	1.0	0.75				02/18/19 14:07	1
Chloroethane	ND	1.0	0.32	-			02/18/19 14:07	1
Chloroform	1.6	1.0	0.34	-			02/18/19 14:07	1
Chloromethane	ND	1.0	0.35	-			02/18/19 14:07	1
cis-1,2-Dichloroethene	ND	1.0	0.81	-			02/18/19 14:07	1
cis-1,3-Dichloropropene	ND	1.0	0.36	-			02/18/19 14:07	1
Cyclohexane	ND	1.0	0.18	0			02/18/19 14:07	1
Dibromochloromethane	ND *	1.0	0.32	-			02/18/19 14:07	1
Dichlorodifluoromethane	ND	1.0	0.68	0			02/18/19 14:07	1
Ethylbenzene	ND	1.0	0.74	-			02/18/19 14:07	1
Isopropylbenzene	ND	1.0	0.79				02/18/19 14:07	1
m,p-Xylene	ND	2.0	0.66	-			02/18/19 14:07	1
Methyl acetate	ND	2.5		ug/L			02/18/19 14:07	1
Methyl tert-butyl ether	0.16 J	1.0		ug/L			02/18/19 14:07	1
Methylcyclohexane	ND	1.0	0.16	-			02/18/19 14:07	1
Methylene Chloride	ND	1.0	0.44	-			02/18/19 14:07	1
Naphthalene	ND	1.0	0.43	-			02/18/19 14:07	1
n-Butylbenzene	ND	1.0	0.64	-			02/18/19 14:07	1
N-Propylbenzene	ND	1.0	0.69	-			02/18/19 14:07	1
o-Xylene	ND	1.0	0.76	-			02/18/19 14:07	1
sec-Butylbenzene	ND	1.0	0.75	-			02/18/19 14:07	1
Styrene	ND	1.0	0.73	-			02/18/19 14:07	

Client Sample ID: Post-Carbon 2

Lab Sample ID: 480-149106-1 N

Date Collected: 02/15/19 12:15 Date Received: 02/15/19 15:35

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Matrix:	vva	Ste	W	ater

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		1.0	0.81	ug/L			02/18/19 14:07	1
Tetrachloroethene	ND		1.0	0.36	ug/L			02/18/19 14:07	1
Toluene	ND		1.0	0.51	ug/L			02/18/19 14:07	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			02/18/19 14:07	1
trans-1,3-Dichloropropene	ND	*	1.0	0.37	ug/L			02/18/19 14:07	1
Trichloroethene	ND		1.0	0.46	ug/L			02/18/19 14:07	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			02/18/19 14:07	1
Vinyl chloride	2.0		1.0	0.90	ug/L			02/18/19 14:07	1
Xylenes, Total	ND		2.0	0.66	ug/L			02/18/19 14:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		77 - 120					02/18/19 14:07	1
4-Bromofluorobenzene (Surr)	112		73 - 120					02/18/19 14:07	1
Toluene-d8 (Surr)	98		80 - 120					02/18/19 14:07	1
Dibromofluoromethane (Surr)	98		75_123					02/18/19 14:07	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.072		0.010	0.0050	mg/L		02/20/19 13:40	02/20/19 16:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.6	HF	0.1	0.1	SU			02/27/19 13:41	1
		HE	0.001	0.001	Degrees C			02/27/19 13:41	

Styrene

Lab Sample ID: 480-149106-2 Matrix: Wastewater

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Method: 8260C - Volatile Orga Analyte		Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND				ug/L			02/15/19 22:50	20
1,1,2,2-Tetrachloroethane	ND		20		ug/L			02/15/19 22:50	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20		ug/L			02/15/19 22:50	20
1,1,2-Trichloroethane	ND		20		ug/L			02/15/19 22:50	20
1,1-Dichloroethane	ND		20		ug/L			02/15/19 22:50	20
1,1-Dichloroethene	ND		20		ug/L			02/15/19 22:50	20
1,2,4-Trichlorobenzene	ND		20		ug/L			02/15/19 22:50	20
1,2,4-Trimethylbenzene	ND		20		ug/L			02/15/19 22:50	20
1,2-Dibromo-3-Chloropropane	ND		20		ug/L			02/15/19 22:50	20
1,2-Dibromoethane	ND		20		ug/L			02/15/19 22:50	20
1,2-Dichlorobenzene	ND		20		ug/L			02/15/19 22:50	20
1,2-Dichloroethane	ND		20		ug/L			02/15/19 22:50	20
1,2-Dichloropropane	ND		20		ug/L			02/15/19 22:50	20
1,3,5-Trimethylbenzene	ND		20		ug/L			02/15/19 22:50	20
1,3-Dichlorobenzene	ND		20		ug/L			02/15/19 22:50	20
1.4-Dichlorobenzene	ND		20		ug/L			02/15/19 22:50	20
2-Butanone (MEK)	ND		200		ug/L			02/15/19 22:50	20
2-Hexanone	ND		100		ug/L			02/15/19 22:50	20
4-Isopropyltoluene	ND		20		ug/L			02/15/19 22:50	20
4-Methyl-2-pentanone (MIBK)	ND		100		ug/L			02/15/19 22:50	20
Acetone	ND		200		ug/L			02/15/19 22:50	20
Benzene	770		20		ug/L			02/15/19 22:50	20
Bromodichloromethane	7.8	J	20		ug/L			02/15/19 22:50	20
Bromoform	ND	-	20		ug/L			02/15/19 22:50	20
Bromomethane	ND		20		ug/L			02/15/19 22:50	20
Carbon disulfide	ND		20		ug/L			02/15/19 22:50	20
Carbon tetrachloride	ND		20		ug/L			02/15/19 22:50	20
Chlorobenzene	ND		20		ug/L			02/15/19 22:50	20
Chloroethane	ND		20		ug/L			02/15/19 22:50	20
Chloroform	15	J	20		ug/L			02/15/19 22:50	20
Chloromethane	ND		20		ug/L			02/15/19 22:50	20
cis-1,2-Dichloroethene	ND		20		ug/L			02/15/19 22:50	20
cis-1,3-Dichloropropene	ND		20		ug/L			02/15/19 22:50	20
Cyclohexane	ND		20		ug/L			02/15/19 22:50	20
Dibromochloromethane	ND		20		ug/L			02/15/19 22:50	20
Dichlorodifluoromethane	ND		20	14	ug/L			02/15/19 22:50	20
Ethylbenzene	42		20	15	ug/L			02/15/19 22:50	20
Isopropylbenzene	ND		20		ug/L			02/15/19 22:50	20
m,p-Xylene	19	J	40		ug/L			02/15/19 22:50	20
Methyl acetate	ND		50		ug/L			02/15/19 22:50	20
Methyl tert-butyl ether	ND		20		ug/L			02/15/19 22:50	20
Methylcyclohexane	ND		20		ug/L			02/15/19 22:50	20
Methylene Chloride	16	J	20		ug/L			02/15/19 22:50	20
Naphthalene	35		20		ug/L			02/15/19 22:50	20
n-Butylbenzene	ND		20		ug/L			02/15/19 22:50	20
N-Propylbenzene	ND		20		ug/L			02/15/19 22:50	20
o-Xylene	ND		20		ug/L			02/15/19 22:50	20
sec-Butylbenzene	ND		20		ug/L			02/15/19 22:50	20
	····				<u> </u>			02/15/10 22:50	

TestAmerica Buffalo

02/15/19 22:50

20

15 ug/L

ND

20

Client Sample ID: Pre-Carbon Date Collected: 02/15/19 12:30

Date Received: 02/15/19 15:35

Lab Sample ID: 480-149106-2 Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		20	16	ug/L			02/15/19 22:50	20
Tetrachloroethene	ND		20	7.2	ug/L			02/15/19 22:50	20
Toluene	120		20	10	ug/L			02/15/19 22:50	20
trans-1,2-Dichloroethene	ND		20	18	ug/L			02/15/19 22:50	20
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			02/15/19 22:50	20
Trichloroethene	ND		20	9.2	ug/L			02/15/19 22:50	20
Trichlorofluoromethane	ND		20	18	ug/L			02/15/19 22:50	20
Vinyl chloride	ND		20	18	ug/L			02/15/19 22:50	20
Xylenes, Total	19	J	40	13	ug/L			02/15/19 22:50	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120					02/15/19 22:50	20
4-Bromofluorobenzene (Surr)	104		73 - 120					02/15/19 22:50	20
Toluene-d8 (Surr)	100		80 - 120					02/15/19 22:50	20
Dibromofluoromethane (Surr)	100		75 - 123					02/15/19 22:50	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	106000		500	100	ug/L		02/19/19 07:36	02/20/19 19:16	1
Magnesium	27300		200	43.4	ug/L		02/19/19 07:36	02/20/19 19:16	1
Potassium	3660		500	100	ug/L		02/19/19 07:36	02/20/19 19:16	1
Sodium	137000		1000	324	ug/L		02/19/19 07:36	02/20/19 19:16	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	226		2.5	1.4	mg/L			02/18/19 13:35	5
Sulfate	57.2		10.0	1.7	mg/L			02/18/19 13:35	5
Alkalinity, Total	198	В	40.0	16.0	mg/L			02/20/19 13:32	4

Client Sample ID: Post-Carbon 2

Date Collected: 02/15/19 12:15

1 2 3 4 5 6 7 8 9

Lab Sample ID: 480-149106-1 Matrix: Wastewater

Lab Sample ID: 480-149106-2

Matrix: Wastewater

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1 _	459460	02/18/19 14:07	NMC	TAL BUF
Total/NA	Prep	Distill/CN			459897	02/20/19 13:40	LAW	TAL BUF
Total/NA	Analysis	335.4		1	459917	02/20/19 16:31	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	460820	02/27/19 13:41	AEF	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 02/15/19 12:30 Date Received: 02/15/19 15:35

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	459376	02/15/19 22:50	KMN	TAL BUF
Total/NA	Prep	200.7			459470	02/19/19 07:36	MV	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	460000	02/20/19 19:16	LMH	TAL BUF
Total/NA	Analysis	300.0		5	459479	02/18/19 13:35	EMD	TAL BUF
Total/NA	Analysis	310.2		4	459906	02/20/19 13:32	SAH	TAL BUF

Laboratory References:

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

Laboratory: TestAmerica Buffalo

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

New York NELAP 2 10026 03-31-19	Authority	Program	EPA Region	Identification Number	Expiration Date
	New York	NELAP	2	10026	03-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

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

Method Description

Anions, Ion Chromatography

Preparation, Total Metals

Metals (ICP)

Cyanide, Total

Purge and Trap

Distillation, Cyanide

Alkalinity

pН

Volatile Organic Compounds by GC/MS

Laboratory

TAL BUF

Protocol

MCAWW

MCAWW

MCAWW

SW846

EPA

SM

EPA

SW846

None

5
8
0

Protocol References: EPA = US Environmental Protection Agency

Method

200.7 Rev 4.4

SM 4500 H+ B

8260C

300.0

310.2

335.4

200.7

5030C

Distill/CN

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. None = None

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

Sample Summary

TestAmerica Job ID: 480-149106-1

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

Lab Sample ID	Client Sample ID	Matrix	Collected Received
480-149106-1	Post-Carbon 2	Wastewater	02/15/19 12:15 02/15/19 15:3
480-149106-2	Pre-Carbon	Wastewater	02/15/19 12:30 02/15/19 15:3

TestAmerica Buffalo 10 Hazelwood Drive

Chain of Custody Record



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

Client Information	Sampler: Pete	[/a:	flam	Jo	b PM: hnso	n, Or	lette	S						Carrier T	racking	No(s):			COC No: 480-108778-1	15804.1	
Client Contact: Thomas Palmer	Phone: 716 55			E-	Mail: lette.j	iohns	ona	htest	ameri	cain	c con		-						Page: Page 1 of 1		
Company:	110 37	1010	7		lette.j	Jonna	onla	giesia	amen								_		Job #:		
Groundwater & Environmental Services Inc	Due Date Request	ed.			- 100		_			Ar	nalys	sis	Req	ueste	d		_	Schimet .	Preservation	Codeer	
415 Lawrence Bell Drive Suite 6															1	1	1			Codes:	
City: Williamsville	TAT Requested (d	ays):												1							
State, Zip:	1				100	13 M															
NY, 14221 Phone:	PO #:	0.000			- 8	1															
518-402-9662(Tel)	CallOut ID 1360	76			101			list	8021												ahydrate
Email: tpalmer@gesonline.com	WO #:				- V			OLM04.2 list	STARS List - VOA - 8021						480	-14910	6 Ch	ain o	of Custody		
Project Name:	Project #:				Yes	or h		OLA	it - V						1	1	1	-	K - EDTA	W-pH4	
NYSDEC-Gastown WWTP: Site# 915171/Gastow Event Desc:					ple	Yes		TCL	SLis	-			Na	al				containe	L - EDA	∠ - other	(specify)
Site: New York	SSOW#:				Sam	SD (vocs	TAR	Tota	_	S04	Mg, K,	/, Total				5	Other:		
	Samula Data	Sample Time	Sample Type (C=comp,	Matrix (W=water S=solid, O=waste/o	Eld Filte	Perform MS/M	200.7 - Iron	8260B - (MOD) \	8021B - (MOD) S	335.4 - Cyanide, Total	SM4500_H+ - pH	300.0_28D - CI, 9	200.7 - Ca, Fe, N	310.2 - Alkalinity,				Total Number	0 mm site		
Sample Identification	Sample Date	Time	G=grab) Preserva	BT=Tissue, A=	Air) iii		R D	A		B		R N		N	EL 1572	612% (C)	100	×	Specia	I Instructio	ns/Note:
Post-Carbon 3				Water	-	*	2	~		0		N. S.	0			Constant States				a strange of the stra	
Post Carbon 2	DICHA	1215	0	Water	-	F		V	N	1	X				+		+				
Post Carbon 4	2/15/19	10(5	67	Water	-		5	X	X	X	N	-			+		+	E.C.			
	1.51				-	-	1.6		-					10	-		+	1241			
Pre-Carbon	N15/19	1230	9	Water	-		X		X			X	X	X	-		-	5.3			
Inside / Outside Sump				Water										-							
																		10 kg			
		1			1			1	1								1				
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Possible Hazard Identification						Sa						nay	be a	ssesse	ed if sa	mples a			d longer tha		
Non-Hazard Flammable Skin Irritant Po Deliverable Requested: I, II, III, IV, Other (specify)	ison B Unkn	own I	Radiological			Sn			n To ructio			auin		isposa	l By La	b		Archi	ve For	Mont	hs
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Δ Yes Δ No	live and find of	12.25	-	11-221-2		12.5		1			-	_			113	he	(-	41		8/04/2016

Client: New York State D.E.C.

Login Number: 149106 List Number: 1 Creator: Harper, Marcus D

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 (Excluding tests with immediate HTs)	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	DEC
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	

11



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 480-150484-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Quarterly

For:

······ Links ······

Review your project results through

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Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Whethe & Johnson

Authorized for release by: 4/2/2019 3:03:20 PM

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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.

Orlette Johnson Senior Project Manager 4/2/2019 3:03:20 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	7
Lab Chronicle	12
Certification Summary	13
Method Summary	14
Sample Summary	15
Chain of Custody	16
Receipt Checklists	17

Qualifiers

GC/MS VOA

GC/IVIS VUA	4	
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
Metals		
Qualifier	Qualifier Description	
В	Compound was found in the blank and sample.	
General Cho	emistry	
Qualifier	Qualifier Description	
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.	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
Glossary		1
Abbreviation	These commonly used abbreviations may or may not be present in this report.	

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
Percent Recovery
Contains Free Liquid
Contains No Free Liquid
Duplicate Error Ratio (normalized absolute difference)
Dilution Factor
Detection Limit (DoD/DOE)
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision Level Concentration (Radiochemistry)
Estimated Detection Limit (Dioxin)
Limit of Detection (DoD/DOE)
Limit of Quantitation (DoD/DOE)
Minimum Detectable Activity (Radiochemistry)
Minimum Detectable Concentration (Radiochemistry)
Method Detection Limit
Minimum Level (Dioxin)
Not Calculated
Not Detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Relative Error Ratio (Radiochemistry)
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

1 2 3 4 5 6 7 8 9 10

Job ID: 480-150484-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-150484-1

Receipt

The samples were received on 3/19/2019 4:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-463704 recovered above the upper control limit for 2-Hexanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: Pre-Carbon (480-150484-2).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-463700 recovered above the upper control limit for trans-1,3-Dichloropropene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: Post-Carbon-2 (480-150484-1).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-150484-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-463700 recovered outside control limits for the following analytes: trans-1,3-Dichloropropene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: Post-Carbon-2 (480-150484-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-150484-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 1664B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-463824 and analytical batch 480-463851 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon-2 (480-150484-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 480-463893.

Job ID: 480-150484-1 (Continued)

Laboratory: TestAmerica Buffalo (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Lab Sample ID: 480-150484-1

Matrix: Wastewater

5

Client Sample ID: Post-Carbon-2 Date Collected: 03/19/19 15:45 Date Received: 03/19/19 16:25

Method: 8260C - Volatile Orgar Analyte	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	-			03/20/19 05:07	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	-			03/20/19 05:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			03/20/19 05:07	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			03/20/19 05:07	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			03/20/19 05:07	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			03/20/19 05:07	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			03/20/19 05:07	1
1,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			03/20/19 05:07	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			03/20/19 05:07	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			03/20/19 05:07	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			03/20/19 05:07	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			03/20/19 05:07	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			03/20/19 05:07	1
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			03/20/19 05:07	1
1,4-Dichlorobenzene	ND	1.0	0.84	ug/L			03/20/19 05:07	1
2-Butanone (MEK)	ND	10	1.3	ug/L			03/20/19 05:07	1
2-Hexanone	ND	5.0		ug/L			03/20/19 05:07	1
4-Isopropyltoluene	ND	1.0	0.31	-			03/20/19 05:07	1
4-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			03/20/19 05:07	1
Acetone	ND	10		ug/L			03/20/19 05:07	1
Benzene	ND	1.0	0.41	-			03/20/19 05:07	1
Bromoform	ND	1.0	0.26				03/20/19 05:07	
Bromomethane	ND	1.0	0.69	•			03/20/19 05:07	1
Carbon disulfide	ND	1.0	0.19	-			03/20/19 05:07	1
Carbon tetrachloride	ND	1.0	0.27	-			03/20/19 05:07	· · · · · · 1
Chlorobenzene	ND	1.0	0.75	-			03/20/19 05:07	1
Dibromochloromethane	ND	1.0	0.32	-			03/20/19 05:07	1
Chloroethane	ND	1.0	0.32	-			03/20/19 05:07	
Chloroform	2.0	1.0	0.34	-			03/20/19 05:07	1
Chloromethane	ND	1.0	0.35	-			03/20/19 05:07	1
cis-1.2-Dichloroethene	ND	1.0	0.33				03/20/19 05:07	
Cyclohexane	ND	1.0	0.01	-			03/20/19 05:07	1
Bromodichloromethane	ND	1.0	0.39	-			03/20/19 05:07	1
Dichlorodifluoromethane	ND	1.0	0.59	•			03/20/19 05:07	· · · · · · · 1
	ND	1.0	0.08	-			03/20/19 05:07	1
Ethylbenzene	ND	1.0		-				1
1,2-Dibromoethane				ug/L			03/20/19 05:07	1
Isopropylbenzene	ND	1.0	0.79				03/20/19 05:07	1
Methyl acetate	ND	2.5		ug/L			03/20/19 05:07	1
Methyl tert-butyl ether	ND	1.0	0.16				03/20/19 05:07	1
Methylcyclohexane	ND	1.0	0.16				03/20/19 05:07	1
Methylene Chloride	ND	1.0	0.44	-			03/20/19 05:07	1
m,p-Xylene	ND	2.0	0.66				03/20/19 05:07	1
Naphthalene	ND	1.0	0.43	-			03/20/19 05:07	1
n-Butylbenzene	ND	1.0	0.64	-			03/20/19 05:07	1
N-Propylbenzene	ND	1.0	0.69				03/20/19 05:07	1
o-Xylene	ND	1.0	0.76				03/20/19 05:07	1
sec-Butylbenzene	ND	1.0	0.75				03/20/19 05:07	1
Tetrachloroethene	ND	1.0	0.36	-			03/20/19 05:07	1
Toluene	ND	1.0	0.51	ug/L			03/20/19 05:07	1

TestAmerica Buffalo

Client Sample ID: Post-Carbon-2 Date Collected: 03/19/19 15:45 Date Received: 03/19/19 16:25

Phenol-d5

2-Fluorophenol

2,4,6-Tribromophenol

Lab Sample ID: 480-150484-1 Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/20/19 05:07	1
trans-1,3-Dichloropropene	ND	*	1.0	0.37	ug/L			03/20/19 05:07	1
Trichloroethene	ND		1.0	0.46	ug/L			03/20/19 05:07	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/20/19 05:07	1
Vinyl chloride	2.3		1.0	0.90	ug/L			03/20/19 05:07	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/20/19 05:07	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/20/19 05:07	1
Styrene	ND		1.0	0.73	ug/L			03/20/19 05:07	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			03/20/19 05:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120					03/20/19 05:07	1
4-Bromofluorobenzene (Surr)	98		73 - 120					03/20/19 05:07	1
Toluene-d8 (Surr)	101		80 - 120					03/20/19 05:07	1
Dibromofluoromethane (Surr)	103		75 - 123					03/20/19 05:07	1

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

Analyte	Result	Qualifier	ŔL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		03/20/19 14:38	03/22/19 01:10	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		03/20/19 14:38	03/22/19 01:10	1
Acenaphthene	ND		5.0	0.41	ug/L		03/20/19 14:38	03/22/19 01:10	1
Acenaphthylene	ND		5.0	0.38	ug/L		03/20/19 14:38	03/22/19 01:10	1
Anthracene	ND		5.0	0.28	ug/L		03/20/19 14:38	03/22/19 01:10	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		03/20/19 14:38	03/22/19 01:10	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		03/20/19 14:38	03/22/19 01:10	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		03/20/19 14:38	03/22/19 01:10	1
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		03/20/19 14:38	03/22/19 01:10	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		03/20/19 14:38	03/22/19 01:10	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		03/20/19 14:38	03/22/19 01:10	1
Carbazole	ND		5.0	0.30	ug/L		03/20/19 14:38	03/22/19 01:10	1
Chrysene	ND		5.0	0.33	ug/L		03/20/19 14:38	03/22/19 01:10	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		03/20/19 14:38	03/22/19 01:10	1
Dibenzofuran	ND		10	0.51	ug/L		03/20/19 14:38	03/22/19 01:10	1
Fluoranthene	ND		5.0	0.40	ug/L		03/20/19 14:38	03/22/19 01:10	1
Fluorene	ND		5.0	0.36	ug/L		03/20/19 14:38	03/22/19 01:10	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		03/20/19 14:38	03/22/19 01:10	1
Naphthalene	ND		5.0	0.76	ug/L		03/20/19 14:38	03/22/19 01:10	1
Pentachlorophenol	ND		10	2.2	ug/L		03/20/19 14:38	03/22/19 01:10	1
Phenanthrene	ND		5.0	0.44	ug/L		03/20/19 14:38	03/22/19 01:10	1
Phenol	ND		5.0	0.39	ug/L		03/20/19 14:38	03/22/19 01:10	1
Pyrene	ND		5.0	0.34	ug/L		03/20/19 14:38	03/22/19 01:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	91		46 - 120				03/20/19 14:38	03/22/19 01:10	1
2-Fluorobiphenyl	103		48 - 120				03/20/19 14:38	03/22/19 01:10	1
p-Terphenyl-d14	98		59 - 136				03/20/19 14:38	03/22/19 01:10	1

03/20/19 14:38 03/22/19 01:10

03/20/19 14:38 03/22/19 01:10

03/20/19 14:38 03/22/19 01:10

22 - 120

35 - 120

41 - 120

55

74

84

1

1

1

Client Sample ID: Post-Carbon-2 Date Collected: 03/19/19 15:45 Date Received: 03/19/19 16:25

Lab Sample ID: 480-150484-1 Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.050	0.0081	ug/L		03/20/19 14:52	03/21/19 17:12	1
alpha-BHC	ND		0.050	0.0077	ug/L		03/20/19 14:52	03/21/19 17:12	1
beta-BHC	ND		0.050	0.025	ug/L		03/20/19 14:52	03/21/19 17:12	1
delta-BHC	ND		0.050	0.010	ug/L		03/20/19 14:52	03/21/19 17:12	1
gamma-BHC (Lindane)	ND		0.050	0.0080	ug/L		03/20/19 14:52	03/21/19 17:12	1
Chlordane (technical)	ND		0.50	0.29	ug/L		03/20/19 14:52	03/21/19 17:12	1
4,4'-DDD	ND		0.050	0.0092	ug/L		03/20/19 14:52	03/21/19 17:12	1
4,4'-DDE	ND		0.050	0.012	ug/L		03/20/19 14:52	03/21/19 17:12	1
4,4'-DDT	ND		0.050	0.011	ug/L		03/20/19 14:52	03/21/19 17:12	1
Dieldrin	ND		0.050	0.0098	ug/L		03/20/19 14:52	03/21/19 17:12	1
Endosulfan I	ND		0.050	0.011	ug/L		03/20/19 14:52	03/21/19 17:12	1
Endosulfan II	ND		0.050	0.012	ug/L		03/20/19 14:52	03/21/19 17:12	1
Endosulfan sulfate	ND		0.050	0.016	ug/L		03/20/19 14:52	03/21/19 17:12	1
Endrin	ND		0.050	0.014	ug/L		03/20/19 14:52	03/21/19 17:12	1
Endrin aldehyde	ND		0.050	0.016	ug/L		03/20/19 14:52	03/21/19 17:12	1
Heptachlor	ND		0.050	0.0085	ug/L		03/20/19 14:52	03/21/19 17:12	1
Heptachlor epoxide	ND		0.050	0.0074	ug/L		03/20/19 14:52	03/21/19 17:12	1
Toxaphene	ND		0.50	0.12	ug/L		03/20/19 14:52	03/21/19 17:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	54		23 - 120				03/20/19 14:52	03/21/19 17:12	1
Tetrachloro-m-xylene	76		44 - 120				03/20/19 14:52	03/21/19 17:12	1
General Chemistry									
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	1.4	JB	4.7	1.3	mg/L		03/20/19 10:06	03/20/19 12:39	1
Cyanide, Total	0.13		0.010	0.0050	mg/L		03/26/19 23:48	03/27/19 13:55	1
Phenolics, Total Recoverable	ND		0.010	0.0050	mg/L		03/27/19 22:16	03/28/19 16:28	1
Total Dissolved Solids	796		10.0	4.0	mg/L			03/25/19 13:41	1
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			03/21/19 12:00	1
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			03/25/19 00:52	1
рН	7.6	HF	0.1	0.1	SU			03/28/19 15:48	1
Temperature	18.2	HE	0.001	0.001	Degrees C			03/28/19 15:48	1

TestAmerica Buffalo

Lab Sample ID: 480-150484-2 Matrix: Wastewater

Analyte	Result (Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20		ug/L			03/20/19 04:54	20
1,1,2,2-Tetrachloroethane	ND		20	4.2	ug/L			03/20/19 04:54	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		20	6.2	ug/L			03/20/19 04:54	20
,1,2-Trichloroethane	ND		20	4.6	ug/L			03/20/19 04:54	20
1,1-Dichloroethane	ND		20	7.6	ug/L			03/20/19 04:54	20
,1-Dichloroethene	ND		20	5.8	ug/L			03/20/19 04:54	20
,2,4-Trichlorobenzene	ND		20	8.2	ug/L			03/20/19 04:54	20
,2,4-Trimethylbenzene	ND		20	15	ug/L			03/20/19 04:54	20
,2-Dibromo-3-Chloropropane	ND		20		ug/L			03/20/19 04:54	20
,2-Dichlorobenzene	ND		20	16	ug/L			03/20/19 04:54	20
,2-Dichloroethane	ND		20	4.2	ug/L			03/20/19 04:54	20
,2-Dichloropropane	ND		20	14	ug/L			03/20/19 04:54	20
,3,5-Trimethylbenzene	ND		20	15	ug/L			03/20/19 04:54	20
,3-Dichlorobenzene	ND		20	16	ug/L			03/20/19 04:54	20
,4-Dichlorobenzene	ND		20	17	ug/L			03/20/19 04:54	20
-Butanone (MEK)	ND		200	26	ug/L			03/20/19 04:54	20
-Hexanone	ND		100	25	ug/L			03/20/19 04:54	20
Isopropyltoluene	ND		20	6.2	ug/L			03/20/19 04:54	20
Methyl-2-pentanone (MIBK)	ND		100	42	ug/L			03/20/19 04:54	20
cetone	ND		200	60	ug/L			03/20/19 04:54	20
romoform	ND		20	5.2	ug/L			03/20/19 04:54	20
romomethane	ND		20	14	ug/L			03/20/19 04:54	20
arbon disulfide	ND		20	3.8	ug/L			03/20/19 04:54	20
arbon tetrachloride	ND		20	5.4	ug/L			03/20/19 04:54	20
Chlorobenzene	ND		20	15	ug/L			03/20/19 04:54	20
bibromochloromethane	ND		20	6.4	ug/L			03/20/19 04:54	20
Chloroethane	ND		20	6.4	ug/L			03/20/19 04:54	20
Chloroform	ND		20	6.8	ug/L			03/20/19 04:54	20
Chloromethane	ND		20	7.0	ug/L			03/20/19 04:54	20
is-1,2-Dichloroethene	ND		20	16	ug/L			03/20/19 04:54	20
Cyclohexane	ND		20	3.6	ug/L			03/20/19 04:54	20
romodichloromethane	ND		20	7.8	ug/L			03/20/19 04:54	20
ichlorodifluoromethane	ND		20	14	ug/L			03/20/19 04:54	20
thylbenzene	120		20	15	ug/L			03/20/19 04:54	20
,2-Dibromoethane	ND		20	15	ug/L			03/20/19 04:54	20
opropylbenzene	ND		20	16	ug/L			03/20/19 04:54	20
lethyl acetate	ND		50	26	ug/L			03/20/19 04:54	20
lethyl tert-butyl ether	ND		20		ug/L			03/20/19 04:54	20
lethylcyclohexane	ND		20	3.2	ug/L			03/20/19 04:54	20
lethylene Chloride	ND		20	8.8	ug/L			03/20/19 04:54	20
n,p-Xylene	72		40		ug/L			03/20/19 04:54	20
Vaphthalene	100		20	8.6	ug/L			03/20/19 04:54	20
n-Butylbenzene	ND		20	13	ug/L			03/20/19 04:54	20
N-Propylbenzene	ND		20		ua/l			03/20/19 04:54	20

Naphthalene	100	20	8.6 ug/L	03/20/19 04:54	20
n-Butylbenzene	ND	20	13 ug/L	03/20/19 04:54	20
N-Propylbenzene	ND	20	14 ug/L	03/20/19 04:54	20
o-Xylene	45	20	15 ug/L	03/20/19 04:54	20
sec-Butylbenzene	ND	20	15 ug/L	03/20/19 04:54	20
Tetrachloroethene	ND	20	7.2 ug/L	03/20/19 04:54	20
Toluene	420	20	10 ug/L	03/20/19 04:54	20
trans-1,2-Dichloroethene	ND	20	18 ug/L	03/20/19 04:54	20

TestAmerica Buffalo

Client Sample ID: Pre-Carbon Date Collected: 03/19/19 15:55 Date Received: 03/19/19 16:25

Lab Sample ID: 480-150484-2 Matrix: Wastewater

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		20	7.4	ug/L			03/20/19 04:54	20
Trichloroethene	ND		20	9.2	ug/L			03/20/19 04:54	20
Trichlorofluoromethane	ND		20	18	ug/L			03/20/19 04:54	20
Vinyl chloride	ND		20	18	ug/L			03/20/19 04:54	20
Xylenes, Total	120		40	13	ug/L			03/20/19 04:54	20
cis-1,3-Dichloropropene	ND		20	7.2	ug/L			03/20/19 04:54	20
Styrene	40		20	15	ug/L			03/20/19 04:54	20
tert-Butylbenzene	ND		20	16	ug/L			03/20/19 04:54	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120					03/20/19 04:54	20
4-Bromofluorobenzene (Surr)	97		73 - 120					03/20/19 04:54	20
Toluene-d8 (Surr)	91		80 - 120					03/20/19 04:54	20
Dibromofluoromethane (Surr)	96		75 - 123					03/20/19 04:54	20
Method: 8260C - Volatile O	rganic Compo	unds bv G	C/MS - DL						
Analyte	· · · ·	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2400		50	21	ug/L		-	03/20/19 17:24	50

			-		
Surrogate	%Recovery Qualifier	Limits	Prepared An	alyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96	77 - 120	03/20	/19 17:24	50
4-Bromofluorobenzene (Surr)	99	73 - 120	03/20	/19 17:24	50
Toluene-d8 (Surr)	92	80 - 120	03/20	/19 17:24	50
Dibromofluoromethane (Surr)	93	75 - 123	03/20	/19 17:24	50

Method: 200.	7 Rev 4.4	- Metals ((ICP)

Alkalinity, Total

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	133000		500	100	ug/L		03/20/19 07:33	03/20/19 18:52	1
Magnesium	44600		200	43.4	ug/L		03/20/19 07:33	03/20/19 18:52	1
Potassium	3710	В	500	100	ug/L		03/20/19 07:33	03/20/19 18:52	1
Sodium	97800		1000	324	ug/L		03/20/19 07:33	03/20/19 18:52	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	168		2.5	1.4	mg/L			03/20/19 12:31	5
Sulfate	120		10.0	1.7	mg/L			03/20/19 12:31	5

40.0

331 B

16.0 mg/L

03/27/19 10:57

4

Client Sample ID: Post-Carbon-2 Date Collected: 03/19/19 15:45 Date Received: 03/19/19 16:25

Lab Sample ID: 480-150484-1 Matrix: Wastewater

	Batch	Batch		Dilution	Batch	Prepared		
Prep Туре	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
otal/NA	Analysis	8260C			463700	03/20/19 05:07	KMN	TAL BUF
otal/NA	Prep	3510C			463893	03/20/19 14:38	ATG	TAL BUF
otal/NA	Analysis	8270D		1	464125	03/22/19 01:10	RJS	TAL BUF
otal/NA	Prep	3510C			463900	03/20/19 14:52	ATG	TAL BUF
otal/NA	Analysis	608.3		1	463992	03/21/19 17:12	JLS	TAL BUF
otal/NA	Prep	1664B			463824	03/20/19 10:06	AJS	TAL BUF
otal/NA	Analysis	1664B		1	463851	03/20/19 12:39	AJS	TAL BUF
otal/NA	Prep	Distill/CN			464846	03/26/19 23:48	AEF	TAL BUF
otal/NA	Analysis	335.4		1	465008	03/27/19 13:55	CLT	TAL BUF
otal/NA	Prep	Distill/Phenol			465065	03/27/19 22:16	AEF	TAL BUF
otal/NA	Analysis	420.1		1	465249	03/28/19 16:28	SAH	TAL BUF
otal/NA	Analysis	SM 2540C		1	464547	03/25/19 13:41	RAF	TAL BUF
otal/NA	Analysis	SM 2540D		1	464438	03/25/19 00:52	MLS	TAL BUF
otal/NA	Analysis	SM 4500 H+ B		1	465256	03/28/19 15:48	KEB	TAL BUF
otal/NA	Analysis	SM 5210B		1	464161	03/21/19 12:00	SAH	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 03/19/19 15:55 Date Received: 03/19/19 16:25

Lab Sample ID: 480-150484-2 Matrix: Wastewater

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	463704	03/20/19 04:54	AMM	TAL BUF
Total/NA	Analysis	8260C	DL	50	463733	03/20/19 17:24	NMC	TAL BUF
Total/NA	Prep	200.7			463710	03/20/19 07:33	MV	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	464010	03/20/19 18:52	LMH	TAL BUF
Total/NA	Analysis	300.0		5	463814	03/20/19 12:31	EMD	TAL BUF
Total/NA	Analysis	310.2		4	464986	03/27/19 10:57	KEB	TAL BUF

Laboratory References:

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

TestAmerica Buffalo

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	er Expiration Date
New York	NELAP	2	10026	03-31-20
The following analytes a	re included in this report, but the la	boratory is not certified by the	a governing authority. T	his list may include analytes for which

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

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

Method Description

HEM and SGT-HEM

Anions, Ion Chromatography

Phenolics, Total Recoverable

Solids, Total Dissolved (TDS)

Solids, Total Suspended (TSS)

HEM and SGT-HEM (Aqueous)

Liquid-Liquid Extraction (Separatory Funnel)

Preparation, Total Metals

Metals (ICP)

Alkalinity

pН

Cyanide, Total

BOD, 5-Day

Purge and Trap

Distillation, Cyanide

Distillation, Phenolics

Volatile Organic Compounds by GC/MS

Organochlorine Pesticides in Water

Semivolatile Organic Compounds (GC/MS)

Method

8260C

8270D

608.3

1664B

300.0

310.2

335.4

420.1

SM 2540C

SM 2540D

SM 5210B

1664B

200.7

3510C

5030C

Distill/CN

Distill/Phenol

SM 4500 H+ B

200.7 Rev 4.4

Laboratory

TAL BUF

Protocol

SW846

SW846

EPA

1664B

MCAWW

MCAWW

MCAWW

MCAWW

SM

SM

SM

SM

1664B

SW846

SW846

None

None

EPA

40CFR136A

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Protocol	References:

1664B = 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.

None = None

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

Sample Summary

TestAmerica Job ID: 480-150484-1

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

Leh Comple ID	Client Semale ID	Matuis	Collected Dessived
Lab Sample ID	Client Sample ID	Matrix	Collected Received
480-150484-1	Post-Carbon-2	Wastewater	03/19/19 15:45 03/19/19 16:2
480-150484-2	Pre-Carbon	Wastewater	03/19/19 15:55 03/19/19 16:2

TestAmerica Buffalo

Chain of Custody Record



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

ient Contact: homas Palmer		Sampler. Lab Pl John John				n, Orlette S					Carrier Tracking No(s):						COC No: 480-123669-28089.1			
IUIIas Faillel	Phone: 216 5	53 5	5129	E-Ma orle		hnson@testamericainc.com						1						Page: Page 1 of 1		
ompany: iroundwater & Environmental Services Inc					T	Analysis Requested														
ddress:	Due Date Requeste	ed:												T	Т	Т	T	Tes	Draconuction Co	daa.
15 Lawrence Bell Drive Suite 6 ty: Villiamsville tate, Zip: 17, 14221	TAT Requested (da	TAT Requested (days): 2 heets 14 Decr																		е 12 5 13
hone: 18-402-9662(Tel)	PO#: CallOut ID 1360	76						es		P										D3
palmer@gesonline.com	WO #: GES Project # 0				or No	(o)		esticid		Demand	s	d Solid	ī	480- I	150 	484 (hair	Dist	J - DI Water	decahydrate رواند V - MCAA
roject Name: Bastown WWTP #915171 - Quarterly Event Desc: Quarterly	Project #: 48002525				e (Yes	J (Yes of No) Total Recoverable	(Stars)	Pollutant Pesticides	VO	xygen	ed Soli	ssolve				204		tainer	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
ite: Iew York	SSOW#:				Sample			ity Poll	CL SVOA	nical O	spend	otal Di	Total	_	010000	K. Na	. Total	of con	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air	Field Filtered	Perform MS/MS	8260C - TCL + C	608_Pest - Priority	8270C - (MOD) TCL	5210B - Biochemical Oxygen	2540D - Total Suspended Solids	2540C_Calcd - Total Dissolved Solids	335.4 - Cyanide,	SM4500_H+ - pH		300.0_28D - (MOD) Cl, 200.7 - Ca. Ma. K. Na	alinit	Total Number of containers	Special I	nstructions/Note:
	><	> <		tion Code:		Xs	and the second	N	N	1 (Sec. 11) (Sec. 11)				N S			N	X		
Post-Carbon 2	3/19/19	1545		Water)	x x	x	х	х	x	x	х	X	x					
Pre-Carbon	3/19/19	1555		Water			x									x x	()	<		
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Possible Hazard Identification Non-Hazard Flammable Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)	Poison B Unki	nown	Radiologica	1			1	m To	Clier	nt	C		ispo	sed if sal By			are I	1	ned longer than	1 month) Months
Empty Kit Relinguished by:		Date:			Tim				-				_	Method	of SI	nipmen	t			
Relinquished by Peter Zattom Dates	- 3/19/19		25	Company		R	eceived	by	m	the	W	0	iK	all	2	Date/Tir		3	19/19/6	25TA
Relinquished by:	Date/Time:			Company			eceived									Date/Tir				Company
	Date/Time.			Company					_				-			aterill				Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						C	ooler T	empera	iture(s	s) °C an	d Oth	ner Re	marks	E.					18	#1

4/2/2019

Client: New York State D.E.C.

Login Number: 150484 List Number: 1 Creator: Harper, Marcus D

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 (Excluding tests with immediate HTs)	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	PZ
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	

11

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Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-152290-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomayer

Authorized for release by: 5/9/2019 11:40:10 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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. Giacomage

Joe Giacomazza Project Management Assistant II 5/9/2019 11:40:10 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	13
Sample Summary	14
Chain of Custody	15
Receipt Checklists	17

QC

RER

RPD

TEF

TEQ

RL

Quality Control

Relative Error Ratio (Radiochemistry)

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

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	5
General Chen	nistry	
Qualifier	Qualifier Description	6
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
Glossary		- 7
Abbreviation	These commonly used abbreviations may or may not be present in this report.	8
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	Q
CFL	Contains Free Liquid	3
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
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	

Job ID: 480-152290-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-152290-1

Comments

No additional comments.

Receipt

The samples were received on 4/19/2019 12:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

Receipt Exceptions

A Chain-of-Custody (COC) was not received with these samples. One was later sent and received: Post-Carbon 2 (480-152290-1) and Pre-Carbon (480-152290-2).

GC/MS VOA

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 490-590455 recovered outside control limits for the following analytes: Bromomethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The matrix spike/matrix spike duplicate associated with analytical batch 490-590455 was unable to be analyzed due to instrument communication error. LCS/LCSD has been provided : (LCS 490-590455/3).

Method(s) 8260C: The laboratory control sample duplicate (LCSD) for analytical batch 490-590664 recovered outside control limits for the following analytes: Vinyl chloride and Dichlorodifluoromethane. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The following sample was diluted due to the nature of the sample matrix: Pre-Carbon (480-152290-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-152290-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 9040C, 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 2 (480-152290-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 04/19/19 10:30 Date Received: 04/19/19 12:25

Toluene

Lab Sample ID: 480-152290-1

Matrix: Wastewater

nalyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1-Trichloroethane	ND	1.0	0.19	ug/L			04/25/19 19:10	
,1,2,2-Tetrachloroethane	ND	1.0	0.19	ug/L			04/25/19 19:10	
,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.15	ug/L			04/25/19 19:10	
,1,2-Trichloroethane	ND	1.0	0.19	ug/L			04/25/19 19:10	
,1-Dichloroethane	ND	1.0	0.24	ug/L			04/25/19 19:10	
,1-Dichloroethene	ND	1.0	0.25	ug/L			04/25/19 19:10	
,2,4-Trichlorobenzene	ND	1.0		ug/L			04/25/19 19:10	
,2,4-Trimethylbenzene	ND	1.0		ug/L			04/25/19 19:10	
,2-Dibromo-3-Chloropropane	ND	10		ug/L			04/25/19 19:10	
,2-Dichlorobenzene	ND	1.0	0.19				04/25/19 19:10	
,2-Dichloroethane	ND	1.0	0.20	0			04/25/19 19:10	
,2-Dichloropropane	ND	1.0	0.25	•			04/25/19 19:10	
,3,5-Trimethylbenzene	ND	1.0		ug/L			04/25/19 19:10	
,3-Dichlorobenzene	ND	1.0	0.18	-			04/25/19 19:10	
.4-Dichlorobenzene	ND	1.0		ug/L			04/25/19 19:10	
,	ND	50	2.6				04/25/19 19:10	
2-Butanone (MEK)	ND	50 10		ug/L				
2-Hexanone			1.3	ug/L			04/25/19 19:10	
	ND	1.0		ug/L			04/25/19 19:10	
-Methyl-2-pentanone (MIBK)	ND	10	0.81	•			04/25/19 19:10	
Acetone	ND	25	2.7	0			04/25/19 19:10	
enzene	ND	1.0		ug/L			04/25/19 19:10	
Bromoform	ND	1.0	0.29	0			04/25/19 19:10	
Bromomethane	ND *	1.0	0.35	ug/L			04/25/19 19:10	
Carbon disulfide	ND	1.0	0.22	ug/L			04/25/19 19:10	
Carbon tetrachloride	ND	1.0	0.18	ug/L			04/25/19 19:10	
Chlorobenzene	ND	1.0	0.18	ug/L			04/25/19 19:10	
Dibromochloromethane	ND	1.0	0.25	ug/L			04/25/19 19:10	
Chloroethane	ND	1.0	0.36	ug/L			04/25/19 19:10	
Chloroform	ND	1.0	0.23	ug/L			04/25/19 19:10	
Chloromethane	ND	1.0	0.36	ug/L			04/25/19 19:10	
is-1,2-Dichloroethene	ND	1.0	0.21	ug/L			04/25/19 19:10	
Cyclohexane	ND	5.0	0.13	ug/L			04/25/19 19:10	
Bromodichloromethane	ND	1.0	0.17	ug/L			04/25/19 19:10	
Dichlorodifluoromethane	ND	1.0	0.17	ug/L			04/25/19 19:10	
Ethylbenzene	ND	1.0	0.19	ug/L			04/25/19 19:10	
,2-Dibromoethane	ND	1.0	0.21	ug/L			04/25/19 19:10	
sopropylbenzene	ND	1.0		ug/L			04/25/19 19:10	
Aethyl acetate	ND	10		ug/L			04/25/19 19:10	
Aethyl tert-butyl ether	ND	1.0		ug/L			04/25/19 19:10	
lethylcyclohexane	ND	5.0	0.090				04/25/19 19:10	
lethylene Chloride	ND	5.0		ug/L			04/25/19 19:10	
n,p-Xylene	ND	2.0		ug/L			04/25/19 19:10	
laphthalene	ND	5.0		ug/L			04/25/19 19:10	
-Butylbenzene	ND	3.0 1.0		ug/L			04/25/19 19:10	
I-Propylbenzene	ND	1.0		ug/L ug/L			04/25/19 19:10	
	ND	1.0		ug/L			04/25/19 19:10	
ec-Butylbenzene	ND	1.0	0.17	ug/L			04/25/19 19:10	

Eurofins TestAmerica, Buffalo

04/25/19 19:10

1.0

ND

0.17 ug/L

1

RL

1.0

1.0

1.0

1.0

1.0

3.0

1.0

1.0

1.0

MDL Unit

0.23 ug/L

0.17 ug/L

0.20 ug/L

0.21 ug/L

0.18 ug/L

0.58 ug/L

0.17 ug/L

0.28 ug/L

0.17 ug/L

D

Prepared

Client Sample ID: Post-Carbon 2 Date Collected: 04/19/19 10:30 Date Received: 04/19/19 12:25

Analyte

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

cis-1,3-Dichloropropene

Trichloroethene

Vinyl chloride

Xylenes, Total

tert-Butylbenzene

Styrene

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

ND

ND

ND

ND

ND

Lab Sample ID: 480-152290-1 Matrix: Wastewater

Analyzed

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

04/25/19 19:10

Dil Fac

1

1

1

1

1

1

1

1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		04/25/19 19:10	1
4-Bromofluorobenzene (Surr)	98		70 - 130		04/25/19 19:10	1
Toluene-d8 (Surr)	109		70 - 130		04/25/19 19:10	1
Dibromofluoromethane (Surr)	103		70 - 130		04/25/19 19:10	1

General Chemistry Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.12		0.010	0.0050	mg/L		05/02/19 13:35	05/02/19 17:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pН	7.4	HF	0.1	0.1	SU			05/07/19 16:35	1
Temperature	21.2	UE .	0.001	0.001	Degrees C			05/07/19 16:35	1

Client Sample ID: Pre-Carbon Date Collected: 04/19/19 10:45 Date Received: 04/19/19 12:25

Lab Sample ID: 480-152290-2

Matrix: Wastewater

r	
	5
	8
	9

Method: 8260C - Volatile Organic Analyte	Result Qualifier	RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND ND	5.0	0.95			04/26/19 12:10	5
1,1,2,2-Tetrachloroethane	ND	5.0	0.95			04/26/19 12:10	5
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0		ug/L		04/26/19 12:10	5
1,1,2-Trichloroethane	ND	5.0		ug/L		04/26/19 12:10	5
1,1-Dichloroethane	ND	5.0		ug/L		04/26/19 12:10	5
1,1-Dichloroethene	ND	5.0		ug/L		04/26/19 12:10	5
1,2,4-Trichlorobenzene	ND	5.0		ug/L ug/L		04/26/19 12:10	5
		5.0	0.85				5
1,2,4-Trimethylbenzene	5.6 ND	5.0 50				04/26/19 12:10 04/26/19 12:10	5
1,2-Dibromo-3-Chloropropane				ug/L			
1,2-Dichlorobenzene	ND	5.0		ug/L		04/26/19 12:10	5
1,2-Dichloroethane	ND	5.0		ug/L		04/26/19 12:10	5
1,2-Dichloropropane	ND	5.0		ug/L		04/26/19 12:10	5
1,3,5-Trimethylbenzene	ND	5.0		ug/L		04/26/19 12:10	5
1,3-Dichlorobenzene	ND	5.0	0.90			04/26/19 12:10	5
1,4-Dichlorobenzene	ND	5.0		ug/L		04/26/19 12:10	5
2-Butanone (MEK)	ND	250		ug/L		04/26/19 12:10	5
2-Hexanone	ND	50		ug/L		04/26/19 12:10	5
4-Isopropyltoluene	ND	5.0		ug/L		04/26/19 12:10	5
4-Methyl-2-pentanone (MIBK)	ND	50		ug/L		04/26/19 12:10	5
Acetone	ND	130	13	ug/L		04/26/19 12:10	5
Benzene	2700	25		ug/L		04/26/19 13:03	25
Bromoform	ND	5.0	1.5	ug/L		04/26/19 12:10	5
Bromomethane	ND	5.0	1.8	ug/L		04/26/19 12:10	5
Carbon disulfide	ND	5.0	1.1	ug/L		04/26/19 12:10	5
Carbon tetrachloride	ND	5.0	0.90	ug/L		04/26/19 12:10	5
Chlorobenzene	ND	5.0	0.90	ug/L		04/26/19 12:10	5
Dibromochloromethane	ND	5.0	1.3	ug/L		04/26/19 12:10	5
Chloroethane	ND	5.0	1.8	ug/L		04/26/19 12:10	5
Chloroform	1.6 J	5.0	1.2	ug/L		04/26/19 12:10	5
Chloromethane	ND	5.0	1.8	ug/L		04/26/19 12:10	5
cis-1,2-Dichloroethene	8.0	5.0	1.1	ug/L		04/26/19 12:10	5
Cyclohexane	ND	25	0.65	ug/L		04/26/19 12:10	5
Bromodichloromethane	ND	5.0	0.85	ug/L		04/26/19 12:10	5
Dichlorodifluoromethane	ND *	5.0	0.85	ug/L		04/26/19 12:10	5
Ethylbenzene	130	5.0	0.95	ug/L		04/26/19 12:10	5
1,2-Dibromoethane	ND	5.0	1.1	ug/L		04/26/19 12:10	5
Isopropylbenzene	ND	5.0	1.7	ug/L		04/26/19 12:10	5
Methyl acetate	ND	50	2.9	ug/L		04/26/19 12:10	5
Methyl tert-butyl ether	ND	5.0		ug/L		04/26/19 12:10	5
Methylcyclohexane	ND	25	0.45	ug/L		04/26/19 12:10	5
Methylene Chloride	ND	25		ug/L		04/26/19 12:10	5
m,p-Xylene	87	10		ug/L		04/26/19 12:10	5
Naphthalene	250	25		ug/L		04/26/19 12:10	5
n-Butylbenzene	ND	5.0		ug/L		04/26/19 12:10	5
N-Propylbenzene	ND	5.0		ug/L		04/26/19 12:10	5
o-Xylene	53	5.0		ug/L		04/26/19 12:10	5
sec-Butylbenzene	ND	5.0		ug/L		04/26/19 12:10	5
Tetrachloroethene	ND	5.0		ug/L		04/26/19 12:10	5
Toluene	470	5.0		ug/L		04/26/19 12:10	5

Eurofins TestAmerica, Buffalo

Client Sample ID: Pre-Carbon Date Collected: 04/19/19 10:45 Date Received: 04/19/19 12:25

Job	ID:	480-1	52290-1
000	· • • •	100 1	02200 1

Lab Sample ID: 480-152290-2

Matrix: Wastewater

5

Method: 8260C - Volatile Organ Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		5.0	1.2	ug/L			04/26/19 12:10	5
trans-1,3-Dichloropropene	ND		5.0	0.85	ug/L			04/26/19 12:10	5
Trichloroethene	ND		5.0	1.0	ug/L			04/26/19 12:10	5
Trichlorofluoromethane	ND		5.0	1.1	ug/L			04/26/19 12:10	5
Vinyl chloride	2.9	J *	5.0	0.90	ug/L			04/26/19 12:10	5
Xylenes, Total	140		15	2.9	ug/L			04/26/19 12:10	5
cis-1,3-Dichloropropene	ND		5.0	0.85	ug/L			04/26/19 12:10	5
Styrene	ND		5.0	1.4	ug/L			04/26/19 12:10	5
tert-Butylbenzene	ND		5.0	0.85	ug/L			04/26/19 12:10	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)			70 - 130		04/26/19 12:10	
1,2-Dichloroethane-d4 (Surr)	111		70 - 130		04/26/19 13:03	2
4-Bromofluorobenzene (Surr)	106		70 - 130		04/26/19 12:10	
4-Bromofluorobenzene (Surr)	108		70 - 130		04/26/19 13:03	2
Toluene-d8 (Surr)	98		70 - 130		04/26/19 12:10	
Toluene-d8 (Surr)	95		70 - 130		04/26/19 13:03	2
Dibromofluoromethane (Surr)	100		70 - 130		04/26/19 12:10	
Dibromofluoromethane (Surr)	97		70 - 130		04/26/19 13:03	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	145000		500	100	ug/L		04/26/19 07:38	04/26/19 23:11	1
Magnesium	47700		200	43.4	ug/L		04/26/19 07:38	04/26/19 23:11	1
Potassium	3900		500	100	ug/L		04/26/19 07:38	04/26/19 23:11	1
Sodium	96000		1000	324	ug/L		04/26/19 07:38	04/26/19 23:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	186		2.5	1.4	mg/L			04/26/19 16:03	5
Sulfate	120		10.0	1.7	mg/L			04/26/19 16:03	5
Alkalinity, Total	304		50.0	20.0	mg/L			05/02/19 17:27	5

Client Sample ID: Post-Carbon 2 Date Collected: 04/19/19 10:30 Date Received: 04/19/19 12:25

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	590455	04/25/19 19:10	S1S	TAL NSH
Total/NA	Prep	Distill/CN			470967	05/02/19 13:35	LAW	TAL BUF
Total/NA	Analysis	335.4		1	470983	05/02/19 17:39	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	471719	05/07/19 16:35	AEF	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 04/19/19 10:45 Date Received: 04/19/19 12:25

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	590664	04/26/19 12:10	S1S	TAL NSH
Total/NA	Analysis	8260C		25	590664	04/26/19 13:03	S1S	TAL NSH
Total/NA	Prep	200.7			469837	04/26/19 07:38	JMP	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	470207	04/26/19 23:11	LMH	TAL BUF
Total/NA	Analysis	300.0		5	469975	04/26/19 16:03	CLA	TAL BUF
Total/NA	Analysis	310.2		5	470991	05/02/19 17:27	SAH	TAL BUF

Laboratory References:

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

TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Job ID: 480-152290-1

Lab Sample ID: 480-152290-1

Lab Sample ID: 480-152290-2

Matrix: Wastewater

Matrix: Wastewater

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program		EPA Region	Identification Number	Expiration Date	
New York	NELAP	NELAP		10026	03-31-20	
The following analytes	are included in this report, bu	t the laboratory is not cert	fied by the governin	ig authority. This list may inc	lude analytes for which	
the agency does not of Analysis Method	fer certification. Prep Method	Matrix	Analyt	e		
0,		Matrix Wastewater		e le, Total		
Analysis Method	Prep Method					

Laboratory: Eurofins TestAmerica, Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-20
Arkansas DEQ	State Program	6	88-0737	04-25-20
California	State Program	9	2938	06-30-19
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-19
lowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-19
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-19
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-20
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-19
Mississippi	State Program	4	N/A	06-30-19
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-19
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-20
North Carolina (WW/SW)	State Program	4	387	12-31-19
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	04-30-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19 *
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-19
South Carolina	State Program	4	84009 (001)	02-28-19 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	04-10-20
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Buffalo

Accreditation/Certification Summary

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

Job ID: 480-152290-1

Laboratory: Eurofins TestAmerica, Nashville (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

Eurofins TestAmerica, Buffalo

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

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH
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
200.7	Preparation, Total Metals	EPA	TAL BUF
5030C	Purge and Trap	SW846	TAL NSH
Distill/CN	Distillation, Cyanide	None	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.

None = None

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 = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600 TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

	San	nple Summary			
Client: New York St Project/Site: Gastov	ate D.E.C. wn WWTP #915171		Job ID:	480-152290-1	
.ab Sample ID	Client Sample ID	Matrix	Collected	Received	
180-152290-1	Post-Carbon 2	Wastewater	04/19/19 10:30	04/19/19 12:25	
180-152290-2	Pre-Carbon	Wastewater	04/19/19 10:45	04/19/19 12:25	
					ļ

TestAmerica Buffalo

Chain of Custody Record



THE LEADER IN ENVIRONMENTAL TESTING

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

Client Information	Sampler:	1	M		Lab P John	M: Ison, O	lette S	(Car	rier Tracki	ng No(s):			COC No: 480-123660-280	90.1
Client Contact:	Phone: E-M			E-Mai	il:	nson@testamericainc.com										Page:		
Thomas Palmer Company:	-				oriet	te.jonns	son@te	stame	-			_				-	Page 1 of 1 Job #:	
Groundwater & Environmental Services Inc									A	naly	sis F	leque	sted			_		
Address: 415 Lawrence Bell Drive Suite 6	Due Date Requested:																Preservation Coo A - HCL	M - Hexane
Sity: Williamsville	TAT Reque	ested (d	ays):														B - NaOH C - Zn Acetate D - Nitric Acid	N - None O - AsNaO2 P - Na2O4S
State, Zip: NY, 14221														1			O - NRINC ACIO	P - Na2045
² hone: 518-402-9662(Tel)	PO #: CallOut I	ID 136	076			0												
mail: palmer@gesonline.com	WO #: GES Pro					Z												
Project Name:	Project #:					(Yes or s or No)		ars)										
Gastown WWTP #915171 - Monthly Event Desc: Monthly Site:	4800252 SSOW#:	25				mple (Yes	tal	51 (St	4	e	otal			480	0-1522	1	nain of Custody	
New York	-					d Sa	de, To	Hd +	1, 50	B, K, I	nity, T					er of		
Sample Identification	Sample	e Date	Sample Time	Type (w	atrix =water, =solid, vaste/oil, sue, A=Air)	Field Filtere Perform MS		SM4500_H+ - рн 8260С - TCL + CP-51 (Stars)	300.0_28D - CI, SO4	200.7 - Ca, Mg, K, Na	310.2 - Alkalinity, Total					Total Number of	Special II	structions/Note:
		<	>	Preservation			BN	_	N	_	N				UT T	X		
Post-Carbon 2	4/18	18	1030	GV	Vater		x	x x	(
Pre-Carbon	4/17	118	1045	C v	Vater			×	(X	X	×	-		_				
	_							+	-	+	$\left \right $	-	++		\vdash	-		
	-					\square		+	-	+		+	++	+	$\left \right $			
	-							+	1	1			++	+				
																1		
Possible Hazard Identification	oison B	Unkr	nown \Box_{F}	Radiological		Sa		urn T			may	Disp	essed if losal By	sampl Lab	es are	7	ed longer than the start	1 month) Months
Deliverable Requested: I, II, III, IV, Other (specify)						Sp					equire	ments						
Empty Kit Relinquished by:			Date:			Time:			1	1			Method	of Shipn	nent:	,	2	
Relinquished by:	Date/Time	-1/19	119 12	25 Com	pany	2	Receiv	ed by:	7	Ul	1.	_		Date	/Time:	191	18 122	Company G
Relinquished by:	Date/Time	;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;	her in		pany		Receiv			~~~	~			Date	e/Time:	11	1 100	Company
Relinquished by:	Date/Time	e:		Com	pany		Receiv	ed by:			-			Date/Time: Comp			Company	
Custody Seals Intact: Δ Yes Δ No							Cooler	Tempe	erature	(s) ⁰C a	and Oth	er Rema	rks:	4	Øt	ŧſ	ICE	
			-											1.	1-0		- La	Ver: 01/16/2019

Page 15 of 17

5/9/2019

TestAmerica		
THE LEADER IN ENVIRONMENTAL TESTING Nashville, TN	COOLER RECEIPT FORM	480-152290 Chain of Custody
Cooler Received/Opened On_4/24/2019@_	930	Clustody
	Time Samples Placed In Storage 1,0	<u>ໃ</u> (2 Hour Window)
	oH Strip Lot Chlorine Strip Lot	
2. Temperature of rep. sample or temp blan		
 If Item #2 temperature is 0°C or less, was t Were custody seals on outside of cooler? If yes, how many and where: 	he representative sample or temp blank frozen? I(Front)	YES NONA
5. Were the seals intact, signed, and dated co	prrectly?	YES NO NA
 Were custody papers inside cooler? <u>I certify that I opened the cooler and answered</u> 	I questions 1-6 (intial)	TESNONA
7. Were custody seals on containers:	YES (NO) and Intact	YESNONA
Were these signed and dated correctly?	· ····	YESNONA
8. Packing mat'l used? Bubblewrap Pl	astic bag Peanuts Vermiculite Foam Insert P	
9. Cooling process:	Cce lce-pack Ice (direct contact) Dry ic	
10. Did all containers arrive in good condition	(unbroken)?	ENONA
11. Were all container labels complete (#, date	, signed, pres., etc)?	(E)NONA
12. Did all container labels and tags agree with	custody papers?	YESNO. (NA)
13a. Were VOA vials received?		(YES)NONA
b. Was there any observable headspace pres	sent in any VOA vial?	YES.(.NO).NA
Larger than this.		
14. Was there a Trip Blank in this cooler?	YES(10)NA If multiple coolers, seque	nce #
I certify that I unloaded the cooler and answered		
15a. On pres'd bottles, did pH test strips sugge	st preservation reached the correct pH level?	YESNO.
b. Did the bottle labels indicate that the corre	ect preservatives were used	ESINONA
16. Was residual chlorine present?		YESNO.
I certify that I checked for chlorine and pH as per	SOP and answered questions 15-16 (intial)	12
17. Were custody papers properly filled out (ink,		(TE)NONA
18. Did you sign the custody papers in the appro	opriate place?	E. NO. (NA)
19. Were correct containers used for the analysi	s requested?	VESNONA
20. Was sufficient amount of sample sent in each		ESNONA
I certify that I entered this project into LIMS and a	inswered questions 17-20 (intial)	
I certify that I attached a label with the unique LIN		
21. Were there Non-Conformance issues at login	N	#

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9

10

Client: New York State D.E.C.

Login Number: 152290

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 (Excluding tests with immediate HTs)	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	

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-155334-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomayer

Authorized for release by: 7/8/2019 11:28:45 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

..... Links

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Ask-

The

www.testamericainc.com

Visit us at:

Expert

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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. Giacomage

Joe Giacomazza Project Management Assistant II 7/8/2019 11:28:45 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Not Calculated

Quality Control

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

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)

2

Qualifiers

NC

ND

PQL

QC RER

RL RPD

TEF

TEQ

quantore		3
GC/MS 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 Chen	nistry	5
Qualifier	Qualifier Description	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	6
Glossary		7
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	8
%R	Percent Recovery	0
CFL	Contains Free Liquid	0
CNF	Contains No Free Liquid	9
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-155334-1

Comments

No additional comments.

Receipt

The samples were received on 6/21/2019 11:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-479388 recovered outside acceptance criteria, low biased, for Cyclohexane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: Post-Carbon 2 (480-155334-1) and Pre-Carbon (480-155334-2).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-479388 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: Post-Carbon 2 (480-155334-1) and Pre-Carbon (480-155334-2).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-155334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-155334-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 9040C, 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 2 (480-155334-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 06/21/19 11:30 Date Received: 06/21/19 11:55

Lab Sample ID: 480-155334-1

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
I,1,1-Trichloroethane	ND	1.0	0.82	ug/L			06/25/19 16:22	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			06/25/19 16:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			06/25/19 16:22	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			06/25/19 16:22	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			06/25/19 16:22	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			06/25/19 16:22	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			06/25/19 16:22	1
,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			06/25/19 16:22	1
,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			06/25/19 16:22	
I,2-Dichlorobenzene	ND	1.0	0.79	ug/L			06/25/19 16:22	• • • • • • •
I,2-Dichloroethane	ND	1.0	0.21	ug/L			06/25/19 16:22	
1,2-Dichloropropane	ND	1.0	0.72	ug/L			06/25/19 16:22	
1,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			06/25/19 16:22	• • • • • • •
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			06/25/19 16:22	1
,4-Dichlorobenzene	ND	1.0	0.84	ug/L			06/25/19 16:22	
2-Butanone (MEK)	ND	10	1.3	ug/L			06/25/19 16:22	
2-Hexanone	ND	5.0	1.2	ug/L			06/25/19 16:22	
Isopropyltoluene	ND	1.0		ug/L			06/25/19 16:22	
-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			06/25/19 16:22	
Acetone	ND	10		ug/L			06/25/19 16:22	
Benzene	ND	1.0	0.41	-			06/25/19 16:22	
Bromoform	ND	1.0		ug/L			06/25/19 16:22	
Bromomethane	ND	1.0	0.69	-			06/25/19 16:22	
Carbon disulfide	ND	1.0	0.19	-			06/25/19 16:22	
Carbon tetrachloride	ND	1.0	0.27				06/25/19 16:22	
Chlorobenzene	ND	1.0	0.75	-			06/25/19 16:22	
Dibromochloromethane	ND	1.0	0.32	-			06/25/19 16:22	
Chloroethane	ND	1.0	0.32				06/25/19 16:22	
Chloroform	ND	1.0	0.34	-			06/25/19 16:22	
Chloromethane	ND	1.0	0.35	-			06/25/19 16:22	
is-1,2-Dichloroethene	ND	1.0	0.81				06/25/19 16:22	
Cyclohexane	ND	1.0	0.18	-			06/25/19 16:22	
Bromodichloromethane	ND	1.0	0.39				06/25/19 16:22	
Dichlorodifluoromethane	ND	1.0		ug/L			06/25/19 16:22	
Ethylbenzene	ND	1.0	0.74	-			06/25/19 16:22	
,2-Dibromoethane	ND	1.0	0.73				06/25/19 16:22	
sopropylbenzene	ND	1.0		ug/L			06/25/19 16:22	
Aethyl acetate	ND	2.5		ug/L			06/25/19 16:22	
Aethyl tert-butyl ether	ND	1.0		ug/L			06/25/19 16:22	
lethylcyclohexane	ND	1.0		ug/L			06/25/19 16:22	
lethylene Chloride	ND	1.0	0.44				06/25/19 16:22	
n,p-Xylene	ND	2.0	0.66	•			06/25/19 16:22	
laphthalene	ND	1.0		ug/L			06/25/19 16:22	
-Butylbenzene	ND	1.0		ug/L			06/25/19 16:22	
-Dutybenzene I-Propylbenzene	ND	1.0	0.69	•			06/25/19 16:22	
	ND	1.0		ug/L ug/L			06/25/19 16:22	
-	ND	1.0					06/25/19 16:22	
sec-Butylbenzene			0.75					
etrachloroethene oluene	ND ND	1.0 1.0	0.36	ug/L ug/L			06/25/19 16:22 06/25/19 16:22	

Eurofins TestAmerica, Buffalo

Client Sample ID: Post-Carbon 2 Date Collected: 06/21/19 11:30

Date Received: 06/21/19 11:55

Lab Sample ID: 480-155334-1

Matrix: Wastewater

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/25/19 16:22	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			06/25/19 16:22	1
Trichloroethene	ND		1.0	0.46	ug/L			06/25/19 16:22	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			06/25/19 16:22	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/25/19 16:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/25/19 16:22	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			06/25/19 16:22	1
Styrene	ND		1.0	0.73	ug/L			06/25/19 16:22	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			06/25/19 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120			-		06/25/19 16:22	1
4-Bromofluorobenzene (Surr)	106		73 - 120					06/25/19 16:22	1
Toluene-d8 (Surr)	93		80 - 120					06/25/19 16:22	1
Dibromofluoromethane (Surr)	109		75 - 123					06/25/19 16:22	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

L	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Cyanide, Total	0.059		0.010	0.0050	mg/L		07/01/19 15:05	07/02/19 13:06	1
	Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	рН	7.3	HF	0.1	0.1	SU			06/25/19 13:39	1
l	Temperature	20.7	HF	0.001	0.001	Degrees C			06/25/19 13:39	1

RL

25

MDL Unit

21 ug/L

D

Prepared

Client Sample ID: Pre-Carbon Date Collected: 06/21/19 11:40 Date Received: 06/21/19 11:55

Analyte

Toluene

1,1,1-Trichloroethane

Method: 8260C - Volatile Organic Compounds by GC/MS

Result Qualifier

ND

Lab Sample ID: 480-155334-2

Analyzed

06/25/19 16:46

Matrix: Wastewater

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Dil Fac

25

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	ne -	20	21 08	29/E	00/20/10 10:10	20	
1,1,2,2-Tetrachloroethane	ND	25	5.3 ug	J/L	06/25/19 16:46	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	25	7.8 ug	ıg/L	06/25/19 16:46	25	
1,1,2-Trichloroethane	ND	25	5.8 ug	ıg/L	06/25/19 16:46	25	
1,1-Dichloroethane	ND	25	9.5 ug	ıg/L	06/25/19 16:46	25	
1,1-Dichloroethene	ND	25	7.3 ug	Jg/L	06/25/19 16:46	25	
1,2,4-Trichlorobenzene	ND	25	10 ug	ıg/L	06/25/19 16:46	25	
1,2,4-Trimethylbenzene	ND	25	19 ug		06/25/19 16:46	25	
1,2-Dibromo-3-Chloropropane	ND	25	9.8 ug	-	06/25/19 16:46	25	
1,2-Dichlorobenzene	ND	25	20 ug		06/25/19 16:46	25	
1,2-Dichloroethane	ND	25	5.3 ug		06/25/19 16:46	25	
1,2-Dichloropropane	ND	25	18 ug		06/25/19 16:46	25	
1,3,5-Trimethylbenzene	ND	25	19 ug		06/25/19 16:46	25	
1,3-Dichlorobenzene	ND	25		ıg/L	06/25/19 16:46	25	
1,4-Dichlorobenzene	ND	25	21 ug	-	06/25/19 16:46	25	
2-Butanone (MEK)	ND	250	33 ug		06/25/19 16:46	25	
2-Hexanone	ND	130		ıg/L	06/25/19 16:46	25	
4-Isopropyltoluene	ND	25	7.8 ug	-	06/25/19 16:46	25	
4-Methyl-2-pentanone (MIBK)	ND	130	53 ug		06/25/19 16:46	25	
Acetone	ND	250	75 ug		06/25/19 16:46	25	
		250	-	-	06/25/19 16:46	25	
Bromoform	980		10 ug				
Bromoform	ND	25	6.5 ug		06/25/19 16:46 06/25/19 16:46	25	
Bromomethane	ND	25	17 ug	-		25	
Carbon disulfide	ND	25	4.8 ug		06/25/19 16:46	25	
Carbon tetrachloride	ND	25	6.8 ug		06/25/19 16:46	25	
Chlorobenzene	ND	25	-	ıg/L	06/25/19 16:46	25	
Dibromochloromethane	ND	25	8.0 uç		06/25/19 16:46	25	
Chloroethane	ND	25	8.0 ug		06/25/19 16:46	25	
Chloroform	ND	25	8.5 ug		06/25/19 16:46	25	
Chloromethane	ND	25	8.8 ug		06/25/19 16:46	25	
cis-1,2-Dichloroethene	ND	25	20 ug		06/25/19 16:46	25	
Cyclohexane	ND	25	4.5 ug		06/25/19 16:46	25	
Bromodichloromethane	ND	25	9.8 ug		06/25/19 16:46	25	
Dichlorodifluoromethane	ND	25	17 ug		06/25/19 16:46	25	
Ethylbenzene	ND	25	19 ug	ıg/L	06/25/19 16:46	25	
1,2-Dibromoethane	ND	25	18 ug	ıg/L	06/25/19 16:46	25	
Isopropylbenzene	ND	25	20 ug	J/L	06/25/19 16:46	25	
Methyl acetate	ND	63	33 ug	ıg/L	06/25/19 16:46	25	
Methyl tert-butyl ether	ND	25	4.0 ug	ıg/L	06/25/19 16:46	25	
Methylcyclohexane	ND	25	4.0 ug	ıg/L	06/25/19 16:46	25	
Methylene Chloride	ND	25	11 ug	J/L	06/25/19 16:46	25	
m,p-Xylene	40 J	50	17 ug	Jg/L	06/25/19 16:46	25	
Naphthalene	34	25	11 ug	ıg/L	06/25/19 16:46	25	
n-Butylbenzene	ND	25	16 uç	ıg/L	06/25/19 16:46	25	
N-Propylbenzene	ND	25	17 ug	Jg/L	06/25/19 16:46	25	
o-Xylene	23 J	25	19 ug	ıg/L	06/25/19 16:46	25	
sec-Butylbenzene	ND	25	19 ug	ıg/L	06/25/19 16:46	25	
Tetrachloroethene	ND	25	9.0 ug	ıg/L	06/25/19 16:46	25	

Eurofins TestAmerica, Buffalo

06/25/19 16:46

25

13 ug/L

120

Client Sample ID: Pre-Carbon Date Collected: 06/21/19 11:40

Date Received: 06/21/19 11:55

Method: 8260C - Volatile Orga	nic Compounds b	y GC/MS (Continued)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		25	23	ug/L			06/25/19 16:46	25
trans-1,3-Dichloropropene	ND		25	9.3	ug/L			06/25/19 16:46	25
Trichloroethene	ND		25	12	ug/L			06/25/19 16:46	25
Trichlorofluoromethane	ND		25	22	ug/L			06/25/19 16:46	25
Vinyl chloride	ND		25	23	ug/L			06/25/19 16:46	25
Xylenes, Total	63		50	17	ug/L			06/25/19 16:46	25
cis-1,3-Dichloropropene	ND		25	9.0	ug/L			06/25/19 16:46	25
Styrene	ND		25	18	ug/L			06/25/19 16:46	25
tert-Butylbenzene	ND		25	20	ug/L			06/25/19 16:46	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

<i>/////////////////////////////////////</i>	quanner	Linito		ricpurcu	<i>Fillaly</i> 200	Diriao	
104		77 - 120			06/25/19 16:46	25	
95		73 - 120			06/25/19 16:46	25	
94		80 - 120			06/25/19 16:46	25	
101		75 - 123			06/25/19 16:46	25	
	95 94	104 95 94	104 77 - 120 95 73 - 120 94 80 - 120	104 77 - 120 95 73 - 120 94 80 - 120	104 77 - 120 95 73 - 120 94 80 - 120	104 77 - 120 06/25/19 16:46 95 73 - 120 06/25/19 16:46 94 80 - 120 06/25/19 16:46	104 77 - 120 06/25/19 16:46 25 95 73 - 120 06/25/19 16:46 25 94 80 - 120 06/25/19 16:46 25

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	108000		500	100	ug/L		06/25/19 14:20	06/28/19 16:07	1
Magnesium	33400		200	43.4	ug/L		06/25/19 14:20	06/28/19 16:07	1
Potassium	4940		500	100	ug/L		06/25/19 14:20	06/28/19 16:07	1
Sodium	84900		1000	324	ug/L		06/25/19 14:20	06/28/19 16:07	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	134		2.5	1.4	mg/L			06/26/19 12:44	5
Sulfate	83.7		10.0	1.7	mg/L			06/26/19 12:44	5
Alkalinity, Total	273		40.0	16.0	mg/L			07/05/19 15:27	4

7/8/2019

Matrix: Wastewater

Lab Sample ID: 480-155334-2

-9 1(

Client Sample ID: Post-Carbon 2 Date Collected: 06/21/19 11:30 Date Received: 06/21/19 11:55

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	479388	06/25/19 16:22	AEM	TAL BUF
Total/NA	Prep	Distill/CN			480438	07/01/19 15:05	AJL	TAL BUF
Total/NA	Analysis	335.4		1	480570	07/02/19 13:06	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	479558	06/25/19 13:39	KMF	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 06/21/19 11:40 Date Received: 06/21/19 11:55

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	479388	06/25/19 16:46	AEM	TAL BUF
Total/NA	Prep	200.7			479530	06/25/19 14:20	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	480340	06/28/19 16:07	AMH	TAL BUF
Total/NA	Analysis	300.0		5	479685	06/26/19 12:44	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	481031	07/05/19 15:27	KEB	TAL BUF

Laboratory References:

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

Job ID: 480-155334-1

Lab Sample ID: 480-155334-1

Lab Sample ID: 480-155334-2

Matrix: Wastewater

Matrix: Wastewater

Laboratory: Eurofins TestAmerica, Buffalo

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

2	10026	
-	10020	03-31-20
ed by the governi	ng authority. This list may inclu	ude analytes for whic
	ed by the governi	ed by the governing authority. This list may incl

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

Eurofins TestAmerica, Buffalo

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

Vethod	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	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
200.7	Preparation, Total Metals	EPA	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-155334-1	Post-Carbon 2	Wastewater	06/21/19 11:30	06/21/19 11:55	
480-155334-2	Pre-Carbon	Wastewater	06/21/19 11:40	06/21/19 11:55	

TestAmerica Buffalo

Chain of Custody Record



10 Hazelwood Drive Amherst, NY 14228-2298 e (716) 691-2600 Eax (716) 691-7001 DL

Email WO A	Client Information	Sampler:	WR		Lab PM: Johnso	on, Or	lette S					C	arrier Tra	acking h	No(s):			COC No: 480-123660-280	090.1
Bandback & Environmental Services Inc Out Disk Requested: Ou		Phone:	2230	7857		johns	son@te	stam	ericair	10.00	m								
Sample Dation One Data Requested: Operation Code::: Code:::: Code::: Code::: Code::: Code::: Code:::: Code:::: Code:::: Code:::: Code:::: Code:::: Code::::::::::::::::::::::::::::::::::::									A	naly	sis	Requ	estec	1					
Arr Mar Requested (days): Mar Requested (days): <t< td=""><td>\ddress:</td><td>Due Date Requeste</td><td>ed:</td><td></td><td>1</td><td colspan="7"></td><td>des:</td></t<>	\ddress:	Due Date Requeste	ed:		1								des:						
Some 2000, 120 million S	Dity:	TAT Requested (da	ays):		-														N - None
Proce Proce Proce Processes Processes<	State, Zip:	- 5	N																P - Na2O4S
918-042-002 (18) Callottin 1/380/78 G View Particle Statute 1/380/78 Set Unit 1/380/78 Set U		PO #:			-	- 480-			30-155	55334 Chain of Custody R - Na2S20				R - Na2S2O3					
Department (compared Name: Gastrom WVTP #915171 - Monthly Event Desc: Monthly Service Sample American 48002252 Sample American Sample American Sample American Sample American Sample American Sample American New York Sample American Sample Ame	518-402-9662(Tel)	CallOut ID 1360	076																T - TSP Dodecahydrate
New York Sample Jedentification Sample Jedentif	tpalmer@gesonline.com	GES Project # 0	GES Project # 0901691														2	J - DI Water	V - MCAA
New York Sample Joint (Processing) Sample Joint (Processin		Project #: 48002525			a Va	es or		Stars)									Itaine		
Preservation Code: X B N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N		SSOW#:			ume	N QS	Total	9-51 (S	04	Na	, Total		5 Other:						
Preservation Code: X B N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N				Type (w- S= (C=comp, O=w	solid, aste/oil,	Inform MS/M	5.4 - Cyanide,	nd - Tr Dr Dr.	0.0_28D - CI, S	0.7 - Ca, Mg, K	0.2 - Alkalinity						tal Number o		
Pest-Carbon 2 G Z1 IS 1130 G Water W X X X X Image: Company Sector 2 (Company Secto	Sample Identification	Sample Date	Time			10 1	The second second	-		-		-	-	1000	1000		P L	Special I	nstructions/Note:
Pre-Carbon G Zi IS IYO G Water IV X	Post-Carbon 2	67118	1130					-	-								P		
Possible Hazard Identification Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Possible Hazard Identification Possible Hazard Identification Pote: Time: Method of Shipment: Empty Kit Relinquished by: Date: Time: Company Received by: Date: Time: Method of Shipment: Relinquished by: Date: Time: Company Received by: Date: Time: Date: Time: Date: Company Relinquished by: Date: Time: Company Received by: Date: Company Received by: Date: Company Relinquished by: Date: Company Received by: Date: Company Received by: Date: Company Relinquished by: Date: Company Received by: Date: Company Received by: Date: Company Relinquished by: Date: Company Received by: Date: Company Received by: Date: Company <td>Pre-Carbon</td> <td></td> <td></td> <td></td> <td>/ater</td> <td>in</td> <td></td> <td>-</td> <td>-</td> <td>x</td> <td>x</td> <td></td> <td>+</td> <td>+</td> <td></td> <td>+</td> <td></td> <td></td> <td></td>	Pre-Carbon				/ater	in		-	-	x	x		+	+		+			
Non-Hazard Flammable Skin Inritant Poison B Unknown Radiological Return To Client Disposal By Lab Archive For Months Deliverable Requested: I, II, III, IV, Other (specify) Date: Special Instructions/QC Requirements: Special Instructions/QC Requirements: Empty Kit Relinquished by: Date/Time: Date/Time: Method of Shipment: Relinquished by: Date/Time: LISS Company Received by: Date/Time: Company Relinquished by: Date/Time: Date/Time: Company Received by: Date/Time: Company Relinquished by: Date/Time: Date/Time: Company Received by: Date/Time: Company Relinquished by: Date/Time: Date/Time: Company Received by: Date/Time: Company Relinquished by: Date/Time: Company Received by: Date/Time: Company Relinquished by: Date/Time: Company Received by: Date/Time: Company		610.11	11 10			11		+	-	1	1		+	1		+			
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Deliverable Requested: I, II, III, IV, Other (specify) Special Instructions/QC Requirements: Empty Kit Relinquished by: Date/Time: Date/Time: Relinquished by: Date/Time: Company	Non-Hazard Flammable Skin Irritant	Poison B Unk	nown	Radiological			Re	turn T	To Clie	ent			sposal	By La	ab				
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*

Client: New York State D.E.C.

Login Number: 155334 List Number: 1

Creator: Harper, Marcus D

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 (Excluding tests with immediate HTs)	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	OGS
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	

11

List Source: Eurofins TestAmerica, Buffalo

Eurofins TestAmerica, Buffalo

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Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-153683-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Quarterly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomogra

Authorized for release by: 7/17/2019 2:51:13 PM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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.

LINKS Review your project results through TOTAL ACCESS



Visit us at: www.testamericainc.com 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. Giacomagge

Joe Giacomazza Project Management Assistant II 7/17/2019 2:51:13 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	7
Lab Chronicle	12
Certification Summary	13
Method Summary	14
Sample Summary	15
Chain of Custody	16
Receipt Checklists	17

Qualifiers

CC/MC VOA		

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	5
GC/MS Semi	VOA	
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
GC Semi VO	Α	
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	8
General Cher	mistry	
Qualifier	Qualifier Description	9
*	LCS or LCSD is outside acceptance limits.	
В	Compound was found in the blank and sample.	
F1	MS and/or MSD Recovery is outside acceptance limits.	
Н	Sample was prepped or analyzed beyond the specified holding time	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
	······································	

Glossary

Olossaly	
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
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Job ID: 480-153683-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-153683-1

Case Narrative

Comments

No additional comments.

Receipt

The samples were received on 5/17/2019 12:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-474636 recovered outside acceptance criteria, low biased, for 1,1-Dichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. the following samples are impacted: Post-Carbon 2 (480-153683-1) and Pre-Carbon (480-153683-2).

Method(s) 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) associated with batch 480-474636 The following samples were affected : Post-Carbon 2 (480-153683-1) and Pre-Carbon (480-153683-2).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-153683-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 480-473786 and analytical batch 480-474183 recovered outside control limits for the following analytes: Pentachlorophenol. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following sample is impacted:Post-Carbon (480-153683-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-153683-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 608.3: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 480-473851 and analytical batch 480-474055 recovered outside control limits for the following analytes: 4,4'-DDT. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 1664A, 1664B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-476855 and analytical batch 480-476865 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 420.1, 9065: The following sample was prepared within analytical hold time but were analyzed outside of analytical holding time due to Instrument issues: Post-Carbon 2 (480-153683-1).

Job ID: 480-153683-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

Method(s) 9040C, 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 2 (480-153683-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-473851.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 05/17/19 10:30 Date Received: 05/17/19 12:35

Lab Sample ID: 480-153683-1

Matrix: Wastewater

Analyte	Result Qualifier	RL		Unit	D Prepare		Dil Fac
I,1,1-Trichloroethane	ND	1.0	0.82			05/25/19 17:50	1
I,1,2,2-Tetrachloroethane	ND	1.0	0.21	-		05/25/19 17:50	1
,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	-		05/25/19 17:50	1
I,1,2-Trichloroethane	ND	1.0	0.23	-		05/25/19 17:50	1
I,1-Dichloroethane	ND	1.0	0.38	-		05/25/19 17:50	1
,1-Dichloroethene	ND	1.0	0.29	-		05/25/19 17:50	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	-		05/25/19 17:50	1
I,2,4-Trimethylbenzene	ND	1.0	0.75	-		05/25/19 17:50	1
,2-Dibromo-3-Chloropropane	ND	1.0	0.39	-		05/25/19 17:50	1
1,2-Dichlorobenzene	ND	1.0	0.79	-		05/25/19 17:50	1
1,2-Dichloroethane	ND	1.0	0.21	-		05/25/19 17:50	1
,2-Dichloropropane	ND	1.0	0.72	-		05/25/19 17:50	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	-		05/25/19 17:50	1
1,3-Dichlorobenzene	ND	1.0	0.78	-		05/25/19 17:50	1
,4-Dichlorobenzene	ND	1.0	0.84	-		05/25/19 17:50	1
2-Butanone (MEK)	ND *	10	1.3	ug/L		05/25/19 17:50	1
2-Hexanone	ND	5.0		ug/L		05/25/19 17:50	1
I-IsopropyItoluene	ND	1.0	0.31	-		05/25/19 17:50	1
I-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L		05/25/19 17:50	1
Acetone	ND	10	3.0	ug/L		05/25/19 17:50	1
Benzene	ND	1.0	0.41	-		05/25/19 17:50	1
Bromoform	ND	1.0	0.26	ug/L		05/25/19 17:50	1
Bromomethane	ND	1.0	0.69	ug/L		05/25/19 17:50	1
Carbon disulfide	ND	1.0	0.19	ug/L		05/25/19 17:50	1
Carbon tetrachloride	ND	1.0	0.27	ug/L		05/25/19 17:50	1
Chlorobenzene	ND	1.0	0.75	ug/L		05/25/19 17:50	1
Dibromochloromethane	ND	1.0	0.32	ug/L		05/25/19 17:50	1
Chloroethane	ND	1.0	0.32	ug/L		05/25/19 17:50	1
Chloroform	ND	1.0	0.34	ug/L		05/25/19 17:50	1
Chloromethane	ND	1.0	0.35	ug/L		05/25/19 17:50	1
cis-1,2-Dichloroethene	ND	1.0	0.81	ug/L		05/25/19 17:50	1
Cyclohexane	ND	1.0	0.18	ug/L		05/25/19 17:50	1
Bromodichloromethane	ND	1.0	0.39	ug/L		05/25/19 17:50	1
Dichlorodifluoromethane	ND	1.0	0.68	-		05/25/19 17:50	1
Ethylbenzene	ND	1.0	0.74			05/25/19 17:50	1
I,2-Dibromoethane	ND	1.0	0.73	ug/L		05/25/19 17:50	1
sopropylbenzene	ND	1.0		ug/L		05/25/19 17:50	1
Methyl acetate	ND	2.5		ug/L		05/25/19 17:50	1
Methyl tert-butyl ether	ND	1.0		ug/L		05/25/19 17:50	1
Methylcyclohexane	ND	1.0		ug/L		05/25/19 17:50	1
/ethylene Chloride	ND	1.0		ug/L		05/25/19 17:50	1
n,p-Xylene	ND	2.0		ug/L		05/25/19 17:50	1
Japhthalene	ND	1.0		ug/L		05/25/19 17:50	1
n-Butylbenzene	ND	1.0		ug/L		05/25/19 17:50	1
N-Propylbenzene	ND	1.0	0.69	-		05/25/19 17:50	1
p-Xylene	ND	1.0		ug/L		05/25/19 17:50	1
sec-Butylbenzene	ND	1.0		ug/L		05/25/19 17:50	1
Tetrachloroethene	ND	1.0		ug/L		05/25/19 17:50	1
Toluene	ND	1.0		ug/L		05/25/19 17:50	1

Eurofins TestAmerica, Buffalo

Client Sample ID: Post-Carbon 2 Date Collected: 05/17/19 10:30 Date Received: 05/17/19 12:35

ī.

2-Fluorophenol

2,4,6-Tribromophenol

Lab Sample ID: 480-153683-1

Matrix: Wastewater

Method: 8260C - Volatile O Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			05/25/19 17:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			05/25/19 17:50	1
Trichloroethene	ND		1.0	0.46	ug/L			05/25/19 17:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			05/25/19 17:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			05/25/19 17:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			05/25/19 17:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			05/25/19 17:50	1
Styrene	ND		1.0	0.73	ug/L			05/25/19 17:50	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			05/25/19 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					05/25/19 17:50	1
4-Bromofluorobenzene (Surr)	91		73 - 120					05/25/19 17:50	1
Toluene-d8 (Surr)	93		80 - 120					05/25/19 17:50	1
Dibromofluoromethane (Surr)	96		75 - 123					05/25/19 17:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		05/20/19 15:58	05/23/19 03:16	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		05/20/19 15:58	05/23/19 03:16	1
Acenaphthene	ND		5.0	0.41	ug/L		05/20/19 15:58	05/23/19 03:16	1
Acenaphthylene	ND		5.0	0.38	ug/L		05/20/19 15:58	05/23/19 03:16	1
Anthracene	ND		5.0	0.28	ug/L		05/20/19 15:58	05/23/19 03:16	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		05/20/19 15:58	05/23/19 03:16	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		05/20/19 15:58	05/23/19 03:16	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		05/20/19 15:58	05/23/19 03:16	1
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		05/20/19 15:58	05/23/19 03:16	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		05/20/19 15:58	05/23/19 03:16	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		05/20/19 15:58	05/23/19 03:16	1
Carbazole	ND		5.0	0.30	ug/L		05/20/19 15:58	05/23/19 03:16	1
Chrysene	ND		5.0	0.33	ug/L		05/20/19 15:58	05/23/19 03:16	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		05/20/19 15:58	05/23/19 03:16	1
Dibenzofuran	ND		10	0.51	ug/L		05/20/19 15:58	05/23/19 03:16	1
Fluoranthene	ND		5.0	0.40	ug/L		05/20/19 15:58	05/23/19 03:16	1
Fluorene	ND		5.0	0.36	ug/L		05/20/19 15:58	05/23/19 03:16	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		05/20/19 15:58	05/23/19 03:16	1
Naphthalene	ND		5.0	0.76	ug/L		05/20/19 15:58	05/23/19 03:16	1
Pentachlorophenol	ND	*	10	2.2	ug/L		05/20/19 15:58	05/23/19 03:16	1
Phenanthrene	ND		5.0	0.44	ug/L		05/20/19 15:58	05/23/19 03:16	1
Phenol	ND		5.0	0.39	ug/L		05/20/19 15:58	05/23/19 03:16	1
Pyrene	ND		5.0	0.34	ug/L		05/20/19 15:58	05/23/19 03:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	85		46 - 120				05/20/19 15:58	05/23/19 03:16	1
2-Fluorobiphenyl	88		48 - 120				05/20/19 15:58	05/23/19 03:16	1
p-Terphenyl-d14	98		59 - 136				05/20/19 15:58	05/23/19 03:16	1
Phenol-d5	46		22 - 120				05/20/19 15:58	05/23/19 03:16	1

05/20/19 15:58 05/23/19 03:16

05/20/19 15:58 05/23/19 03:16

35 - 120

41 - 120

57

82

1

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

Client Sample ID: Post-Carbon 2 Date Collected: 05/17/19 10:30 Date Received: 05/17/19 12:35

Lab Sample ID: 480-153683-1 Matrix: Wastewater

Matrix: Wastewater

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.048	0.0077	ug/L		05/21/19 08:18	05/22/19 10:57	1
alpha-BHC	ND		0.048	0.0073	ug/L		05/21/19 08:18	05/22/19 10:57	1
beta-BHC	ND		0.048	0.024	ug/L		05/21/19 08:18	05/22/19 10:57	1
delta-BHC	ND		0.048	0.0095	ug/L		05/21/19 08:18	05/22/19 10:57	1
gamma-BHC (Lindane)	ND		0.048	0.0076	ug/L		05/21/19 08:18	05/22/19 10:57	1
Chlordane (technical)	ND		0.48	0.28	ug/L		05/21/19 08:18	05/22/19 10:57	1
4,4'-DDD	ND		0.048	0.0088	ug/L		05/21/19 08:18	05/22/19 10:57	1
4,4'-DDE	ND		0.048	0.011	ug/L		05/21/19 08:18	05/22/19 10:57	1
4,4'-DDT	ND	*	0.048	0.010	ug/L		05/21/19 08:18	05/22/19 10:57	1
Dieldrin	ND		0.048	0.0093	ug/L		05/21/19 08:18	05/22/19 10:57	1
Endosulfan I	ND		0.048	0.010	ug/L		05/21/19 08:18	05/22/19 10:57	1
Endosulfan II	ND		0.048	0.011	ug/L		05/21/19 08:18	05/22/19 10:57	1
Endosulfan sulfate	ND		0.048	0.015	ug/L		05/21/19 08:18	05/22/19 10:57	1
Endrin	ND		0.048	0.013	ug/L		05/21/19 08:18	05/22/19 10:57	1
Endrin aldehyde	ND		0.048	0.016	ug/L		05/21/19 08:18	05/22/19 10:57	1
Heptachlor	ND		0.048	0.0081	ug/L		05/21/19 08:18	05/22/19 10:57	1
Heptachlor epoxide	ND		0.048	0.0070	ug/L		05/21/19 08:18	05/22/19 10:57	1
Toxaphene	ND		0.48	0.11	ug/L		05/21/19 08:18	05/22/19 10:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	80		23 - 120				05/21/19 08:18	05/22/19 10:57	1
Tetrachloro-m-xylene	81		44 - 120				05/21/19 08:18	05/22/19 10:57	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	2.7	J F1 B	5.0	1.4	mg/L		06/08/19 08:53	06/08/19 11:32	1
Cyanide, Total	0.17		0.010	0.0050	mg/L		05/29/19 16:28	05/30/19 19:31	1
Phenolics, Total Recoverable	0.014	В*	0.010	0.0050	mg/L		06/13/19 11:55	06/13/19 23:30	1
Phenolics, Total Recoverable	0.0065	JH	0.010	0.0050	mg/L		06/13/19 11:55	06/17/19 21:14	1
Total Dissolved Solids	813		10.0	4.0	mg/L			05/24/19 10:41	1
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			05/19/19 06:48	1
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L			05/23/19 17:35	1
рН	7.4	HF	0.1	0.1	SU			05/22/19 17:02	1
Temperature	40.4	HE	0.001	0.001	Degrees C			05/22/19 17:02	1

Client Sample ID: Pre-Carbon Date Collected: 05/17/19 10:45 Date Received: 05/17/19 12:35

Lab Sample ID: 480-153683-2

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	25	21	ug/L			05/25/19 18:14	25
1,1,2,2-Tetrachloroethane	ND	25		ug/L			05/25/19 18:14	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	25		ug/L			05/25/19 18:14	25
1,1,2-Trichloroethane	ND	25		ug/L			05/25/19 18:14	25
1,1-Dichloroethane	ND	25	9.5	ug/L			05/25/19 18:14	25
1,1-Dichloroethene	ND	25	7.3	ug/L			05/25/19 18:14	25
1,2,4-Trichlorobenzene	ND	25	10	ug/L			05/25/19 18:14	25
1,2,4-Trimethylbenzene	ND	25	19	ug/L			05/25/19 18:14	25
1,2-Dibromo-3-Chloropropane	ND	25	9.8	ug/L			05/25/19 18:14	25
1,2-Dichlorobenzene	ND	25	20	ug/L			05/25/19 18:14	25
1,2-Dichloroethane	ND	25	5.3	ug/L			05/25/19 18:14	25
1,2-Dichloropropane	ND	25	18	ug/L			05/25/19 18:14	25
1,3,5-Trimethylbenzene	ND	25	19	ug/L			05/25/19 18:14	25
1,3-Dichlorobenzene	ND	25	20	ug/L			05/25/19 18:14	25
1,4-Dichlorobenzene	ND	25		ug/L			05/25/19 18:14	25
2-Butanone (MEK)	ND *	250		ug/L			05/25/19 18:14	25
2-Hexanone	ND	130		ug/L			05/25/19 18:14	25
1-Isopropyltoluene	ND	25		ug/L			05/25/19 18:14	25
1-Methyl-2-pentanone (MIBK)	ND	130		ug/L			05/25/19 18:14	25
Acetone	ND	250		ug/L			05/25/19 18:14	25
Benzene	2300	25		ug/L			05/25/19 18:14	25
Bromoform	ND	25		ug/L			05/25/19 18:14	25
Bromomethane	ND	25		ug/L			05/25/19 18:14	25
Carbon disulfide	ND	25		ug/L			05/25/19 18:14	25
Carbon tetrachloride	ND	25		ug/L			05/25/19 18:14	25
Chlorobenzene	ND	25		ug/L			05/25/19 18:14	25
Dibromochloromethane	ND	25		ug/L			05/25/19 18:14	2
Chloroethane	ND	25		ug/L			05/25/19 18:14	2
Chloroform	23 J	25		ug/L			05/25/19 18:14	25
Chloromethane	9.9 J	25		ug/L			05/25/19 18:14	25
cis-1,2-Dichloroethene	ND	25		ug/L			05/25/19 18:14	25
Cyclohexane	ND	25		ug/L ug/L			05/25/19 18:14	25
Bromodichloromethane	ND	25		ug/L ug/L			05/25/19 18:14	25
Dichlorodifluoromethane	ND	25 25		ug/L ug/L			05/25/19 18:14	25
	58	25		ug/L ug/L			05/25/19 18:14	25
Ethylbenzene	ND	25 25		-				25
1,2-Dibromoethane				ug/L			05/25/19 18:14	2:
sopropylbenzene	ND	25		ug/L			05/25/19 18:14	
Methyl acetate	ND	63 25		ug/L			05/25/19 18:14	25
Methyl tert-butyl ether	ND	25		ug/L			05/25/19 18:14	25
Methylcyclohexane	ND	25		ug/L			05/25/19 18:14	25
Methylene Chloride	17 J	25		ug/L			05/25/19 18:14	25
n,p-Xylene	73	50		ug/L			05/25/19 18:14	25
Naphthalene	100	25		ug/L			05/25/19 18:14	25
n-Butylbenzene	ND	25		ug/L			05/25/19 18:14	2
N-Propylbenzene	ND	25		ug/L			05/25/19 18:14	2
o-Xylene	43	25		ug/L			05/25/19 18:14	2
sec-Butylbenzene	ND	25		ug/L			05/25/19 18:14	2
Tetrachloroethene	ND	25	9.0	ug/L			05/25/19 18:14	2

Eurofins TestAmerica, Buffalo

Client Sample ID: Pre-Carbon Date Collected: 05/17/19 10:45 Date Received: 05/17/19 12:35

Lab Sample ID: 480-153683-2

Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		25	23	ug/L			05/25/19 18:14	25
trans-1,3-Dichloropropene	ND		25	9.3	ug/L			05/25/19 18:14	25
Trichloroethene	ND		25	12	ug/L			05/25/19 18:14	25
Trichlorofluoromethane	ND		25	22	ug/L			05/25/19 18:14	25
Vinyl chloride	ND		25	23	ug/L			05/25/19 18:14	25
Xylenes, Total	120		50	17	ug/L			05/25/19 18:14	25
cis-1,3-Dichloropropene	ND		25	9.0	ug/L			05/25/19 18:14	25
Styrene	ND		25	18	ug/L			05/25/19 18:14	25
tert-Butylbenzene	ND		25	20	ug/L			05/25/19 18:14	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1.2-Dichloroethane-d4 (Surr)	103		77 - 120			-	-	05/25/19 18:14	25

1,2-Dichioroethane-04 (Sull)	103	11 - 120	05/25/19 18.14 25	
4-Bromofluorobenzene (Surr)	90	73 - 120	05/25/19 18:14 25	
Toluene-d8 (Surr)	92	80 - 120	05/25/19 18:14 25	
Dibromofluoromethane (Surr)	104	75 - 123	05/25/19 18:14 25	

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	149000		500	100	ug/L		05/20/19 13:23	05/23/19 17:02	1
Magnesium	47300		200	43.4	ug/L		05/20/19 13:23	05/23/19 17:02	1
Potassium	5260		500	100	ug/L		05/20/19 13:23	05/23/19 17:02	1
Sodium	100000		1000	324	ug/L		05/20/19 13:23	05/23/19 17:02	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	198		2.5	1.4	mg/L			05/31/19 18:42	5
Sulfate	125		10.0	1.7	mg/L			05/31/19 18:42	5
Alkalinity, Total	330		40.0	16.0	mg/L			05/30/19 11:46	4

Batch

Number

474636

474055

476865

475457

478341

474487

Prepared

or Analyzed

05/25/19 17:50

473786 05/20/19 15:58 ATG

474183 05/23/19 03:16 PJQ

473851 05/21/19 08:18 JMP

475165 05/29/19 16:28 AJL

477642 06/13/19 11:55 DLR

478011 06/13/19 23:30 KEB

477642 06/13/19 11:55 DLR

474591 05/24/19 10:41 CSS

474365 05/22/19 17:02 KMF

473604 05/19/19 06:48 MDL

476855 06/08/19 08:53

05/22/19 10:57 JLS

06/08/19 11:32 AJS

05/30/19 19:31 JRS1

06/17/19 21:14 KEB

05/23/19 17:35 SMH

Analyst

KMN

Lab

TAL BUF

Dilution

Factor

1

1

1

1

1

1

1

1

1

1

1

Run

Client Sample ID: Post-Carbon 2 Date Collected: 05/17/19 10:30 Date Received: 05/17/19 12:35

Batch

Туре

Prep

Prep

Prep

Prep

Prep

Prep

Analysis

Prep Type

Total/NA

Batch

8260C

3510C

8270D

3510C

608.3

1664B

1664B

335.4

420.1

420.1

Distill/CN

Distill/Phenol

Distill/Phenol

SM 2540C

SM 2540D

SM 5210B

SM 4500 H+ B

Method

Lab Sample ID: 480-153683-1 Matrix: Wastewater

Client Sample ID: Pre-Carbon Date Collected: 05/17/19 10:45 Date Received: 05/17/19 12:35

Lab Sample ID: 480-153683-2 Matrix: Wastewater

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	474636	05/25/19 18:14	KMN	TAL BUF
Total/NA	Prep	200.7			473691	05/20/19 13:23	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	474577	05/23/19 17:02	AMH	TAL BUF
Total/NA	Analysis	300.0		5	475580	05/31/19 18:42	RJS	TAL BUF
Total/NA	Analysis	310.2		4	475409	05/30/19 11:46	KEB	TAL BUF

Laboratory References:

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

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

Job ID: 480-153683-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

Method Summary

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

8 9 10

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
608.3	Organochlorine Pesticides in Water	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
1664B	HEM and SGT-HEM	1664B	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
310.2	Alkalinity	MCAWW	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
420.1	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	рН	SM	TAL BUF
SM 5210B	BOD, 5-Day	SM	TAL BUF
1664B	HEM and SGT-HEM (Aqueous)	1664B	TAL BUF
200.7	Preparation, Total Metals	EPA	TAL BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	TAL BUF
Distill/Phenol	Distillation, Phenolics	None	TAL BUF

Protocol References:

1664B = 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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-153683-1	Post-Carbon 2	Wastewater	05/17/19 10:30	05/17/19 12:35	
480-153683-2	Pre-Carbon	Wastewater	05/17/19 10:45	05/17/19 12:35	

TestAmerica Buffalo

Chain of Custody Record



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

Client Information	Sampler:	W	r	1	Lab F Johr		n: son, Orlette S						C	Carrier Tracking No(s):							COC No: 480-123669-2808	39.1	
Client Contact: Thomas Palmer	Phone:				E-Ma	úl:		hnson@testamericainc.com												1	Page: Page 1 of 1		
Company:	-				one	lie.jc	JIIISO	nœies	anne				_	-							Job #:		
Groundwater & Environmental Services Inc Address:	Due Date	e Requeste				L			-	A	naly	sis I	Req	ues	ted		_		_	_			
415 Lawrence Bell Drive Suite 6	Due Date	e Requeste																			Preservation Codes: A - HCL M - Hexane		
City: Williamsville	TAT Req	uested (da	iys):																	4	B - NaOH	M - Hexane N - None	
State, Zip:	1	SW					1														C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
NY, 14221 Phone:	PO #:	0	•			-															E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3	
518-402-9662(Tel)	CallOu	CallOut ID 136076			_	2			des		P		ş								G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate	
Email: tpalmer@gesonline.com	WO #: GES P	roject # 0	901691	~		or No)	(0)	Total Recoverable	Pollutant Pesticides		Demand	ds	2540C_Calcd - Total Dissolved Solids								I - Ice J - DI Water	U - Acetone V - MCAA	
Project Name:	Project # 480025					(Yes	or N	tal Recov (Stars)	ant P		/gen	I Solids	solve				4			ainer	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Gastown WWTP #915171 - Quarterly Event Desc: Quarterly Site:	480023 SSOW#:				-	nple	(Yes	otal F	Pollut	SVOA		endec	I Diss	Ial		Grease	cl, S04	8	otal	container	Other:		
New York					_	I San		- 1 7		TCL	emica	Suspe	Tota	e, Toi	ъ	d Gre	(00)	, K, Na	ity, To	5			
				Cumpic /	atrix	tered	INS/	420.4 - Phenolics 8260C - TCL + CP	608 Pest - Priority	8270C - (MOD) TCL	5210B - Biochemical Oxygen	2540D - Total Suspended	alcd	335.4 - Cyanide, Total	SM4500_H+ - pH	1664B - Oil and	300.0_28D - (MOD) CI,	a, Mg,	310.2 - Alkalinity, Total	Total Number			
			Sample	s s	=water, =solid, /aste/oil,	Id Fil	form	4-P	Pest	- 'D	0B - E	- 0	0C_C	4 - C	1500	4B - 0	0_28	7 - Ca,	2 - A	al N			
Sample Identification	Samp	le Date	Time	G=grab) BT=Tis	sue, A=Air	Fiel(-		-	Carl State			Statement of the local division of the local	-		200.7	310	Tot	Special In	structions/Note:	
	2	\leq	\times	Preservation	Code:	X	X		N	N	N	N	-	В	-	S	N)	N	X			
Post-Carbon 2	51	7	1030	GV	/ater			x >	X	X	X	Х	х	Х	х	х							
Pre-Carbon	5	17	1045	G V	/ater			>									x	x	x				
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	1					+	\vdash	-	+	+													
	-					+	+	-	+	+	-			-			-	-	-				
Possible Hazard Identification			L				Sam	ple D	ispos	sal (A	fee	nav	be a	SSAS	sed	fsa	nples	are	e reta	aine	d longer than 1	month)	
Non-Hazard I Flammable Skin Irritant Poi	son B	Unkr	nown	Radiological						o Cliei		J	4D	ispo	sal B	y Lat	5	E			ive For	Months	
Deliverable Requested: I, II, III, IV, Other (specify)							Spee	cial Ins	struct	ions/C													
Empty Kit Relinquished by:			Date:			Ti	me:	1	-	1	1		_	-	Meth	od of S	Shipme	ent:		-			
Relinquished by:	Date/Tir	me: (17	1 ,77	Com	Dany		T	Receive	d by:	2	5						Pate/	ime;	2	1	G 1125	CamponB	
Relinquished by:	Date/Tir	211	123	Com	bany			Receive	d by:	again	5					-) Date/		T		1 12)	Cómpany	
										-													
Relinquished by:	Date/Tir	Date/Time: Company			bany		Received by:							Date/Time:					- 11	Company			
Custody Seals Intact: Custody Seal No.:								Cooler	empe	rature(s) °C a	nd Oth	ner Rei	marks	3 :	Ŧ	Ŧ		3		9		
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7/17/2019

Client: New York State D.E.C.

Login Number: 153683 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 (Excluding tests with immediate HTs)	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	

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-156158-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Whethe & Cheharry

Authorized for release by: 7/30/2019 8:03:38 AM

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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.

.....Links **Review your project** results through **Total** Access Have a Question? Ask-The Expert Visit us at:

www.testamericainc.com

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.

Orlette Johnson Senior Project Manager 7/30/2019 8:03:38 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

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

Qualifiers

RER

RL RPD

TEF TEQ Relative Error Ratio (Radiochemistry)

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

Qualifiers		3
GC/MS VOA		
Qualifier	Qualifier Description	_ 4
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
General Che Qualifier	mistry Qualifier Description	5
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	6
Glossary		- 7
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	8
%R	Percent Recovery	
CFL	Contains Free Liquid	Q
CNF	Contains No Free Liquid	3
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
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	

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-156158-1

Receipt

The samples were received on 7/12/2019 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-482370 recovered above the upper control limit for 2-Butanone (MEK). The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following samples are impacted: Post-Carbon 2 (480-156158-1) and Pre-Carbon (480-156158-2).

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-156158-2), (480-156158-E-2 MS) and (480-156158-E-2 MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-156158-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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 has been qualified with the "HF" flag to indicate analysis was performed in the laboratory outside the 15 minute timeframe: Post-Carbon 2 (480-156158-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 07/12/19 12:00 Date Received: 07/12/19 12:45

Lab Sample ID: 480-156158-1

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
,1,1-Trichloroethane	ND	1.0	0.82	-			07/17/19 17:59	1
,1,2,2-Tetrachloroethane	ND	1.0	0.21	-			07/17/19 17:59	1
,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0		ug/L			07/17/19 17:59	1
,1,2-Trichloroethane	ND	1.0		ug/L			07/17/19 17:59	1
,1-Dichloroethane	ND	1.0	0.38	ug/L			07/17/19 17:59	1
,1-Dichloroethene	ND	1.0		ug/L			07/17/19 17:59	1
,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			07/17/19 17:59	
,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			07/17/19 17:59	
,2-Dibromo-3-Chloropropane	ND	1.0		ug/L			07/17/19 17:59	1
,2-Dichlorobenzene	ND	1.0	0.79	ug/L			07/17/19 17:59	
,2-Dichloroethane	ND	1.0	0.21	ug/L			07/17/19 17:59	
,2-Dichloropropane	ND	1.0	0.72	ug/L			07/17/19 17:59	
,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			07/17/19 17:59	1
,3-Dichlorobenzene	ND	1.0	0.78	ug/L			07/17/19 17:59	1
,4-Dichlorobenzene	ND	1.0	0.84	ug/L			07/17/19 17:59	1
-Butanone (MEK)	ND	10	1.3	ug/L			07/17/19 17:59	• • • • •
-Hexanone	ND	5.0	1.2	ug/L			07/17/19 17:59	
-Isopropyltoluene	ND	1.0	0.31	ug/L			07/17/19 17:59	
-Methyl-2-pentanone (MIBK)	ND	5.0	2.1	ug/L			07/17/19 17:59	
cetone	5.8 J	10		ug/L			07/17/19 17:59	
enzene	0.64 J	1.0	0.41	ug/L			07/17/19 17:59	
romoform	ND	1.0	0.26	ug/L			07/17/19 17:59	
romomethane	ND	1.0		ug/L			07/17/19 17:59	
arbon disulfide	ND	1.0	0.19	-			07/17/19 17:59	
arbon tetrachloride	ND	1.0	0.27	-			07/17/19 17:59	
hlorobenzene	ND	1.0	0.75	-			07/17/19 17:59	
ibromochloromethane	ND	1.0	0.32	-			07/17/19 17:59	
hloroethane	ND	1.0	0.32	-			07/17/19 17:59	
hloroform	0.34 J	1.0	0.34	-			07/17/19 17:59	
hloromethane	ND	1.0		ug/L			07/17/19 17:59	
s-1,2-Dichloroethene	ND	1.0		ug/L			07/17/19 17:59	
yclohexane	ND	1.0		ug/L			07/17/19 17:59	
romodichloromethane	ND	1.0		ug/L			07/17/19 17:59	
ichlorodifluoromethane	ND	1.0		ug/L			07/17/19 17:59	
thylbenzene	ND	1.0	0.74	-			07/17/19 17:59	
,2-Dibromoethane	ND	1.0	0.73	-			07/17/19 17:59	
opropylbenzene	ND	1.0		ug/L			07/17/19 17:59	
lethyl acetate	ND	2.5		ug/L			07/17/19 17:59	
lethyl tert-butyl ether	ND	1.0		ug/L			07/17/19 17:59	
lethylcyclohexane	ND	1.0		ug/L			07/17/19 17:59	,
lethylene Chloride	ND	1.0		ug/L ug/L			07/17/19 17:59	
i,p-Xylene	ND	2.0		ug/L ug/L			07/17/19 17:59	
aphthalene	ND	1.0		ug/L ug/L			07/17/19 17:59	
Butylbenzene		1.0		-			07/17/19 17:59	
	ND			ug/L				
-Propylbenzene	ND	1.0		ug/L			07/17/19 17:59	
	ND	1.0	0.76				07/17/19 17:59	
ec-Butylbenzene	ND	1.0	0.75				07/17/19 17:59	
etrachloroethene oluene	ND ND	1.0		ug/L ug/L			07/17/19 17:59 07/17/19 17:59	· · · · · · · · · ·

Eurofins TestAmerica, Buffalo

Client Sample ID: Post-Carbon 2 Date Collected: 07/12/19 12:00 Date Received: 07/12/19 12:45

Lab Sample ID: 480-156158-1

Matrix: Wastewater

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	Ę
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/17/19 17:59	1	
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/17/19 17:59	1	
Trichloroethene	ND		1.0	0.46	ug/L			07/17/19 17:59	1	
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/17/19 17:59	1	
Vinyl chloride	0.98	J	1.0	0.90	ug/L			07/17/19 17:59	1	
Xylenes, Total	ND		2.0	0.66	ug/L			07/17/19 17:59	1	
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/17/19 17:59	1	
Styrene	ND		1.0	0.73	ug/L			07/17/19 17:59	1	
tert-Butylbenzene	ND		1.0	0.81	ug/L			07/17/19 17:59	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		77 - 120			-		07/17/19 17:59	1	
4-Bromofluorobenzene (Surr)	92		73 - 120					07/17/19 17:59	1	
Toluene-d8 (Surr)	99		80 - 120					07/17/19 17:59	1	
Dibromofluoromethane (Surr)	96		75 - 123					07/17/19 17:59	1	

	Analyte Cyanide, Total	Result 0.15	Qualifier	RL 0.010	MDL 0.0050		D	Prepared 07/22/19 14:55	Analyzed 07/23/19 12:37	Dil Fac
	Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	pH	7.5	HF	0.1	0.1	SU			07/23/19 13:45	1
L	Temperature	20.7	HF	0.001	0.001	Degrees C			07/23/19 13:45	1

Client Sample ID: Pre-Carbon Date Collected: 07/12/19 12:15 Date Received: 07/12/19 12:45

Lab Sample ID: 480-156158-2

Matrix: Wastewater

5

Method: 8260C - Volatile Organ	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	25		ug/L			07/17/19 18:22	25
1,1,2,2-Tetrachloroethane	ND	25		ug/L			07/17/19 18:22	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	25		ug/L			07/17/19 18:22	25
1,1,2-Trichloroethane	ND	25		ug/L			07/17/19 18:22	25
1,1-Dichloroethane	ND	25		ug/L			07/17/19 18:22	25
1,1-Dichloroethene	ND	25		ug/L			07/17/19 18:22	25
1,2,4-Trichlorobenzene	ND	25	10	ug/L			07/17/19 18:22	25
1,2,4-Trimethylbenzene	29	25	19	ug/L			07/17/19 18:22	25
1,2-Dibromo-3-Chloropropane	ND	25	9.8	ug/L			07/17/19 18:22	25
1,2-Dichlorobenzene	ND	25	20	ug/L			07/17/19 18:22	25
1,2-Dichloroethane	ND	25	5.3	ug/L			07/17/19 18:22	25
1,2-Dichloropropane	ND	25	18	ug/L			07/17/19 18:22	25
1,3,5-Trimethylbenzene	ND	25	19	ug/L			07/17/19 18:22	25
1,3-Dichlorobenzene	ND	25	20	ug/L			07/17/19 18:22	25
1,4-Dichlorobenzene	ND	25	21	ug/L			07/17/19 18:22	25
2-Butanone (MEK)	ND	250	33	ug/L			07/17/19 18:22	25
2-Hexanone	ND	130	31	ug/L			07/17/19 18:22	25
4-Isopropyltoluene	ND	25	7.8	ug/L			07/17/19 18:22	25
4-Methyl-2-pentanone (MIBK)	ND	130	53	ug/L			07/17/19 18:22	25
Acetone	ND	250	75	ug/L			07/17/19 18:22	25
Bromoform	ND	25	6.5	ug/L			07/17/19 18:22	25
Bromomethane	ND	25	17	ug/L			07/17/19 18:22	25
Carbon disulfide	ND	25	4.8	ug/L			07/17/19 18:22	25
Carbon tetrachloride	ND	25	6.8	ug/L			07/17/19 18:22	25
Chlorobenzene	ND	25	19	ug/L			07/17/19 18:22	25
Dibromochloromethane	ND	25	8.0	ug/L			07/17/19 18:22	25
Chloroethane	ND	25	8.0	ug/L			07/17/19 18:22	25
Chloroform	12 J	25	8.5	ug/L			07/17/19 18:22	25
Chloromethane	ND	25	8.8	ug/L			07/17/19 18:22	25
cis-1,2-Dichloroethene	ND	25	20	ug/L			07/17/19 18:22	25
Cyclohexane	ND	25	4.5	ug/L			07/17/19 18:22	25
Bromodichloromethane	ND	25	9.8	ug/L			07/17/19 18:22	25
Dichlorodifluoromethane	ND	25		ug/L			07/17/19 18:22	25
Ethylbenzene	40	25	19	ug/L			07/17/19 18:22	25
1,2-Dibromoethane	ND	25	18	ug/L			07/17/19 18:22	25
Isopropylbenzene	ND	25	20	ug/L			07/17/19 18:22	25
Methyl acetate	ND	63		ug/L			07/17/19 18:22	25
Methyl tert-butyl ether	ND	25		ug/L			07/17/19 18:22	25
Methylcyclohexane	ND	25		ug/L			07/17/19 18:22	25
Methylene Chloride	ND	25		ug/L			07/17/19 18:22	25
m,p-Xylene	230	50		ug/L			07/17/19 18:22	25
Naphthalene	1100	25		ug/L			07/17/19 18:22	25
n-Butylbenzene	ND	25		ug/L			07/17/19 18:22	25
N-Propylbenzene	ND	25		ug/L			07/17/19 18:22	25
o-Xylene	130	25		ug/L			07/17/19 18:22	25
sec-Butylbenzene	ND	25		ug/L			07/17/19 18:22	25
Tetrachloroethene	ND	25		ug/L			07/17/19 18:22	25
Toluene	1300	25		ug/L			07/17/19 18:22	25
trans-1,2-Dichloroethene	ND	25		ug/L			07/17/19 18:22	25

Eurofins TestAmerica, Buffalo

Client Sample ID: Pre-Carbon Date Collected: 07/12/19 12:15 Date Received: 07/12/19 12:45

Lab Sample ID: 480-156158-2 Matrix: Wastewater

07/17/19 18:22

water

25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		25	9.3	ug/L			07/17/19 18:22	25
Trichloroethene	ND		25	12	ug/L			07/17/19 18:22	25
Trichlorofluoromethane	ND		25	22	ug/L			07/17/19 18:22	25
Vinyl chloride	ND		25	23	ug/L			07/17/19 18:22	25
Xylenes, Total	360		50	17	ug/L			07/17/19 18:22	25
cis-1,3-Dichloropropene	ND		25	9.0	ug/L			07/17/19 18:22	25
Styrene	120		25	18	ug/L			07/17/19 18:22	25
tert-Butylbenzene	ND		25	20	ug/L			07/17/19 18:22	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120			-		07/17/19 18:22	25
4-Bromofluorobenzene (Surr)	93		73 - 120					07/17/19 18:22	25
Toluene-d8 (Surr)	98		80 - 120					07/17/19 18:22	25

Method: 8260C -	Volatile Orga	nic Compounds	s by GC/MS - DL

98

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7200		200	82	ug/L			07/17/19 23:28	200
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120					07/17/19 23:28	200
4-Bromofluorobenzene (Surr)	94		73 - 120					07/17/19 23:28	200
Toluene-d8 (Surr)	100		80 - 120					07/17/19 23:28	200
Dibromofluoromethane (Surr)	92		75 - 123					07/17/19 23:28	200

75 - 123

Method: 200.7 Rev 4.4 - Metals (ICP)

Dibromofluoromethane (Surr)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	133000		500	100	ug/L		07/17/19 11:25	07/17/19 18:25	1
Magnesium	54700		200	43.4	ug/L		07/17/19 11:25	07/17/19 18:25	1
Potassium	4180		500	100	ug/L		07/17/19 11:25	07/17/19 18:25	1
Sodium	114000		1000	324	ug/L		07/17/19 11:25	07/17/19 18:25	1
General Chemistry									

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	232		2.5	1.4	mg/L			07/17/19 20:58	5
Sulfate	126		10.0	1.7	mg/L			07/17/19 20:58	5
Alkalinity, Total	384		40.0	16.0	mg/L			07/23/19 20:16	4

Client Sample ID: Post-Carbon 2 Date Collected: 07/12/19 12:00 Date Received: 07/12/19 12:45

Total/NA Prep Distill/CN 483253 07/22/19 14:55 AJL TAL BUF	Prep Type Total/NA	Batch Type Analysis	Batch Method 8260C	Run	Dilution Factor	Batch Number 482370	Prepared or Analyzed 07/17/19 17:59	Analyst AEM	Lab TAL BUF
		,			1	483253	07/22/19 14:55	AJL	

Client Sample ID: Pre-Carbon Date Collected: 07/12/19 12:15 Date Received: 07/12/19 12:45

Job ID: 480-156158-1

Lab Sample ID: 480-156158-1

Lab Sample ID: 480-156158-2

Matrix: Wastewater

Matrix: Wastewater

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	482370	07/17/19 18:22	AEM	TAL BUF
Total/NA	Analysis	8260C	DL	200	482533	07/17/19 23:28	AMM	TAL BUF
Total/NA	Prep	200.7			482298	07/17/19 11:25	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	482561	07/17/19 18:25	AMH	TAL BUF
Total/NA	Analysis	300.0		5	482404	07/17/19 20:58	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	483578	07/23/19 20:16	SRW	TAL BUF

Laboratory References:

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

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

Job ID: 480-156158-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	pН	
SM 4500 H+ B		Wastewater	Temperature	

Method Summary

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

Method	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	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	рН	SM	TAL BUF
200.7	Preparation, Total Metals	EPA	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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. None = None

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

Sample Summary

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

480-156158-1 Post-Carbon 2 Wastewater 07/12/19 12:00 07/12/19 12:45 480-156158-2 Pre-Carbon Wastewater 07/12/19 12:15 07/12/19 12:45	Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
490.456459.3 Dra Carbon Mostawatar 07/12/40.42/40.42/40.42/40.42/46	480-156158-1	Post-Carbon 2	Wastewater	07/12/19 12:00	07/12/19 12:45	
460-150156-2 PTE-Carbon Wastewater 07/12/1912.15 07/12/1912.45	480-156158-2	Pre-Carbon	Wastewater	07/12/19 12:15	07/12/19 12:45	

TestAmerica Buffalo

Chain of Custody Record



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

Client Information	Sampler	Zaft	Can	Lab P John	M: Ison. (Orlette	s					Carrie	er Trackir	g No(s):			COC 1 480-	No: 123660-	28090.1		
lient Contact:	Phone: E-Mail:			l:	phnson@testamericainc.com									Page: Page 1 of 1							
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Broundwater & Environmental Services Inc	Due Date Requeste				-				An	nalys	sis F	Reques	ted			-	0	amentiam	Cadaat		
adress: 15 Lawrence Bell Drive Suite 6	Due Date Requeste	ea:				-											Pres	ervation	Codes:		
sity: Villiamsville	TAT Requested (da	ays):																			
tate, Zip: IY, 14221	-																				
none: 18-402-9662(Tel)	PO #: CallOut ID 1360	76				1															
nail:	WO #:				or No)	-								480	0-1561	158 0	Chain o	of Custo	ody		ite
palmer@gesonline.com roject Name:	GES Project # 0 Project #:	0901691			(Yes or			6						1	1 1		K-E	DTA		- pH 4-5	6.0
astown WWTP #915171 - Monthly Event Desc: Monthly	48002525	5			Ves (-		(Star			Tes					inter	L-E Othe	DA	2.	other (specify	.y)
ite: Jew York	SSOW#:				Sample (Total	-	P-51	\$04	K, Na	/, Tot					26.00	5 Othe	ar.			
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oll, T=Tissue, A=Air)	Field Filtered	anide	SM4500_H+ - pH	8260C - TCL + CP-51 (Stars)	300.0_28D - CI, SO4	200.7 - Ca, Mg, I	310.2 - Alkalinity, Total					Total Minister		Speci	al Instr	uctions/No	ote:
	\rightarrow	\succ	Preservat		\bowtie	В	N	A		D	N							PL	>		
Post-Carbon 2	2/2/19	1200	6	Water	Π	X	X	X								COLUMN STATE					
re-Carbon	7/2/19	1215	9	Water	Π			X	x	x	x						-				
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Relinquished by:	Date/Time:			Company		Red	ceived	by:						Dat	e/Time:				C	ompany	
Custody Seals Intact: Custody Seal No.:	and a constant					Co	oler Te	empera	ature(s	s)°Ca	ind Oth	her Remark	KS:	0	1	4	1	IC E	-		
Δ Yes Δ No						a contra		Carlos a services of											-		

7/30/2019

Client: New York State D.E.C.

Login Number: 156158 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 (Excluding tests with immediate HTs)	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.	False	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-157314-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Quarterly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomogra

Authorized for release by: 8/26/2019 12:35:04 PM Joe Giacomazza, Project Management Assistant II joe.giacomazza@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.



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. Giacomage

Joe Giacomazza Project Management Assistant II 8/26/2019 12:35:04 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	11
Certification Summary	12
Method Summary	13
Sample Summary	14
Chain of Custody	15
Receipt Checklists	16

Qualifiers

		 3
NS VOA		
fier	Qualifier Description	
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	 _
NS Semi V	VOA	5
fier	Qualifier Description	
	Compound was found in the blank and sample.	
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
Semi VOA	N Contraction of the second	
fier	Qualifier Description	
	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.	 8
als		
fier	Qualifier Description	9
	Compound was found in the blank and sample.	
eral Chem	nistry	
fier	Qualifier Description	
	Compound was found in the blank and sample.	
	Sample was prepped or analyzed beyond the specified holding time	
	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	

Glossary

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
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-157314-1

Case Narrative

Comments

No additional comments.

Receipt

The samples were received on 8/7/2019 3:47 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9° C.

GC/MS VOA

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-157314-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-157314-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-157314-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) SM 2540C: Reanalysis of the following sample was performed outside of the analytical holding time due to confirmation of historical failure; both results are reported : Post-Carbon 2 (480-157314-1).

Method(s) SM 5210B: The residual D.O. in sample (480-157328-A-4) was < 1.0 mg/L in all dilutions tested; they were over depleted. Results were reported, but they may be biased low.

Method(s) 9040C, 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 2 (480-157314-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-485979.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 08/07/19 15:15 Date Received: 08/07/19 15:47

Lab Sample ID: 480-157314-1

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L		08/12/19 17:58	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L		08/12/19 17:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L		08/12/19 17:58	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L		08/12/19 17:58	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L		08/12/19 17:58	1
I,1-Dichloroethene	ND	1.0	0.29	ug/L		08/12/19 17:58	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L		08/12/19 17:58	1
,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L		08/12/19 17:58	
,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L		08/12/19 17:58	
l,2-Dichlorobenzene	ND	1.0	0.79	ug/L		08/12/19 17:58	• • • • • •
1,2-Dichloroethane	ND	1.0	0.21	ug/L		08/12/19 17:58	
1,2-Dichloropropane	ND	1.0	0.72	ug/L		08/12/19 17:58	
,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L		08/12/19 17:58	
I,3-Dichlorobenzene	ND	1.0		ug/L		08/12/19 17:58	
,4-Dichlorobenzene	ND	1.0		ug/L		08/12/19 17:58	
2-Butanone (MEK)	ND	10		ug/L		08/12/19 17:58	· · · · · · · · .
2-Hexanone	ND	5.0		ug/L		08/12/19 17:58	
-Isopropyltoluene	ND	1.0		ug/L		08/12/19 17:58	
-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L		08/12/19 17:58	
Acetone	6.0 J	10		ug/L		08/12/19 17:58	
enzene	0.41 J	1.0		ug/L		08/12/19 17:58	
romoform	ND	1.0		ug/L		08/12/19 17:58	
romomethane	ND	1.0	0.69	-		08/12/19 17:58	
Carbon disulfide	ND	1.0		ug/L		08/12/19 17:58	
Carbon tetrachloride	ND	1.0		ug/L		08/12/19 17:58	
Chlorobenzene	ND	1.0		-		08/12/19 17:58	
Dibromochloromethane	ND	1.0		ug/L		08/12/19 17:58	
			0.32				
Chloroethane	ND	1.0		ug/L		08/12/19 17:58	
Chloroform	ND	1.0		ug/L		08/12/19 17:58	
Chloromethane	0.51 J	1.0		ug/L		08/12/19 17:58	
is-1,2-Dichloroethene	ND	1.0		ug/L		08/12/19 17:58	
Cyclohexane	ND	1.0		ug/L		08/12/19 17:58	
Bromodichloromethane	ND	1.0		ug/L		08/12/19 17:58	
Dichlorodifluoromethane	ND	1.0		ug/L		08/12/19 17:58	
Ethylbenzene	ND	1.0	0.74			08/12/19 17:58	
,2-Dibromoethane	ND	1.0	0.73			08/12/19 17:58	
sopropylbenzene	ND	1.0		ug/L		08/12/19 17:58	
lethyl acetate	ND	2.5		ug/L		08/12/19 17:58	
lethyl tert-butyl ether	ND	1.0		ug/L		08/12/19 17:58	
lethylcyclohexane	ND	1.0	0.16			08/12/19 17:58	
lethylene Chloride	0.49 J	1.0	0.44	ug/L		08/12/19 17:58	
ı,p-Xylene	ND	2.0		ug/L		08/12/19 17:58	
laphthalene	ND	1.0	0.43	ug/L		08/12/19 17:58	
-Butylbenzene	ND	1.0	0.64	ug/L		08/12/19 17:58	
I-Propylbenzene	ND	1.0	0.69	ug/L		08/12/19 17:58	
o-Xylene	ND	1.0	0.76	ug/L		08/12/19 17:58	
ec-Butylbenzene	ND	1.0	0.75	ug/L		08/12/19 17:58	
Fetrachloroethene	ND	1.0	0.36	ug/L		08/12/19 17:58	

Eurofins TestAmerica, Buffalo

RL

1.0

1.0

1.0

1.0

1.0

2.0

1.0

1.0

1.0

MDL Unit

0.90 ug/L

0.37 ug/L

0.46 ug/L

0.88 ug/L

0.90 ug/L

0.66 ug/L

0.36 ug/L

0.73 ug/L

0.81 ug/L

D

Prepared

Client Sample ID: Post-Carbon 2 Date Collected: 08/07/19 15:15 Date Received: 08/07/19 15:47

Analyte

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

cis-1,3-Dichloropropene

Trichloroethene

Vinyl chloride

Xylenes, Total

tert-Butylbenzene

Styrene

Phenol-d5

2-Fluorophenol

2,4,6-Tribromophenol

Lab Sample ID: 480-157314-1 Matrix: Wastewater

Analyzed

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

08/12/19 17:58

5 6 7

Dil Fac

1

1

1

1

1

1

1

9

1	
Fac	
1	
'	

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	107		77 _ 120	_		08/12/19 17:58	1	
4-Bromofluorobenzene (Surr)	99		73 - 120			08/12/19 17:58	1	
Toluene-d8 (Surr)	97		80 - 120			08/12/19 17:58	1	
Dibromofluoromethane (Surr)	106		75 _ 123			08/12/19 17:58	1	

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

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

ND

ND

ND

ND

42

59

64

0.92 J

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		08/12/19 08:09	08/12/19 20:49	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		08/12/19 08:09	08/12/19 20:49	1
Acenaphthene	ND		5.0	0.41	ug/L		08/12/19 08:09	08/12/19 20:49	1
Acenaphthylene	ND		5.0	0.38	ug/L		08/12/19 08:09	08/12/19 20:49	1
Anthracene	ND		5.0	0.28	ug/L		08/12/19 08:09	08/12/19 20:49	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		08/12/19 08:09	08/12/19 20:49	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		08/12/19 08:09	08/12/19 20:49	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		08/12/19 08:09	08/12/19 20:49	1
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		08/12/19 08:09	08/12/19 20:49	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		08/12/19 08:09	08/12/19 20:49	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		08/12/19 08:09	08/12/19 20:49	1
Carbazole	ND		5.0	0.30	ug/L		08/12/19 08:09	08/12/19 20:49	1
Chrysene	ND		5.0	0.33	ug/L		08/12/19 08:09	08/12/19 20:49	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		08/12/19 08:09	08/12/19 20:49	1
Dibenzofuran	ND		10	0.51	ug/L		08/12/19 08:09	08/12/19 20:49	1
Fluoranthene	ND		5.0	0.40	ug/L		08/12/19 08:09	08/12/19 20:49	1
Fluorene	ND		5.0	0.36	ug/L		08/12/19 08:09	08/12/19 20:49	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		08/12/19 08:09	08/12/19 20:49	1
Naphthalene	ND		5.0	0.76	ug/L		08/12/19 08:09	08/12/19 20:49	1
Pentachlorophenol	ND		10	2.2	ug/L		08/12/19 08:09	08/12/19 20:49	1
Phenanthrene	1.3	JB	5.0	0.44	ug/L		08/12/19 08:09	08/12/19 20:49	1
Phenol	ND		5.0	0.39	ug/L		08/12/19 08:09	08/12/19 20:49	1
Pyrene	ND		5.0	0.34	ug/L		08/12/19 08:09	08/12/19 20:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		46 - 120				08/12/19 08:09	08/12/19 20:49	1
2-Fluorobiphenyl	82		48 - 120				08/12/19 08:09	08/12/19 20:49	1
p-Terphenyl-d14	79		59 - 136				08/12/19 08:09	08/12/19 20:49	1

08/12/19 20:49

08/12/19 20:49

08/12/19 20:49

08/12/19 08:09

08/12/19 08:09

08/12/19 08:09

22 - 120

35 - 120

41 - 120

1

1

Client Sample ID: Post-Carbon 2 Date Collected: 08/07/19 15:15 Date Received: 08/07/19 15:47

Lab Sample ID: 480-157314-1

Matrix: Wastewater

Method: 608.3 - Organochlorine Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin		Quaimer	0.048	0.0078	ug/L		08/08/19 07:59	08/08/19 15:29	1
alpha-BHC	ND		0.048	0.0074	•		08/08/19 07:59	08/08/19 15:29	1
beta-BHC	ND		0.048	0.0074	0		08/08/19 07:59	08/08/19 15:29	1
delta-BHC	ND		0.048	0.0096			08/08/19 07:59	08/08/19 15:29	
	ND		0.048	0.0090	•		08/08/19 07:59	08/08/19 15:29	1
gamma-BHC (Lindane)					•				1
Chlordane (technical)	ND		0.48		ug/L		08/08/19 07:59	08/08/19 15:29	[.]
4,4'-DDD	ND		0.048	0.0088	•		08/08/19 07:59	08/08/19 15:29	1
4,4'-DDE	ND		0.048	0.011	0		08/08/19 07:59	08/08/19 15:29	1
4,4'-DDT	ND		0.048	0.011			08/08/19 07:59	08/08/19 15:29	1
Dieldrin	ND		0.048	0.0094	ug/L		08/08/19 07:59	08/08/19 15:29	1
Endosulfan I	ND		0.048	0.011	-		08/08/19 07:59	08/08/19 15:29	1
Endosulfan II	ND		0.048	0.012			08/08/19 07:59	08/08/19 15:29	1
Endosulfan sulfate	ND		0.048	0.015			08/08/19 07:59	08/08/19 15:29	1
Endrin	ND		0.048	0.013			08/08/19 07:59	08/08/19 15:29	1
Endrin aldehyde	ND		0.048	0.016	ug/L		08/08/19 07:59	08/08/19 15:29	1
Heptachlor	ND		0.048	0.0082	ug/L		08/08/19 07:59	08/08/19 15:29	1
Heptachlor epoxide	ND		0.048	0.0071	ug/L		08/08/19 07:59	08/08/19 15:29	1
Toxaphene	ND		0.48	0.12	ug/L		08/08/19 07:59	08/08/19 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	44	p	23 - 120				08/08/19 07:59	08/08/19 15:29	1
Tetrachloro-m-xylene	68		44 _ 120				08/08/19 07:59	08/08/19 15:29	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		4.8	1.3	mg/L		08/09/19 18:52	08/09/19 21:30	1
Cyanide, Total	0.12		0.010	0.0050	mg/L		08/13/19 17:40	08/14/19 13:44	1
Phenolics, Total Recoverable	0.012	в	0.010	0.0050	mg/L		08/20/19 15:32	08/20/19 17:15	1
Total Dissolved Solids	581	H	10.0	4.0	mg/L			08/21/19 12:57	1
Biochemical Oxygen Demand	ND		6.0	6.0	mg/L			08/08/19 17:51	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	4.0	mg/L		·	08/09/19 10:21	1
рН	7.1	HF	0.1	0.1	SU			08/13/19 19:24	1
Temperature	20.1	HF	0.001	0.001	Degrees C			08/13/19 19:24	1

Client Sample ID: Pre-Carbon Date Collected: 08/07/19 15:30 Date Received: 08/07/19 15:47

trans-1,2-Dichloroethene

Lab Sample ID: 480-157314-2

Matrix: Wastewater

Method: 8260C - Volatile Organ Analyte	Result Qualifier	RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	25	21	ug/L		08/12/19 18:21	25
1,1,2,2-Tetrachloroethane	ND	25	5.3	ug/L		08/12/19 18:21	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	25	7.8	ug/L		08/12/19 18:21	25
1,1,2-Trichloroethane	ND	25	5.8	ug/L		08/12/19 18:21	25
1,1-Dichloroethane	ND	25	9.5	ug/L		08/12/19 18:21	25
1,1-Dichloroethene	ND	25	7.3	ug/L		08/12/19 18:21	25
1,2,4-Trichlorobenzene	ND	25	10	ug/L		08/12/19 18:21	25
1,2,4-Trimethylbenzene	ND	25	19	ug/L		08/12/19 18:21	25
1,2-Dibromo-3-Chloropropane	ND	25	9.8	ug/L		08/12/19 18:21	25
1,2-Dichlorobenzene	ND	25	20	ug/L		08/12/19 18:21	25
1,2-Dichloroethane	ND	25	5.3	ug/L		08/12/19 18:21	25
1,2-Dichloropropane	ND	25	18	ug/L		08/12/19 18:21	25
1,3,5-Trimethylbenzene	ND	25	19	ug/L		08/12/19 18:21	25
1,3-Dichlorobenzene	ND	25	20	ug/L		08/12/19 18:21	25
1,4-Dichlorobenzene	ND	25	21	ug/L		08/12/19 18:21	25
2-Butanone (MEK)	ND	250	33	ug/L		08/12/19 18:21	25
2-Hexanone	ND	130		-		08/12/19 18:21	25
4-Isopropyltoluene	ND	25	7.8	ug/L		08/12/19 18:21	25
4-Methyl-2-pentanone (MIBK)	ND	130	53	ug/L		08/12/19 18:21	25
Acetone	ND	250		ug/L		08/12/19 18:21	25
Bromoform	ND	25		ug/L		08/12/19 18:21	25
Bromomethane	ND	25		ug/L		08/12/19 18:21	25
Carbon disulfide	ND	25	4.8	ug/L		08/12/19 18:21	25
Carbon tetrachloride	ND	25	6.8	ug/L		08/12/19 18:21	25
Chlorobenzene	ND	25	19	ug/L		08/12/19 18:21	25
Dibromochloromethane	ND	25	8.0	ug/L		08/12/19 18:21	25
Chloroethane	ND	25	8.0	ug/L		08/12/19 18:21	25
Chloroform	37	25	8.5	ug/L		08/12/19 18:21	25
Chloromethane	ND	25	8.8	ug/L		08/12/19 18:21	25
cis-1,2-Dichloroethene	ND	25	20	ug/L		08/12/19 18:21	25
Cyclohexane	ND	25		ug/L		08/12/19 18:21	25
Bromodichloromethane	ND	25		ug/L		08/12/19 18:21	25
Dichlorodifluoromethane	ND	25		ug/L		08/12/19 18:21	25
Ethylbenzene	120	25		ug/L		08/12/19 18:21	25
1,2-Dibromoethane	ND	25		ug/L		08/12/19 18:21	25
Isopropylbenzene	ND	25		-		08/12/19 18:21	25
Methyl acetate	ND	63		ug/L		08/12/19 18:21	25
Methyl tert-butyl ether	ND	25		ug/L		08/12/19 18:21	25
Methylcyclohexane	ND	25		ug/L		08/12/19 18:21	25
Methylene Chloride	22 J	25		ug/L		08/12/19 18:21	25
m,p-Xylene	89	<u>50</u>		ug/L		08/12/19 18:21	25
Naphthalene	480	25		ug/L		08/12/19 18:21	25
n-Butylbenzene	ND	25		ug/L		08/12/19 18:21	25
N-Propylbenzene	ND	25		ug/L		08/12/19 18:21	25 25
o-Xylene	54	25		ug/L		08/12/19 18:21	25
sec-Butylbenzene	ND	25		ug/L		08/12/19 18:21	25
Tetrachloroethene	ND	25		ug/L		08/12/19 18:21	25
Toluene	390	25		ug/L ug/L		08/12/19 18:21	25
I VINEILE	JJU	<u>ر</u> ح		agri		00/12/10 10.21	20

Eurofins TestAmerica, Buffalo

08/12/19 18:21

25

23 ug/L

ND

RL

25

25

25

25

50

25

25

MDL Unit

9.3 ug/L

12 ug/L

22 ug/L

23 ug/L

17 ug/L

9.0 ug/L

18 ug/L

D

Prepared

Client Sample ID: Pre-Carbon Date Collected: 08/07/19 15:30

Date Received: 08/07/19 15:47

trans-1,3-Dichloropropene

Trichlorofluoromethane

cis-1,3-Dichloropropene

Analyte

Trichloroethene

Vinyl chloride

Styrene

Xylenes, Total

Lab Sample ID: 480-157314-2 Matrix: Wastewater

Analyzed

08/12/19 18:21

08/12/19 18:21

08/12/19 18:21

08/12/19 18:21

08/12/19 18:21

08/12/19 18:21

08/12/19 18:21

Dil Fac

25

25

25

25

25

25

25

7 8 9

tert-Butylbenzene	ND	25	20 ug/L		08/12/19 18:21	25	
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	107	77 - 120			08/12/19 18:21	25	
4-Bromofluorobenzene (Surr)	102	73 - 120			08/12/19 18:21	25	
Toluene-d8 (Surr)	97	80 - 120			08/12/19 18:21	25	
Dibromofluoromethane (Surr)	107	75 - 123			08/12/19 18:21	25	

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

140

ND

20 J

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2900		50	21	ug/L			08/13/19 01:30	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120					08/13/19 01:30	50
4-Bromofluorobenzene (Surr)	101		73 - 120					08/13/19 01:30	50
Toluene-d8 (Surr)	101		80 - 120					08/13/19 01:30	50
Dibromofluoromethane (Surr)	107		75 - 123					08/13/19 01:30	50

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	92900		500	100	ug/L		08/09/19 08:04	08/09/19 16:21	1
Magnesium	29700		200	43.4	ug/L		08/09/19 08:04	08/09/19 16:21	1
Potassium	2670		500	100	ug/L		08/09/19 08:04	08/23/19 19:35	1
Sodium	72000	В	1000	324	ug/L		08/09/19 08:04	08/09/19 16:21	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	177		2.5	1.4	mg/L			08/09/19 11:56	5
Sulfate	85.9		10.0	1.7	mg/L			08/09/19 11:56	5
Alkalinity, Total	188		40.0	16.0	mg/L			08/08/19 21:47	4

Dilution

Factor

1

1

1

1

1

1

1

1

1

1

Run

Batch

Number

486412

486428

486572

485979

485989

486356

486358

486948

487031

487946

487973

488136

486224

486839

486141

Prepared

or Analyzed

08/12/19 17:58

08/12/19 08:09

08/12/19 20:49

08/08/19 07:59

08/08/19 15:29

08/09/19 18:52

08/09/19 21:30

08/13/19 17:40

08/14/19 13:44

08/20/19 15:32

08/20/19 17:15

08/21/19 12:57

08/09/19 10:21

08/13/19 19:24

08/08/19 17:51

Analyst

AEM

JMP

PJQ

JMP

JLS

MJB

MJB

AJL

MDL

AJL

SRW

ZFM

CSS

AEF

BEF

Lab

TAL BUF

TAL BUF TAL BUF

TAL BUF

TAL BUF

Lab Sample ID: 480-157314-2

Matrix: Wastewater

Client Sample ID: Post-Carbon 2 Date Collected: 08/07/19 15:15 Date Received: 08/07/19 15:47

Prep Type

Total/NA

Batch

Туре

Prep

Prep

Prep

Prep

Prep

Analysis

Batch

Method

8260C

3510C

8270D

3510C

608.3

1664B

1664B

335.4

420.1

Distill/CN

Distill/Phenol

SM 2540C

SM 2540D

SM 5210B

SM 4500 H+ B

Lab Sample ID: 480-157314-1 Matrix: Wastewater

5 6

Client Sample ID: Pre-Carbon Date Collected: 08/07/19 15:30 Date Received: 08/07/19 15:47

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		25	486412	08/12/19 18:21	AEM	TAL BUF
Total/NA	Analysis	8260C	DL	50	486610	08/13/19 01:30	BTP	TAL BUF
Total/NA	Prep	200.7			486148	08/09/19 08:04	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	488653	08/23/19 19:35	LMH	TAL BUF
Total/NA	Prep	200.7			486148	08/09/19 08:04	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	486514	08/09/19 16:21	AMH	TAL BUF
Total/NA	Analysis	300.0		5	486216	08/09/19 11:56	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	486139	08/08/19 21:47	SRW	TAL BUF

Laboratory References:

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

Laboratory: Eurofins TestAmerica, Buffalo Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

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

lethod	Method Description	Protocol	Laboratory
260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
08.3	Organochlorine Pesticides in Water	40CFR136A	TAL BUF
00.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
664B	HEM and SGT-HEM	1664B	TAL BUF
00.0	Anions, Ion Chromatography	MCAWW	TAL BUF
10.2	Alkalinity	MCAWW	TAL BUF
35.4	Cyanide, Total	MCAWW	TAL BUF
20.1	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL BUF
M 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF
M 5210B	BOD, 5-Day	SM	TAL BUF
664B	HEM and SGT-HEM (Aqueous)	1664B	TAL BUF
00.7	Preparation, Total Metals	EPA	TAL BUF
510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	TAL BUF
) istill/Phenol	Distillation, Phenolics	None	TAL BUF

Protocol References:

1664B = 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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-157314-1	Post-Carbon 2	Wastewater	08/07/19 15:15	08/07/19 15:47	Asset ID
480-157314-2	Pre-Carbon	Wastewater	08/07/19 15:30	08/07/19 15:47	

8/26/2019

TestAmerica Buffalo

10 Hazelwood Drive

Chain of Custody Record



_

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

Client Information	Sample	er: M	K			b PM: phnsoi	n, Or	rlette	S					c	arrier	Frackir	g No	(s):			COC No: 480-123669-2	8089.1
Client Contact Thomas Palmer	Phone:	800	287	7887		Mail: lette.j	ohns	son@	testa	ameri	icaind	c.com	1								Page: Page 1 of 1	
Company:	_	~				T														-	Job #:	
Groundwater & Environmental Services Inc Address:	Due D	ate Reques	ted:								An	alys		equ	equested							
415 Lawrence Bell Drive Suite 6	TATR	equested (davs).			-								1	,							е
Williamsville		education (12
State, Zip: NY, 14221						12															Custody	S 3
Phone: 518-402-9662(Tel)	PO #: CallC	P0#: CallOut ID 136076								s		-				480	157	314 (Chai	n of	Custody	D3 Jdecahydrat
Email:	WO #:	W0 #: GES Project # 0901691				or No)		erable		sticid		emano		Solids			1	1	1		J - DI Water	U - Acetone V - MCAA
tpalmer@gesonline.com Project Name:	Projec	t #:	0901091			Yes o	or No	Total Recoverable	(s	ant Pe		gen D	Solid	olved			1.	+		ners	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)
Gastown WWTP #915171 - Quarterly Event Desc: Quarterly Site:	4800 ssow					- lo	(Yes	otal R	CP-51 (Stars)	olluta	SVOA	I Oxy	nded	Diss	Tes			a 04	otal	containers	Other:	
New York	_	_				Sar	MSD	ics, T	CP-5	ority F	TCL	emica	Suspe	Tota	e, Tot	Hd -	o cease	K. Na	ity, To	rofo		
				Sam; Typ	e (W=water	ilte	/SW u	420.4 - Phenolics,	8260C - TCL +	608_Pest - Priority Pollutant Pesticides	8270C - (MOD) TCL	5210B - Biochemical Oxygen Demand	2540D - Total Suspended Solids	2540C_Calcd - Total Dissolved Solids	335.4 - Cyanide, Total	SM4500_H+ - pt		300.0_280 - (MOU) CI, 200.7 - Ca. Mg. K. Na	310.2 - Alkalinity, Total	Total Number of		
Sample Identification	San	nple Date	Samp Time		mp, S=solid. O=waste/o ab) BT=Tissue, A	il, 19	Perfo	20.4 -	260C	08 P	1270C	210B	540D	540C	35.4 -	SM4500_H+	0040	300.0_28U	10.2	Total	Snecia	I Instructions/Note:
Sample Identification					ervation Code	_		S	-	N						V S			N	X	opecia	
Post-Carbon 2	8	17/19	151	5 6	Water	r N	N	X	x	x	X	х	x	x	х	x	×		T	12		
Pre-Carbon	8	719	153		Wate	r	NN	1	x									x >	× ×	:		
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	1					-	T	1								1	1		T			
	-		1			1	T	1							1		1		T			
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Possible Hazard Identification		- ,			_		S	ampl	e Dis	5DOS	al (A	fee	mav	be a	SSes	sed i	fsa	nples	are	retai	ined longer th	an 1 month)
	oison B	Dun.	known	Radiolo	gical						Clier		Þ		Dispo	sal By	Lal)		1	chive For	Months
Deliverable Requested: I, II, III, IV, Other (specify)							Sp	pecia	I Inst	ructio	ons/C	C R	equir	emer	nts:							
Empty Kit Relinquished by:			Date:			Т	lime	:			٨.		1		A		11	hipmer	1		1	
Relinquished by	Date	Time:	19 1	547	Company	1		Rec	ceived	by:	M	VIR	01	N	1	Kc	IP	Date/Ti	BE	31	67/19	15 47 TS
Relinquished by:	Date	/Time!	11 1	<u> </u>	Company			Rec	ceived	by:							1	Date/Ti	me:	-1		Company
Relinquished by:	Date	/Time:			Company			Rec	ceived	by:	_	1	12	-	-		-	Date/Ti	me: _7	-10	154-	7 Company AR
Custody Seals Intact: Custody Seal No.:								Cod	oler Te	mpera	ature(s	s) °C a	nd Oti	ner Re	emarks):		0	(19-11
Δ Yes Δ No							-	1														Ver: 01/16/2019
													-		2	6		00		1	ი თ	

Client: New York State D.E.C.

Login Number: 157314 List Number: 1

Creator: Harper, Marcus D

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 (Excluding tests with immediate HTs)	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	

11

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-159813-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomayer

Authorized for release by: 10/9/2019 9:45:42 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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. Giacomagge

Joe Giacomazza Project Management Assistant II 10/9/2019 9:45:43 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Contains Free Liquid

Dilution Factor

Contains No Free Liquid

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE) Limit of Quantitation (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Not Calculated

Quality Control

Duplicate Error Ratio (normalized absolute difference)

Decision Level Concentration (Radiochemistry)

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry)

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)

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

Qualifiare

CFL

CNF

DER Dil Fac

DI

DLC

EDL

LOD

LOQ MDA

MDC MDL

ML NC

ND

PQL

QC

RER RL

RPD

TEF

TEQ

DL, RA, RE, IN

Qualifiers		3
GC/MS VOA Qualifier	Qualifier Description	4
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
Metals		5
Qualifier	Qualifier Description	
F1	MS and/or MSD Recovery is outside acceptance limits.	6
General Cher	nistry	
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
В	Compound was found in the blank and sample.	8
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
Glossary		9
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	

Eurofins TestAmeric	ca, Buffalo
---------------------	-------------

Job ID: 480-159813-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-159813-1

Comments

No additional comments.

Receipt

The samples were received on 9/25/2019 2:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-495480 recovered outside acceptance criteria, low biased, for Naphthalene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted: Post-Carbon 2 (480-159813-1).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-495480 recovered above the upper control limit for 2-Butanone (MEK). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Post-Carbon 2 (480-159813-1) and Pre-Carbon (480-159813-2).

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 480-495480 was outside the method criteria for the following analyte(s): Naphthalene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated. The following samples are impacted: Pre-Carbon (480-159813-2).

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-159813-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-159813-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 335.4: The laboratory control sample (LCS) for preparation batch 480-495511 and analytical batch 480-495757 recovered outside control limits for the following analytes: Cyanide.

Method(s) 9040C, 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 2 (480-159813-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 09/25/19 14:00 Date Received: 09/25/19 14:30

Lab Sample ID: 480-159813-1

Matrix: W

59813-1	
lastewater	
Dil Fac	5
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B 1	
3 1	

	ompounds by GC/MS							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L			10/02/19 22:48	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			10/02/19 22:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			10/02/19 22:48	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			10/02/19 22:48	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L			10/02/19 22:48	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			10/02/19 22:48	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			10/02/19 22:48	1
1,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			10/02/19 22:48	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			10/02/19 22:48	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			10/02/19 22:48	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			10/02/19 22:48	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			10/02/19 22:48	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			10/02/19 22:48	1
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			10/02/19 22:48	1
1,4-Dichlorobenzene	ND	1.0	0.84	ug/L			10/02/19 22:48	1
2-Butanone (MEK)	ND	10	1.3	ug/L			10/02/19 22:48	1
2-Hexanone	ND	5.0	1.2	ug/L			10/02/19 22:48	1
4-Isopropyltoluene	ND	1.0	0.31	ug/L			10/02/19 22:48	1
4-Methyl-2-pentanone (MIBK)	ND	5.0	2.1	ug/L			10/02/19 22:48	1
Acetone	4.5 J	10	3.0	ug/L			10/02/19 22:48	1
Benzene	5.6	1.0	0.41	ug/L			10/02/19 22:48	1
Bromoform	ND	1.0	0.26	ug/L			10/02/19 22:48	1
Bromomethane	ND	1.0	0.69	ug/L			10/02/19 22:48	1
Carbon disulfide	ND	1.0	0.19	ug/L			10/02/19 22:48	1
Carbon tetrachloride	ND	1.0	0.27	ug/L			10/02/19 22:48	1
Chlorobenzene	ND	1.0	0.75	ug/L			10/02/19 22:48	1
Dibromochloromethane	ND	1.0	0.32	ug/L			10/02/19 22:48	1
Chloroethane	ND	1.0	0.32	ug/L			10/02/19 22:48	1
Chloroform	0.61 J	1.0	0.34	ug/L			10/02/19 22:48	1
Chloromethane	ND	1.0	0.35				10/02/19 22:48	1
cis-1,2-Dichloroethene	ND	1.0	0.81	ug/L			10/02/19 22:48	1
Cyclohexane	ND	1.0	0.18	ug/L			10/02/19 22:48	1
Bromodichloromethane	ND	1.0	0.39	ug/L			10/02/19 22:48	1
Dichlorodifluoromethane	ND	1.0	0.68	ug/L			10/02/19 22:48	1
Ethylbenzene	ND	1.0	0.74	ug/L			10/02/19 22:48	1
1,2-Dibromoethane	ND	1.0	0.73				10/02/19 22:48	1
Isopropylbenzene	ND	1.0	0.79				10/02/19 22:48	1
Methyl acetate	ND	2.5		ug/L			10/02/19 22:48	1
Methyl tert-butyl ether	ND	1.0	0.16				10/02/19 22:48	1
Methylcyclohexane	ND	1.0	0.16				10/02/19 22:48	1
Methylene Chloride	ND	1.0	0.44	-			10/02/19 22:48	1
m,p-Xylene	ND	2.0	0.66				10/02/19 22:48	1
Naphthalene	ND	1.0		ug/L			10/02/19 22:48	1
n-Butylbenzene	ND	1.0	0.64				10/02/19 22:48	1
N-Propylbenzene	ND	1.0	0.69	-			10/02/19 22:48	1
o-Xylene	ND	1.0	0.76				10/02/19 22:48	1
sec-Butylbenzene	ND	1.0	0.75				10/02/19 22:48	1
Tetrachloroethene	ND	1.0	0.36	ug/L			10/02/19 22:48	1

Eurofins TestAmerica, Buffalo

10/02/19 22:48

1.0

0.51 ug/L

ND

Toluene

RL

1.0

1.0

1.0

1.0

1.0

2.0

1.0

1.0

1.0

MDL Unit

0.37 ug/L

0.46 ug/L

0.88 ug/L

0.90 ug/L

0.66 ug/L

0.36 ug/L

0.73 ug/L

0.81 ug/L

0.90 ug/L D

Prepared

Client Sample ID: Post-Carbon 2 Date Collected: 09/25/19 14:00

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

ND

ND

ND

ND

ND

Date Received: 09/25/19 14:30

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

cis-1,3-Dichloropropene

Trichloroethene

Vinyl chloride

Xylenes, Total

tert-Butylbenzene

Styrene

Analyte

Lab Sample ID: 480-159813-1 Matrix: Wastewater

Analyzed

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

10/02/19 22:48

Job ID: 480-159813-1

5

Dil Fac

1

1

1

1

1

1

1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)			77 - 120		10/02/19 22:48	1	
4-Bromofluorobenzene (Surr)	115		73 - 120		10/02/19 22:48	1	
Toluene-d8 (Surr)	113		80 - 120		10/02/19 22:48	1	
Dibromofluoromethane (Surr)	110		75 - 123		10/02/19 22:48	1	

General Chemistry Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac D Cyanide, Total 0.083 0.010 0.0050 mg/L 10/02/19 14:47 10/03/19 13:24 1 RL Analyte Result Qualifier RL Unit D Dil Fac Prepared Analyzed 7.5 HF 0.1 0.1 SU 10/08/19 10:00 рΗ 1 0.001 0.001 Degrees C 10/08/19 10:00 Temperature 19.2 HF 1

Client Sample ID: Pre-Carbon Date Collected: 09/25/19 14:15 Date Received: 09/25/19 14:30

sec-Butylbenzene

Tetrachloroethene

Toluene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: 480-159813-2

Matrix: Wastewater

Analyte	Result Qualifier	RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	50	41	ug/L		10/02/19 23:11	50
1,1,2,2-Tetrachloroethane	ND	50	11	-		10/02/19 23:11	50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	50	16	ug/L		10/02/19 23:11	50
1,1,2-Trichloroethane	ND	50	12	ug/L		10/02/19 23:11	50
1,1-Dichloroethane	ND	50	19	ug/L		10/02/19 23:11	50
1,1-Dichloroethene	ND	50	15	ug/L		10/02/19 23:11	50
1,2,4-Trichlorobenzene	ND	50		ug/L		10/02/19 23:11	50
1,2,4-Trimethylbenzene	ND	50		ug/L		10/02/19 23:11	50
1,2-Dibromo-3-Chloropropane	ND	50		ug/L		10/02/19 23:11	50
1,2-Dichlorobenzene	ND	50	40	ug/L		10/02/19 23:11	50
1,2-Dichloroethane	ND	50		ug/L		10/02/19 23:11	50
1,2-Dichloropropane	ND	50	36	ug/L		10/02/19 23:11	50
1,3,5-Trimethylbenzene	ND	50	39	ug/L		10/02/19 23:11	50
1,3-Dichlorobenzene	ND	50		ug/L		10/02/19 23:11	50
1,4-Dichlorobenzene	ND	50		ug/L		10/02/19 23:11	50
2-Butanone (MEK)	ND	500	66	ug/L		10/02/19 23:11	50
2-Hexanone	ND	250	62	ug/L		10/02/19 23:11	50
4-Isopropyltoluene	ND	50	16	ug/L		10/02/19 23:11	50
4-Methyl-2-pentanone (MIBK)	ND	250	110	ug/L		10/02/19 23:11	50
Acetone	ND	500		ug/L		10/02/19 23:11	50
Benzene	2600	50		ug/L		10/02/19 23:11	50
Bromoform	ND	50	13	ug/L		10/02/19 23:11	50
Bromomethane	ND	50	35			10/02/19 23:11	50
Carbon disulfide	ND	50	9.5	ug/L		10/02/19 23:11	50
Carbon tetrachloride	ND	50	14	ug/L		10/02/19 23:11	50
Chlorobenzene	ND	50	38	ug/L		10/02/19 23:11	50
Dibromochloromethane	ND	50	16	ug/L		10/02/19 23:11	50
Chloroethane	ND	50	16	ug/L		10/02/19 23:11	50
Chloroform	20 J	50	17			10/02/19 23:11	50
Chloromethane	ND	50	18	ug/L		10/02/19 23:11	50
cis-1,2-Dichloroethene	ND	50	41	ug/L		10/02/19 23:11	50
Cyclohexane	ND	50	9.0	ug/L		10/02/19 23:11	50
Bromodichloromethane	ND	50	20	ug/L		10/02/19 23:11	50
Dichlorodifluoromethane	ND	50	34	ug/L		10/02/19 23:11	50
Ethylbenzene	73	50	37	ug/L		10/02/19 23:11	50
1,2-Dibromoethane	ND	50	37	ug/L		10/02/19 23:11	50
lsopropylbenzene	ND	50	40	ug/L		10/02/19 23:11	50
Methyl acetate	ND	130	65	ug/L		10/02/19 23:11	50
Methyl tert-butyl ether	ND	50	8.0	ug/L		10/02/19 23:11	50
Methylcyclohexane	ND	50	8.0	ug/L		10/02/19 23:11	50
Methylene Chloride	ND	50	22	ug/L		10/02/19 23:11	50
m,p-Xylene	57 J	100	33	ug/L		10/02/19 23:11	50
Naphthalene	140	50		ug/L		10/02/19 23:11	50
n-Butylbenzene	ND	50		ug/L		10/02/19 23:11	50
N-Propylbenzene	ND	50	35	ug/L		10/02/19 23:11	50
o-Xylene	39 J	50	38	ug/L		10/02/19 23:11	50
	-			-			

Eurofins TestAmerica, Buffalo

10/02/19 23:11

10/02/19 23:11

10/02/19 23:11

50

50

50

38 ug/L

18 ug/L

26 ug/L

ND

ND

390

50

50

Client Sample ID: Pre-Carbon Date Collected: 09/25/19 14:15 Date Received: 09/25/19 14:30

Lab Sample ID: 480-159813-2 Matrix: Wastowator

Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		50	45	ug/L			10/02/19 23:11	50
trans-1,3-Dichloropropene	ND		50	19	ug/L			10/02/19 23:11	50
Trichloroethene	ND		50	23	ug/L			10/02/19 23:11	50
Trichlorofluoromethane	ND		50	44	ug/L			10/02/19 23:11	50
Vinyl chloride	ND		50	45	ug/L			10/02/19 23:11	50
Xylenes, Total	96	J	100	33	ug/L			10/02/19 23:11	50
cis-1,3-Dichloropropene	ND		50	18	ug/L			10/02/19 23:11	50
Styrene	ND		50	37	ug/L			10/02/19 23:11	50
tert-Butylbenzene	ND		50	41	ug/L			10/02/19 23:11	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1.2-Dichloroethane-d4 (Surr)	109		77 - 120			-		10/02/19 23:11	50

1,2-Dichloroethane-d4 (Surr)	109	77 - 120	10/02/19 23:11	50
4-Bromofluorobenzene (Surr)	111	73 - 120	10/02/19 23:11	50
Toluene-d8 (Surr)	113	80 - 120	10/02/19 23:11	50
Dibromofluoromethane (Surr)	115	75 - 123	10/02/19 23:11	50

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	108000		500	100	ug/L		09/27/19 09:03	10/01/19 22:09	1
Magnesium	41800		200	43.4	ug/L		09/27/19 09:03	09/28/19 19:35	1
Potassium	21200	F1	500	100	ug/L		09/27/19 09:03	09/28/19 19:35	1
Sodium	130000		1000	324	ug/L		09/27/19 09:03	09/28/19 19:35	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	207		2.5	1.4	mg/L			10/05/19 17:24	5
Sulfate	148		10.0	1.7	mg/L			10/05/19 17:24	5
Alkalinity, Total	359	В	40.0	16.0	mg/L			10/08/19 18:07	4

Client Sample ID: Post-Carbon 2 Date Collected: 09/25/19 14:00 Date Received: 09/25/19 14:30

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	495480	10/02/19 22:48	KMN	TAL BUF
Total/NA	Prep	Distill/CN			495511	10/02/19 14:47	ZFM	TAL BUF
Total/NA	Analysis	335.4		1	495757	10/03/19 13:24	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	496648	10/08/19 10:00	KEB	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 09/25/19 14:15 Date Received: 09/25/19 14:30

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	495480	10/02/19 23:11	KMN	TAL BUF
Total/NA	Prep	200.7			494483	09/27/19 09:03	KMP	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	495321	10/01/19 22:09	AMH	TAL BUF
Total/NA	Prep	200.7			494483	09/27/19 09:03	KMP	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	494861	09/28/19 19:35	AMH	TAL BUF
Total/NA	Analysis	300.0		5	496156	10/05/19 17:24	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	496784	10/08/19 18:07	SRW	TAL BUF

Laboratory References:

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

Job ID: 480-159813-1

Lab Sample ID: 480-159813-1

Lab Sample ID: 480-159813-2

Matrix: Wastewater

Matrix: Wastewater

5
6
7
8
0

Authority Program Identification Number Expiration Date New York NELAP 10026 03-31-20 The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. Pren Method

Analysis Method Prep Method Matrix	Analyte
335.4 Distill/CN Wastewater	Cyanide, Total
SM 4500 H+ B Wastewater	pH
SM 4500 H+ B Wastewater	Temperature

Eurofins TestAmerica, Buffalo

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

lethod	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
800.0	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
200.7	Preparation, Total Metals	EPA	TAL BUF
6030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-159813-1	Post-Carbon 2	Wastewater	09/25/19 14:00	09/25/19 14:30	
480-159813-2	Pre-Carbon	Wastewater	09/25/19 14:15	09/25/19 14:30	

Eurofins TestAmerica, Buffalo

Chain of Custody Record

deurofins 🔅

Environment Testing TestAmerica

10 Hazelwood Drive Amherst, NY 14228-2298 Phone: 716-691-2600 Fax: 716-691-7991

Client Information	Sampier: UR John					t. on, Orlette S						Carrier Track	king N	D(S):		COC No: 490-123665-28	090.1
Client Contact: Thomas Palmer	Sampler: MR Joh Phone: 8002877857 E-M; orie					.johnson@testamericainc.com											
Company:	000	01	10-1							alys							
Groundwater & Environmental Services Inc Address:	Due Date Requested:					—		T	An		480	-159813					es:
415 Lawrence Bell Drive Suite 6 City:	TAT Requested (days):										1		Chai	n of Cu	stody		M - Hexane N - None
Williamsville State, Zip:	51D PO#: CallOut ID 136076				1								1	1110		D - Nitric Acid	O - AsNaO2 P - Na2O4S
NY, 14221 Phone:				_												E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3
518-402-9662(Tel)					(o)										G - Amchlor H - Ascorbic Acid	S - H2SO4 T - TSP Dodecahydrate	
Email: tpaImer@gesonline.com	WO #:				No)			_							sia	J - DI Water K - EDTA	U - Acetone V - MCAA W - pH 4-5
Project Name: Gastown WWTP #915171 - Monthly Event Desc: Monthly	Project #: 48002525				le (Yes es or h			Stars		-					container	L-EDA	Z - other (specify)
Site: New York	SSOW#:				Sampl ISD (Y	Total		P-51 (S04	K, Na					of co	Other:	
Sample Identification	Sample Date	Sample Time	Туре	Matrix (W=water, S=solid, Inwaste/oil, Fissue, A=Air)	Field Filtered Sample (Yes of Perform MS/MSD (Yes or No)	335.4 - Cyanide, Total	SM4500_H+ - pH	8260C - TCL + CP-51 (Stars)	300.0_28D - CI, SO4	200.7 - Ca, Mg, K, Na 310.2 - Alkalinity Total					Total Number	Special	nstructions/Note:
	> <	$>\!$	Preservatio		\boxtimes	в		-	-) N					X		
Post-Carbon 2	9/25	1400	6	Water		1	1	1								1	
Pre-Carbon	9/25	1415	G	Water				1	1	1 1					1		
		-															
															1		
Possible Hazard Identification Non-Hazard Flammable Skin Irritant P Deliverable Requested: I, II, III, IV, Other (specify)	oison B KUnkn	own □ _F	Radiological	_			eturn	To C	lient		iremen	isposal By	f san Lab	nples ar	e retai Arcl	ned longer than	1 month) Months
		Date:		_	Time:			Jouon		- Toqu			t of S	ipment:	-	-	
Empty Kit Relinquished by:	Date/Time:	1	Co	ppany	Trane.	_	eived b	iy;				mound		ate/Time:	-		Company
Relinquished by:	Date/Time:	5 19 1				Rece	eived b	W:					E	ate/Time:	_		Company
	Date/Time:			npany			ived		-	-	17						
Relinquished by	Date/ Inte.				_	-	-	2	-	1	le		L	ate Time	5-1	19 1431	Company AD
Custody Seals Intact: Custody Seal No.:						Cool	er Tem	nperatu	ure(s) '	'C and	Other Re	marks:				2.9 :	#1
																,	Ver: 01/16/2019

10/9/2019

Client: New York State D.E.C.

Login Number: 159813 List Number: 1

Creator: Stopa, Erik S

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 (Excluding tests with immediate HTs)	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	

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-160947-1

Client Project/Site: Gastown WWTP #915171

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Gisconayer

Authorized for release by: 10/31/2019 8:49:51 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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.



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. Giacomage

Joe Giacomazza Project Management Assistant II 10/31/2019 8:49:51 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Qualifiers

	3
Qualifier Description	4
MS and/or MSD Recovery is outside acceptance limits.	
Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	5
nistry	
Qualifier Description	6
Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
	7
These commonly used abbreviations may or may not be present in this report.	8
Listed under the "D" column to designate that the result is reported on a dry weight basis	
Percent Recovery	0
Contains Free Liquid	3
Contains No Free Liquid	10
Duplicate Error Ratio (normalized absolute difference)	10
Dilution Factor	
Detection Limit (DoD/DOE)	11
- -	MS and/or MSD Recovery is outside acceptance limits. Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. nistry Qualifier Description Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Image: Comparing the second se

Glossary

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
Percent Recovery
Contains Free Liquid
Contains No Free Liquid
Duplicate Error Ratio (normalized absolute difference)
Dilution Factor
Detection Limit (DoD/DOE)
Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
Decision Level Concentration (Radiochemistry)
Estimated Detection Limit (Dioxin)
Limit of Detection (DoD/DOE)
Limit of Quantitation (DoD/DOE)
Minimum Detectable Activity (Radiochemistry)
Minimum Detectable Concentration (Radiochemistry)
Method Detection Limit
Minimum Level (Dioxin)
Not Calculated
Not Detected at the reporting limit (or MDL or EDL if shown)
Practical Quantitation Limit
Quality Control
Relative Error Ratio (Radiochemistry)
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-160947-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-160947-1

Comments

No additional comments.

Receipt

The samples were received on 10/16/2019 11:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

GC/MS VOA

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-160947-2), (480-160947-D-2 MS) and (480-160947-D-2 MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-160947-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method 335.4: The laboratory control sample (LCS) for preparation batch 480-499236 and analytical batch 480-499415 recovered outside control limits for the following analytes: Cyanide. The LCS recovery was high. The sample was reanalyzed and the result was confirmed.

Methods 9040C, 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 2 (480-160947-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 10/16/19 11:15 Date Received: 10/16/19 11:50

Toluene

Lab Sample ID: 480-160947-1

Matrix: Water

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L			10/22/19 02:24	1
,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			10/22/19 02:24	1
,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			10/22/19 02:24	1
,1,2-Trichloroethane	ND	1.0	0.23	ug/L			10/22/19 02:24	1
,1-Dichloroethane	ND	1.0	0.38	ug/L			10/22/19 02:24	1
,1-Dichloroethene	ND	1.0	0.29	ug/L			10/22/19 02:24	1
,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			10/22/19 02:24	
2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			10/22/19 02:24	
,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			10/22/19 02:24	
,2-Dichlorobenzene	ND	1.0	0.79	ug/L			10/22/19 02:24	• • • • •
,2-Dichloroethane	ND	1.0	0.21	ug/L			10/22/19 02:24	
2-Dichloropropane	ND	1.0	0.72	ug/L			10/22/19 02:24	
,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			10/22/19 02:24	1
,3-Dichlorobenzene	ND	1.0	0.78				10/22/19 02:24	
,4-Dichlorobenzene	ND	1.0		ug/L			10/22/19 02:24	
Butanone (MEK)	ND	10		ug/L			10/22/19 02:24	
Hexanone	ND	5.0		ug/L			10/22/19 02:24	
Isopropyltoluene	ND	1.0		ug/L			10/22/19 02:24	
Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			10/22/19 02:24	
cetone	ND	10	3.0	ug/L			10/22/19 02:24	
enzene	20	1.0		ug/L			10/22/19 02:24	
omoform	ND	1.0		ug/L			10/22/19 02:24	
romomethane	ND	1.0	0.69	-			10/22/19 02:24	
arbon disulfide	ND	1.0	0.19	•			10/22/19 02:24	
arbon tetrachloride	ND	1.0		ug/L			10/22/19 02:24	
hlorobenzene	ND	1.0		ug/L			10/22/19 02:24	
ibromochloromethane	ND	1.0		ug/L			10/22/19 02:24	
hloroethane	ND	1.0		ug/L			10/22/19 02:24	
hloroform	0.74 J	1.0		ug/L			10/22/19 02:24	
hloromethane	ND	1.0		ug/L			10/22/19 02:24	
s-1,2-Dichloroethene	ND	1.0		ug/L			10/22/19 02:24	
yclohexane	ND	1.0		ug/L			10/22/19 02:24	
	ND	1.0		-				
romodichloromethane		1.0		ug/L			10/22/19 02:24 10/22/19 02:24	
ichlorodifluoromethane	ND ND	1.0		ug/L			10/22/19 02:24	
thylbenzene				ug/L				
2-Dibromoethane	ND	1.0		ug/L			10/22/19 02:24	
opropylbenzene	ND	1.0		ug/L			10/22/19 02:24	
ethyl acetate	ND	2.5		ug/L			10/22/19 02:24	
ethyl tert-butyl ether	ND	1.0		ug/L			10/22/19 02:24	
ethylcyclohexane	ND	1.0		ug/L			10/22/19 02:24	
ethylene Chloride	ND	1.0		ug/L			10/22/19 02:24	
,p-Xylene	ND	2.0		ug/L			10/22/19 02:24	
aphthalene	ND	1.0		ug/L			10/22/19 02:24	
Butylbenzene	ND	1.0		ug/L			10/22/19 02:24	
-Propylbenzene	ND	1.0		ug/L			10/22/19 02:24	
Xylene	ND	1.0		ug/L			10/22/19 02:24	
ec-Butylbenzene	ND	1.0		ug/L			10/22/19 02:24	
etrachloroethene	ND	1.0	0.36	ug/L			10/22/19 02:24	
		1.0	0 - 4				10/00/10 00 01	

Eurofins TestAmerica, Buffalo

10/22/19 02:24

1.0

0.51 ug/L

ND

RL

1.0

1.0

1.0

1.0

1.0

2.0

1.0

1.0

1.0

MDL Unit

0.90 ug/L

0.37 ug/L

0.46 ug/L

0.88 ug/L

0.90 ug/L

0.66 ug/L

0.36 ug/L

0.73 ug/L

0.81 ug/L

D

Prepared

Client Sample ID: Post-Carbon 2 Date Collected: 10/16/19 11:15 Date Received: 10/16/19 11:50

Analyte

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

cis-1,3-Dichloropropene

Trichloroethene

Vinyl chloride

Xylenes, Total

tert-Butylbenzene

Styrene

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

1.1

ND

ND

ND

ND

.lob	١D·	480-1	60947-1
000	ıD.	100 1	00047 1

Lab Sample ID: 480-160947-1

Analyzed

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

10/22/19 02:24

Matrix: Water

Dil Fac

1

1

1

1

1

1

1

Surrogate	%Recovery	Qualifier	Limits	Prepar	ed Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		77 - 120		10/22/19 02:24	1
4-Bromofluorobenzene (Surr)	102		73 - 120		10/22/19 02:24	1
Toluene-d8 (Surr)	100		80 - 120		10/22/19 02:24	1
Dibromofluoromethane (Surr)	106		75 - 123		10/22/19 02:24	1

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.12		0.010	0.0050	mg/L		10/21/19 12:50	10/22/19 09:28	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
рН	7.4	HF	0.1	0.1	SU			10/24/19 14:32	1
Temperature	19.1	HF	0.001	0.001	Degrees C			10/24/19 14:32	1

Client Sample ID: Pre-Carbon Date Collected: 10/16/19 11:30 Date Received: 10/16/19 11:50

Toluene

Lab Sample ID: 480-160947-2

Matrix: Water

ND S0 41 upt. 102219 02247 11,12-Trichloroshane ND 50 14 upt. 102219 02247 11,12-Trichloroshane ND 50 15 upt. 102219 02247 11,12-Trichloroshane ND 50 15 upt. 102219 0247 1,1-2-Trichloroshane ND 50 15 upt. 102219 0247 1,1-Dicklooshane ND 50 15 upt. 102219 0247 1,2-A Trichloroshane ND 50 21 upt. 102219 0247 1,2-A Trichloroshane ND 50 30 upt. 102219 0247 1,2-Britonso-Achizopropane ND 50 30 upt. 102219 0247 1,2-Dickloropropane ND 50 31 upt. 102219 0247 1,2-Dickloropropane ND 50 31 upt. 102219 0247 1,2-Dickloropropane ND 50 31 upt. 102219 0247 1,2-Dickloropropane ND <th>Analyte</th> <th>Result</th> <th>Qualifier</th> <th>RL</th> <th>MDL</th> <th>Unit</th> <th>D</th> <th>Prepared</th> <th>Analyzed</th> <th>Dil Fa</th>	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,2-2-Trichlocoshane ND 50 11 ugL 10221190247 1,1,2-Trichlocoshane ND 50 16 ugL 10221190247 1,1-2-Trichlocoshane ND 50 15 ugL 10221190247 1,1-Dichlocoshane ND 50 15 ugL 10221190247 1,1-Dichlocoshane ND 50 21 ugL 10221190247 1,2-A-Trinchlybersene ND 50 20 ugL 10221190247 1,2-Dichlocoshane ND 50 38 ugL 1022190247 1,2-Dichlocoshane ND 50 39 ugL 1022190247 1,2-Dichlocoshane ND 50 39 ugL 1022190247 1,2-Dichlocoshane ND 50 39 ugL 1022190247 1,2-Dichlocoshane ND 50 42 ugL 1022190247 1,2-Dichlocoshane ND 50 42 ugL 1022190247 1,2-Dichlocoshane ND 50 42 ugL 1022190247 1,2-Dichlocoshane <t< td=""><td></td><td></td><td></td><td>50</td><td>41</td><td>ug/L</td><td></td><td>-</td><td></td><td>5</td></t<>				50	41	ug/L		-		5
1,1,2-Trichloro-1,2,2-trifluoroethane ND 50 19 upL 1022/19 02.47 1,1,2-Trichloroethane ND 50 19 upL 1022/19 02.47 1,1-Dichloroethane ND 50 19 upL 1022/19 02.47 1,1-Dichloroethane ND 50 19 upL 1022/19 02.47 1,1-Dichloroethane ND 50 20 upL 1022/19 02.47 1,2.1-Trinklorbenzene ND 50 20 upL 1022/19 02.47 1,2.Dichloroethane ND 50 11 upL 1022/19 02.47 1,2.Dichlorophane ND 50 30 upL 1022/19 02.47 1,2.Dichlorophane ND 50 30 upL 1022/19 02.47 1,2.Dichlorophane ND 50 30 upL 1022/19 02.47 1,2.Dichlorophane ND 50 42 upL 1022/19 02.47 1,2.Dichlorophane ND 50 10 upL 1022/19 02.47 1,2.Dichlorophane ND 50 10 upL 1022/19 02.47	1,1,2,2-Tetrachloroethane	ND		50	11	-			10/22/19 02:47	50
1,1,2-Trichloroshhane ND 50 12 upL 1022/19.02.47 1,1-Dichloroshhane ND 50 19 upL 1022/19.02.47 1,2,4-Trichloroshnane ND 50 21 upL 1022/19.02.47 1,2,4-Trichloroshnane ND 50 21 upL 1022/19.02.47 1,2,4-Trichloroshnane ND 50 20 upL 1022/19.02.47 1,2,Dichloroshnane ND 50 40 upL 1022/19.02.47 1,2,Dichloroshnane ND 50 30 upL 1022/19.02.47 1,2,Dichloroshnane ND 50 39 upL 1022/19.02.47 1,3,Dichloroshnane ND 50 39 upL 1022/19.02.47 1,4,Dichloroshnane ND 50 49 upL 1022/19.02.47 1,4,Dichloroshnane ND 50 49 upL 1022/19.02.47 1,4,Dichloroshnane ND 50 49 upL 1022/19.02.47 1,4,Dichloroshnane ND 50 19 upL 1022/19.02.47 <tr< td=""><td>1,1,2-Trichloro-1,2,2-trifluoroethane</td><td>ND</td><td></td><td>50</td><td>16</td><td>-</td><td></td><td></td><td>10/22/19 02:47</td><td>50</td></tr<>	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50	16	-			10/22/19 02:47	50
1,1 Dickloroschane ND 50 19 upL 1002/1902/17 1,1 Dickloroschane ND 50 15 upL 1002/1902/17 1,2 JTintilorobanzene ND 50 38 upL 1002/1902/17 1,2 JTintilorobanzene ND 50 38 upL 1002/1902/17 1,2 JTintilorobanzene ND 50 30 upL 1002/1902/17 1,2 Dichonspropane ND 50 30 upL 1002/1902/17 1,2 Dichoropropane ND 50 39 upL 1002/1902/17 1,3 D-Tintherbybenzene ND 50 39 upL 1002/1902/17 1,4 Dichorobenzene ND 50 49 upL 1002/1902/17 1,4 Dichorobenzene ND 50 61 upL 1002/1902/17 1,4 Dichorobenzene ND 50 10 upL 1002/1902/17 1,4 Dichorobenzene ND 50 10 upL 1002/1902/17 1,4 Dichorobenzene ND 50 10 upL 1002/1902/17	1,1,2-Trichloroethane	ND		50					10/22/19 02:47	50
1,1-Dicktoreshene ND 50 15 ug/L 1022/19 02.47 1,2.4-Trinktlyberzene ND 50 21 ug/L 1022/19 02.47 1,2.Dicktorebrazene ND 50 20 ug/L 1022/19 02.47 1,2.Dicktorebrazene ND 50 40 ug/L 1022/19 02.47 1.2.Dicktorebrazene ND 50 38 ug/L 1022/19 02.47 1.2.Dicktorebrazene ND 50 38 ug/L 1022/19 02.47 1.3.Dicktorebrazene ND 50 39 ug/L 1022/19 02.47 1.3.Dicktorebrazene ND 50 39 ug/L 1022/19 02.47 1.4.Dicktorebrazene ND 500 66 ug/L 1022/19 02.47 2.Butanone (MEK) ND 500 66 ug/L 1022/19 02.47 2.Butanone (MEK) ND 50 11 ug/L 1022/19 02.47 2.Butanone (MEK) ND 50 15 ug/L 1022/19 02.47 2.Butanone (MEK) ND 50 15 ug/L 1022/19 02.47						-				50
12.4-Trichlorobenzene ND 50 21 ug/L 1002219 02.47 12.4-Trinethyberzene ND 50 33 ug/L 1002219 02.47 12.Dehtrono-Schloropropane ND 50 40 ug/L 1002219 02.47 12.Dehtrono-Schloropropane ND 50 40 ug/L 1002219 02.47 12.Dehtrono-Schloropropane ND 50 36 ug/L 1002219 02.47 13.S-Timethyberzene ND 50 39 ug/L 1002219 02.47 13.S-Timethyberzene ND 50 66 ug/L 1002219 02.47 14.Dehtronberzene ND 50 66 ug/L 1002219 02.47 14.Aeptrophyblukine ND 50 16 ug/L 1002219 02.47 4-keoprophyblukine ND 50 15 ug/L 1002219 02.47 4-keoprophyblukine ND 50 15 ug/L 1002219 02.47 A-keotone ND 50 15 ug/L 1002219 02.47 <t< td=""><td>1.1-Dichloroethene</td><td>ND</td><td></td><td>50</td><td></td><td>-</td><td></td><td></td><td>10/22/19 02:47</td><td>50</td></t<>	1.1-Dichloroethene	ND		50		-			10/22/19 02:47	50
1,2.4.Trimethyberszene ND 50 38 ug/L 1022/19 02.47 1,2.0.Bronoros-3.Chioropropane ND 50 40 1022/19 02.47 1,2.0.Bronoros-ane ND 50 40 1022/19 02.47 1,2.0.Bronoros-ane ND 50 36 ug/L 1022/19 02.47 1,2.0.Bronoros-ane ND 50 39 ug/L 1022/19 02.47 1,3.Deltohoroberzene ND 50 39 ug/L 1022/19 02.47 1,3.Deltohoroberzene ND 50 42 ug/L 1022/19 02.47 1,3.Deltohoroberzene ND 50 66 ug/L 1022/19 02.47 2.4.desprozyfichare ND 50 66 ug/L 1022/19 02.47 2.4.desprozyfichare ND 50 16 ug/L 1022/19 02.47 4.desprozyfichare ND 50 150 ug/L 1022/19 02.47 4.desprozyfichare ND 50 13 ug/L 1022/19 02.47 A.desprozyfichare ND 50 31 ug/L 1022/19 02.47 Born	1.2.4-Trichlorobenzene									50
12-Dichorop-3-Chlooppopane ND 50 20 ugl. 102219 0247 1,2-Dichorophane ND 50 10 ugl. 102219 0247 1,2-Dichorophane ND 50 36 ugl. 102219 0247 1,2-Dichorophane ND 50 39 ugl. 102219 0247 1,3-Strimethybenzene ND 50 39 ugl. 102219 0247 1,3-Dichorophane ND 50 42 ugl. 102219 0247 1,4-Dichorophane ND 50 66 ugl. 102219 0247 2-Haxnone (MEK) ND 50 16 ugl. 102219 0247 2-Haxnone (MIBK) ND 50 150 ugl. 102219 0247 4-Aepropylobune ND 50 150 ugl. 102219 0247 A-Hentry-Spentanone (MIBK) ND 50 150 ugl. 102219 0247 Benzene ND 50 150 ugl. 102219 0247 Bronnomethane ND 50 150 ugl. 102219 0247 Dioromothone						-				50
1.2.Dichlorobenzene ND 50 40 ug/L 10/22/19/02:47 1.2.Dichloropethane ND 50 36 ug/L 10/22/19/02:47 1.3.Dichloropethane ND 50 39 ug/L 10/22/19/02:47 1.3.Dichloropethane ND 50 39 ug/L 10/22/19/02:47 1.3.Dichloropethane ND 50 42 ug/L 10/22/19/02:47 4.Lobchorobenzene ND 50 66 ug/L 10/22/19/02:47 4.Lobchorobenzene ND 250 10 ug/L 10/22/19/02:47 4.Loprotytionene ND 500 150 ug/L 10/22/19/02:47 4.Loprotytionene ND 500 150 ug/L 10/22/19/02:47 4.Loprotytionene ND 500 150 ug/L 10/22/19/02:47 4.Loprotytionene ND 50 13 ug/L 10/22/19/02:47 Bromorethane ND 50 13 ug/L 10/22/19/02:47 <td< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>50</td></td<>	-									50
1.2.Dichloroethane ND 50 11 ug/L 10/22/19 02.47 1.3.Dichloropopane ND 50 39 ug/L 10/22/19 02.47 1.3.Dichlorobenzene ND 50 39 ug/L 10/22/19 02.47 1.4.Dichlorobenzene ND 50 66 ug/L 10/22/19 02.47 2.Huanone (MEK) ND 50 66 ug/L 10/22/19 02.47 2.Huanone (MEK) ND 50 61 ug/L 10/22/19 02.47 4.Hoptrychulene ND 50 11 ug/L 10/22/19 02.47 4.Hoptrychulene ND 50 150 ug/L 10/22/19 02.47 Acetone ND 50 150 ug/L 10/22/19 02.47 Acetone ND 50 150 ug/L 10/22/19 02.47 Bromorbitane ND 50 150 ug/L 10/22/19 02.47 Bromorbitane ND 50 150 ug/L 10/22/19 02.47 Carbon disulfide ND 50 16 ug/L 10/22/19 02.47 Choroebnitane </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>50</td>										50
1.2.Dichloropropane ND 50 38 ug/L 10/22/19 02.47 1.3.5-Timethylbenzene ND 50 39 ug/L 10/22/19 02.47 1.4.Dichlorobenzene ND 50 42 ug/L 10/22/19 02.47 2.4-Uichlorobenzene ND 50 66 ug/L 10/22/19 02.47 2.4-Uichlorobenzene ND 50 66 ug/L 10/22/19 02.47 2.4-Versanone ND 50 16 ug/L 10/22/19 02.47 4-keoropylloluene ND 50 16 ug/L 10/22/19 02.47 Actone ND 50 10 ug/L 10/22/19 02.47 Benzene 150 50 21 ug/L 10/22/19 02.47 Benzene ND 50 13 ug/L 10/22/19 02.47 Bromoform ND 50 13 ug/L 10/22/19 02.47 Carbon titrachioride ND 50 44 ug/L 10/22/19 02.47 Carbon titrachioride ND 50 44 ug/L 10/22/19 02.47 Chorobenzen						-				50
1,3.5-Trimethybenzene ND 50 39 ugL 10/22/19 02:47 1,3.Dichtorobenzene ND 50 42 ugL 10/22/19 02:47 1,3.Dichtorobenzene ND 50 66 ugL 10/22/19 02:47 2.Butanone (MEK) ND 250 66 ugL 10/22/19 02:47 4.Aespropribulene ND 50 16 ugL 10/22/19 02:47 4.Aestrone ND 50 16 ugL 10/22/19 02:47 4.Aestrone ND 50 10 ugL 10/22/19 02:47 Acstone ND 50 110 ugL 10/22/19 02:47 Bromoform ND 50 13 ugL 10/22/19 02:47 Bromoform ND 50 13 ugL 10/22/19 02:47 Bromoform ND 50 14 ugL 10/22/19 02:47 Carbon distified ND 50 16 ugL 10/22/19 02:47 Chiorobethane ND 50						-				50
1.3-Dichlorobenzene ND 50 39 ug/L 10/22/19 02.47 1.4-Dichlorobenzene ND 50 60 ug/L 10/22/19 02.47 2-Hexanone (MEK) ND 50 60 ug/L 10/22/19 02.47 2-Hexanone (MIBK) ND 50 10 ug/L 10/22/19 02.47 4-Heyty-2-pentanone (MIBK) ND 50 10 ug/L 10/22/19 02.47 Actone ND 50 10 ug/L 10/22/19 02.47 Renzene 150 50 21 ug/L 10/22/19 02.47 Renzene 150 50 33 ug/L 10/22/19 02.47 Romomethane ND 50 35 ug/L 10/22/19 02.47 Carbon disulfide ND 50 13 ug/L 10/22/19 02.47 Carbon tatrachloride ND 50 14 ug/L 10/22/19 02.47 Carbon disulfide ND 50 16 ug/L 10/22/19 02.47 Carbon disulfide ND 50 16 ug/L 10/22/19 02.47 Chorobenze										
1.4-DichlorobenzeneND5042ug/L10/22/19 02:472-Butanone (MEK)ND50066ug/L10/22/19 02:472-Hexanone (MEK)ND50016ug/L10/22/19 02:474-JacpropyllolueneND500150ug/L10/22/19 02:474-Methyl-2-pentanone (MIBK)ND250110ug/L10/22/19 02:47AcetoneND500150ug/L10/22/19 02:47Benzono1500505121ug/L10/22/19 02:47BromoferND505321ug/L10/22/19 02:47BromoferND5055ug/L10/22/19 02:47BromoferND5038ug/L10/22/19 02:47Carbon disulféND5014ug/L10/22/19 02:47ChorobenzeneND5016ug/L10/22/19 02:47DiormochformethaneND5016ug/L10/22/19 02:47ChorobenzeneND5016ug/L10/22/19 02:47ChorobenzeneND5016ug/L10/22/19 02:47ChorobenzeneND5017ug/L10/22/19 02:47ChorobenzeneND5014ug/L10/22/19 02:47ChorobenzeneND509.0ug/L10/22/19 02:47ChorobenzeneND5037ug/L10/22/19 02:47ChorobenzeneND5037ug/L10/22/19 02:47 <tr< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>50</td></tr<>	-									50
2-Butanone (MEK) ND 500 66 ug/L 10/22/19 02:47 2-Hexanone ND 500 16 ug/L 10/22/19 02:47 4-kopropyltoluene ND 500 16 ug/L 10/22/19 02:47 Aketopic-Spentanone (MIBK) ND 500 150 ug/L 10/22/19 02:47 Acetone ND 500 150 ug/L 10/22/19 02:47 Benzene 1500 50 21 ug/L 10/22/19 02:47 Bromoferm ND 50 35 ug/L 10/22/19 02:47 Carbon terabinide ND 50 35 ug/L 10/22/19 02:47 Carbon terabinide ND 50 14 ug/L 10/22/19 02:47 Chiorobenzene ND 50 16 ug/L 10/22/19 02:47 Chiorobenzene ND 50 16 ug/L 10/22/19 02:47 Chiorobenzene ND 50 18 ug/L 10/22/19 02:47 Chiorobenzene ND <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>50</td>						•				50
2-Hexanone ND 250 62 ug/L 10/22/19 02:47 4-Isopropholuene ND 50 110 ug/L 10/22/19 02:47 4-Methyl-2-pentanone (MIBK) ND 500 150 ug/L 10/22/19 02:47 Acetone ND 500 150 ug/L 10/22/19 02:47 Benzene 1500 60 21 ug/L 10/22/19 02:47 Bromonethane ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 36 ug/L 10/22/19 02:47 Carbon disulfide ND 50 16 ug/L 10/22/19 02:47 Chlorobenzene ND 50 16 ug/L 10/22/19 02:47 Chlorobethane ND 50 16 ug/L 10/22/19 02:47 Chlorobethane ND 50 41 ug/L 10/22/19 02:47 Cyclohexane ND										50
H-Isopropytholuene ND 50 16 ug/L 10/22/19 02:47 4-Methyl-2-pentanone (MIBK) ND 250 110 ug/L 10/22/19 02:47 Acetone ND 500 150 ug/L 10/22/19 02:47 Acetone ND 500 13 ug/L 10/22/19 02:47 Bromoform ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 34 ug/L 10/22/19 02:47 Carbon disulfide ND 50 14 ug/L 10/22/19 02:47 Chorosthare ND 50 16 ug/L 10/22/19 02:47 Chorosthare ND <						-				50
4-Methyl-2-pentanone (MIBK) ND 250 110 ug/L 10/22/19 02:47 Acetone ND 500 150 ug/L 10/22/19 02:47 Banzane 1500 50 21 ug/L 10/22/19 02:47 Bromoform ND 50 13 ug/L 10/22/19 02:47 Bromomethane ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 35 ug/L 10/22/19 02:47 Carbon tetrachloride ND 50 14 ug/L 10/22/19 02:47 Chiorobenzene ND 50 16 ug/L 10/22/19 02:47 Chiorobenzene ND 50 16 ug/L 10/22/19 02:47 Chiorobentane ND 50 16 ug/L 10/22/19 02:47 Chiorobentane ND 50 18 ug/L 10/22/19 02:47 Chiorobentane ND 50 18 ug/L 10/22/19 02:47 Chiorobentane ND						-				50
Acetone ND 500 150 ug/L 10/2/19 02:47 Benzene 1500 50 21 ug/L 10/2/19 02:47 Benzene ND 50 13 ug/L 10/2/19 02:47 Bromomethane ND 50 35 ug/L 10/2/19 02:47 Carbon disulfide ND 50 9.5 ug/L 10/2/19 02:47 Carbon disulfide ND 50 38 ug/L 10/2/19 02:47 Carbon disulfide ND 50 38 ug/L 10/2/19 02:47 Chiorobharzene ND 50 38 ug/L 10/2/19 02:47 Chiorobharzene ND 50 16 ug/L 10/2/19 02:47 Chiorobharae ND 50 16 ug/L 10/2/19 02:47 Chiorobharae ND 50 18 ug/L 10/2/19 02:47 Chiorobharae ND 50 41 ug/L 10/2/19 02:47 Chiorobharae ND 50 37<										50
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Bromoform ND 50 13 ug/L 10/22/19 02:47 Bromomethane ND 50 35 ug/L 10/22/19 02:47 Carbon disulfide ND 50 9.5 ug/L 10/22/19 02:47 Carbon tetrachloride ND 50 14 ug/L 10/22/19 02:47 Chloroberzene ND 50 16 ug/L 10/22/19 02:47 Chloroberzene ND 50 16 ug/L 10/22/19 02:47 Chloroberzene ND 50 16 ug/L 10/22/19 02:47 Chlorobertane ND 50 16 ug/L 10/22/19 02:47 Chlorodethane ND 50 11 ug/L 10/22/19 02:47 Chlorodethane ND 50 41 ug/L 10/22/19 02:47 Cyclohexane ND 50 41 ug/L 10/22/19 02:47 Cyclohexane ND F1 50 37 ug/L 10/22/19 02:47 Cyclohexane ND </td <td>Acetone</td> <td>ND</td> <td></td> <td></td> <td>150</td> <td>ug/L</td> <td></td> <td></td> <td>10/22/19 02:47</td> <td>50</td>	Acetone	ND			150	ug/L			10/22/19 02:47	50
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ND 50 16 ug/L 10/22/19 02:47 Chloroform 18 J 50 17 ug/L 10/22/19 02:47 Chloromethane ND 50 18 ug/L 10/22/19 02:47 Chloromethane ND 50 41 ug/L 10/22/19 02:47 Cyclohexane ND 50 9.0 ug/L 10/22/19 02:47 Bromotichloromethane ND 50 9.0 ug/L 10/22/19 02:47 Dichlorodithuromethane ND 50 20 ug/L 10/22/19 02:47 Dichlorodithuromethane ND F1 50 34 ug/L 10/22/19 02:47 12-Dibromoethane ND 50 37 ug/L 10/22/19 02:47 12-Dibromoethane ND 50 37 ug/L 10/22/19 02:47 12-Dibromoethane ND 50 40 ug/L 10/22/19 02:47 12-Dibromoethane ND 50 8.0 ug/L 10/22/19 02:47 Methyl aceta	Chlorobenzene	ND		50	38	ug/L			10/22/19 02:47	50
Chioroform 18 J 50 17 ug/L 10/22/19 02:47 Chioromethane ND 50 41 ug/L 10/22/19 02:47 cis-1,2-Dichloroethene ND 50 41 ug/L 10/22/19 02:47 Cyclohexane ND 50 9.0 ug/L 10/22/19 02:47 Dichlorodifluoromethane ND 50 50 20 ug/L 10/22/19 02:47 Dichlorodifluoromethane ND 50 50 37 ug/L 10/22/19 02:47 Ethylbenzene 130 50 37 ug/L 10/22/19 02:47 12-Dichorodethane ND 50 37 ug/L 10/22/19 02:47 12-Dichorodethane ND 50 37 ug/L 10/22/19 02:47 12-Dichorodethane ND 50 40 ug/L 10/22/19 02:47 12-Dichorodethane ND 50 8.0 ug/L 10/22/19 02:47 Methyl acetate ND 50 8.0 ug/L 10/	Dibromochloromethane	ND		50	16	ug/L			10/22/19 02:47	50
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ND 50 9.0 u/L 10/22/19 02:47 Bromodichloromethane ND F1 50 20 ug/L 10/22/19 02:47 Dichlorodifluoromethane ND F1 50 34 ug/L 10/22/19 02:47 Ethylbenzene 130 50 37 ug/L 10/22/19 02:47 1,2-Dibromoethane ND S0 50 37 ug/L 10/22/19 02:47 1,2-Dibromoethane ND S0 50 37 ug/L 10/22/19 02:47 1,2-Dibromoethane ND S0 50 40 ug/L 10/22/19 02:47 Isopropylbenzene ND S0 65 ug/L 10/22/19 02:47 Methyl acetate ND S0 8.0 ug/L 10/22/19 02:47 Methylene Chloride 30 J 50 22 ug/L 10/22/19 02:47 n.p-Xylene 74 J 100 33 ug/L 10/22/19 02:47 n-Butylbenzene ND S0 32<	Chloromethane	ND		50	18	ug/L			10/22/19 02:47	50
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N-Propylbenzene ND 50 35 ug/L 10/22/19 02:47 o-Xylene 49 J 50 38 ug/L 10/22/19 02:47										50
b-Xylene 49 J 50 38 ug/L 10/22/19 02:47	-									50
		ND								50
sec-Butylbenzene ND 50 38 ug/L 10/22/19 02:47			J							50
Tetrachloroethene ND 50 18 ug/L 10/22/19 02:47	sec-Butylbenzene	ND		50	38	ug/L				50

Eurofins TestAmerica, Buffalo

10/22/19 02:47

50

380

26 ug/L

RL

50

50

50

50

50

100

50

50

MDL Unit

19 ug/L

23 ug/L

44 ug/L

45 ug/L

33 ug/L

18 ug/L

37 ug/L

45 ug/L D

Prepared

Client Sample ID: Pre-Carbon Date Collected: 10/16/19 11:30 Date Received: 10/16/19 11:50

Analyte

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

Trichloroethene

Vinyl chloride

Styrene

Xylenes, Total cis-1,3-Dichloropropene

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Result Qualifier

ND

ND

ND

ND

ND

120

ND

ND

Job	ID:	480-1	60947-1
000		100 1	00011 1

Lab Sample ID: 480-160947-2 Matrix: Water

Analyzed

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

10/22/19 02:47

Dil Fac

50

50

50

50

50

50

50

50 50	9
Fac	
50	

tert-Butylbenzene	ND	50		41 ug/L		10/22/19 02:47	50	3
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac	10
1,2-Dichloroethane-d4 (Surr)	106		77 _ 120			10/22/19 02:47	50	
4-Bromofluorobenzene (Surr)	101		73 - 120			10/22/19 02:47	50	11
Toluene-d8 (Surr)	100		80 - 120			10/22/19 02:47	50	
Dibromofluoromethane (Surr)	108		75 - 123			10/22/19 02:47	50	

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	76600		500	100	ug/L		10/18/19 06:44	10/19/19 02:45	1
Magnesium	21500		200	43.4	ug/L		10/18/19 06:44	10/19/19 02:45	1
Potassium	2320		500	100	ug/L		10/18/19 06:44	10/22/19 10:13	1
Sodium	57700		1000	324	ug/L		10/18/19 06:44	10/19/19 02:45	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	98.9		2.5	1.4	mg/L			10/23/19 19:28	5
Sulfate	91.3		10.0	1.7	mg/L			10/23/19 19:28	5
Alkalinity, Total	171		30.0	12.0	mg/L			10/30/19 23:57	3

Client Sample ID: Post-Carbon 2 Date Collected: 10/16/19 11:15 Date Received: 10/16/19 11:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	499245	10/22/19 02:24	RJF	TAL BUF
Total/NA	Prep	Distill/CN			499236	10/21/19 12:50	MDL	TAL BUF
Total/NA	Analysis	335.4		1	499415	10/22/19 09:28	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	500055	10/24/19 14:32	KEB	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 10/16/19 11:30 Date Received: 10/16/19 11:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	499245	10/22/19 02:47	RJF	TAL BUF
Total/NA	Prep	200.7			498661	10/18/19 06:44	JLC	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	499008	10/19/19 02:45	EMB	TAL BUF
Total/NA	Prep	200.7			498661	10/18/19 06:44	JLC	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	499646	10/22/19 10:13	LMH	TAL BUF
Total/NA	Analysis	300.0		5	499698	10/23/19 19:28	IMZ	TAL BUF
Total/NA	Analysis	310.2		3	501356	10/30/19 23:57	SRW	TAL BUF

Laboratory References:

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

Job ID: 480-160947-1

Lab Sample ID: 480-160947-1

Lab Sample ID: 480-160947-2

Matrix: Water

Matrix: Water

5 6 7 8

5

Laboratory: Eurofins TestAmerica, Buffalo Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. Authority Program **Identification Number Expiration Date** New York NELAP 10026 03-31-20 The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. Analysis Method Prep Method Matrix Analyte 335.4 Distill/CN Water Cyanide, Total Water SM 4500 H+ B pН SM 4500 H+ B Water Temperature

Eurofins TestAmerica, Buffalo

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

Method	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	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
200.7	Preparation, Total Metals	EPA	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-160947-1	Post-Carbon 2	Water	10/16/19 11:15	10/16/19 11:50	
480-160947-2	Pre-Carbon	Water	10/16/19 11:30	10/16/19 11:50	

Buffalo

10 Hazelwood Drive

Chain of Custody Record



Amherst, NY 14228

Client Contact	Project M.	anager: Gle	nn May (N	VSDEC)		Site	Conta	et. T	homa	e Pale	mer	_	Date:	WOR		0/14	118	COC No:
oundwater & Environmental Services, Inc		716) 851-722		ISDEC)). Joh		mer		Carrie			opiu	17	1 of 7 COCs
5 Aero Drive Suite 3	Tevrax. (Analysis T		Time		Lab				lison	T	TT		TT	TT	T		Job No.
eektowaga, NY 14225	Calenda	r(C) or We													1	1100000		7
00) 287-7857 Phone		AT if different f		/		1	8			8260				11	1			
						Math	hod			- YO					1			
66) 902-2187 FAX oject Name: NYSDEC Gatown WWTP			2 weeks			100	Met			N-	-				11			
e: 915171			week 2 days				ocal ocal	-		S list	Tota				48	0-160	947 CH	hain of Custody
O # Callout 120597 GES Project #0901691-05-220			l day			MOI	D) T	linit		AR	nide,	Hd			T I	- 1		un of Custody
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	200.7 - (MOD) Local Method	310.2 - Alkalinity		TCL and STARS list - VOA - 8260	335.4 - Cyanide, Total	SM4500_H+-pH						Sample Specific Notes:
Post-Carbon 2	10/14	1115	Grab	W	5	N				x	-	x		T				
Pre-Carbon	10/16	1130	Grab	w	6	N 2	x x	x		x	-		++			-		
The Carbon	10/10	1150	Giuo				-	-		-	-		++	++-	+	+		
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eservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=	NaOH; 6= Othe	r		-	1		ample	Di			foo	mayb	20222 0	cod if ca	mole	s are r	etaine	d longer than 1 month)
ssible Hazard Identification Non-Hazard Flammable Skin Irritant	Poison B		Unknown			ľ			m To	1.0		K	Dispos	al By Lat	6		Archiv	
ecial Instructions/QC Requirements & Comments:	1 0/30/1 2		Shanshin		-	-	-	Tortal		Cherr			Dispes					
2	Y.							1	-	- V)		/	/				#1312
linquished by:		25		Date/Tir	1150		eceive		45		14	C	a mailine ma	Compa	B			Date/Time:
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Client: New York State D.E.C.

Login Number: 160947 List Number: 1

Creator: Wallace, Cameron

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 (Excluding tests with immediate HTs)	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	

11

List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-163310-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Quarterly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomogra

Authorized for release by: 12/12/2019 2:53:17 PM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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. Giacomage

Joe Giacomazza Project Management Assistant II 12/12/2019 2:53:17 PM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	7
Lab Chronicle	12
Certification Summary	13
Method Summary	14
Sample Summary	15
Chain of Custody	16
Receipt Checklists	17

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Not Calculated

Quality Control

Limit of Quantitation (DoD/DOE)

Decision Level Concentration (Radiochemistry)

Minimum Detectable Activity (Radiochemistry)

Minimum Detectable Concentration (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry)

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

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

Qualifiers

DL

DLC

EDL

LOD

LOQ

MDA

MDC

MDL ML

NC

ND PQL

QC

RL RPD

TEF

TEQ

RER

DL, RA, RE, IN

GC/MS VOA Qualifier	Qualifier Description	4
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	-
General Che	mistry	5
Qualifier	Qualifier Description	
F1	MS and/or MSD Recovery is outside acceptance limits.	6
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	
Glossary		-
Abbreviation	These commonly used abbreviations may or may not be present in this report.	0
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	9
CFL	Contains Free Liquid	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	

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

Eurofins TestAmerica, Buffalo

Job ID: 480-163310-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-163310-1

Comments

No additional comments.

Receipt

The samples were received on 11/26/2019 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 2.2° C and 2.4° C.

GC/MS VOA

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-507035 recovered outside acceptance criteria, low biased, for Chloromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated sample(s) were non-detect for this analyte, the data have been reported. The following sample is impacted: Pre-Carbon (480-163310-2).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-163310-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) associated with batch 480-507678 recovered outside acceptance criteria, low biased, for Pentachlorophenol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-163310-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method 608.3: The continuing calibration verification (CCV) associated with batch 480-507295 recovered above the upper control limit for Toxaphene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: Post-Carbon 2 (480-163310-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Methods 9040C, 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 2 (480-163310-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-507055.

Job ID: 480-163310-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon 2 Date Collected: 11/26/19 09:45 Date Received: 11/26/19 10:30

Lab Sample ID: 480-163310-1

Matrix: Wastewater

5

Analyte	c Compounds by GC Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L			11/27/19 23:09	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			11/27/19 23:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			11/27/19 23:09	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L			11/27/19 23:09	1
I,1-Dichloroethane	ND	1.0	0.38	ug/L			11/27/19 23:09	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L			11/27/19 23:09	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			11/27/19 23:09	1
1,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			11/27/19 23:09	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			11/27/19 23:09	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L			11/27/19 23:09	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L			11/27/19 23:09	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L			11/27/19 23:09	1
1,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			11/27/19 23:09	1
1,3-Dichlorobenzene	ND	1.0	0.78	ug/L			11/27/19 23:09	1
1,4-Dichlorobenzene	ND	1.0	0.84	ug/L			11/27/19 23:09	1
2-Butanone (MEK)	ND	10	1.3	ug/L			11/27/19 23:09	1
2-Hexanone	ND	5.0	1.2	ug/L			11/27/19 23:09	1
1-Isopropyltoluene	ND	1.0	0.31	ug/L			11/27/19 23:09	1
1-Methyl-2-pentanone (MIBK)	ND	5.0		ug/L			11/27/19 23:09	1
Acetone	ND	10		-			11/27/19 23:09	1
Benzene	14	1.0	0.41				11/27/19 23:09	1
Bromoform	ND	1.0	0.26	0			11/27/19 23:09	1
Bromomethane	ND	1.0	0.69	-			11/27/19 23:09	1
Carbon disulfide	ND	1.0	0.19	0			11/27/19 23:09	1
Carbon tetrachloride	ND	1.0	0.27	0			11/27/19 23:09	1
Chlorobenzene	ND	1.0	0.75	-			11/27/19 23:09	1
Dibromochloromethane	ND	1.0	0.32	-			11/27/19 23:09	1
Chloroethane	ND	1.0		ug/L			11/27/19 23:09	1
Chloroform	1.2	1.0	0.34	-			11/27/19 23:09	1
Chloromethane	ND	1.0	0.35	-			11/27/19 23:09	1
cis-1,2-Dichloroethene	ND	1.0	0.81	-			11/27/19 23:09	1
Cyclohexane	ND	1.0	0.18	-			11/27/19 23:09	1
Bromodichloromethane	ND	1.0	0.39	-			11/27/19 23:09	1
Dichlorodifluoromethane	ND	1.0	0.68	-			11/27/19 23:09	1
Ethylbenzene	ND	1.0	0.74	-			11/27/19 23:09	1
1,2-Dibromoethane	ND	1.0	0.73	-			11/27/19 23:09	1
sopropylbenzene	ND	1.0		ug/L			11/27/19 23:09	1
Methyl acetate	ND	2.5		ug/L			11/27/19 23:09	1
Methyl tert-butyl ether	ND	1.0		ug/L			11/27/19 23:09	1
Methylcyclohexane	ND	1.0		ug/L			11/27/19 23:09	1
Methylene Chloride	ND	1.0		ug/L			11/27/19 23:09	1
n,p-Xylene	ND	2.0	0.66	-			11/27/19 23:09	1
Naphthalene	ND	1.0		ug/L			11/27/19 23:09	1
n-Butylbenzene	ND	1.0		ug/L			11/27/19 23:09	1
N-Propylbenzene	ND	1.0	0.69	-			11/27/19 23:09	1
p-Xylene	ND	1.0		ug/L			11/27/19 23:09	1
sec-Butylbenzene	ND	1.0		ug/L			11/27/19 23:09	1
Tetrachloroethene	ND	1.0		ug/L			11/27/19 23:09	1
Toluene	ND	1.0		ug/L			11/27/19 23:09	

Eurofins TestAmerica, Buffalo

Client Sample ID: Post-Carbon 2 Date Collected: 11/26/19 09:45 Date Received: 11/26/19 10:30

Phenol-d5

2-Fluorophenol

2,4,6-Tribromophenol

Lab Sample ID: 480-163310-1

Matrix: Wastewater

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			11/27/19 23:09	1	
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			11/27/19 23:09	1	
Trichloroethene	ND		1.0	0.46	ug/L			11/27/19 23:09	1	
Trichlorofluoromethane	ND		1.0	0.88	ug/L			11/27/19 23:09	1	
Vinyl chloride	1.1		1.0	0.90	ug/L			11/27/19 23:09	1	
Xylenes, Total	ND		2.0	0.66	ug/L			11/27/19 23:09	1	
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			11/27/19 23:09	1	
Styrene	ND		1.0	0.73	ug/L			11/27/19 23:09	1	
tert-Butylbenzene	ND		1.0	0.81	ug/L			11/27/19 23:09	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	98		77 - 120					11/27/19 23:09	1	
4-Bromofluorobenzene (Surr)	96		73 - 120					11/27/19 23:09	1	
Toluene-d8 (Surr)	97		80 - 120					11/27/19 23:09	1	
Dibromofluoromethane (Surr)	97		75 - 123					11/27/19 23:09	1	

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

Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		5.0	0.65	ug/L		11/27/19 15:43	12/03/19 07:01	1
2-Methylnaphthalene	ND		5.0	0.60	ug/L		11/27/19 15:43	12/03/19 07:01	1
Acenaphthene	ND		5.0	0.41	ug/L		11/27/19 15:43	12/03/19 07:01	1
Acenaphthylene	ND		5.0	0.38	ug/L		11/27/19 15:43	12/03/19 07:01	1
Anthracene	ND		5.0	0.28	ug/L		11/27/19 15:43	12/03/19 07:01	1
Benzo[a]anthracene	ND		5.0	0.36	ug/L		11/27/19 15:43	12/03/19 07:01	1
Benzo[a]pyrene	ND		5.0	0.47	ug/L		11/27/19 15:43	12/03/19 07:01	1
Benzo[b]fluoranthene	ND		5.0	0.34	ug/L		11/27/19 15:43	12/03/19 07:01	1
Benzo[g,h,i]perylene	ND		5.0	0.35	ug/L		11/27/19 15:43	12/03/19 07:01	1
Benzo[k]fluoranthene	ND		5.0	0.73	ug/L		11/27/19 15:43	12/03/19 07:01	1
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	ug/L		11/27/19 15:43	12/03/19 07:01	1
Carbazole	ND		5.0	0.30	ug/L		11/27/19 15:43	12/03/19 07:01	1
Chrysene	ND		5.0	0.33	ug/L		11/27/19 15:43	12/03/19 07:01	1
Dibenz(a,h)anthracene	ND		5.0	0.42	ug/L		11/27/19 15:43	12/03/19 07:01	1
Dibenzofuran	ND		10	0.51	ug/L		11/27/19 15:43	12/03/19 07:01	1
Fluoranthene	ND		5.0	0.40	ug/L		11/27/19 15:43	12/03/19 07:01	1
Fluorene	ND		5.0	0.36	ug/L		11/27/19 15:43	12/03/19 07:01	1
Indeno[1,2,3-cd]pyrene	ND		5.0	0.47	ug/L		11/27/19 15:43	12/03/19 07:01	1
Naphthalene	ND		5.0	0.76	ug/L		11/27/19 15:43	12/03/19 07:01	1
Pentachlorophenol	ND		10	2.2	ug/L		11/27/19 15:43	12/03/19 07:01	1
Phenanthrene	ND		5.0	0.44	ug/L		11/27/19 15:43	12/03/19 07:01	1
Phenol	ND		5.0	0.39	ug/L		11/27/19 15:43	12/03/19 07:01	1
Pyrene	ND		5.0	0.34	ug/L		11/27/19 15:43	12/03/19 07:01	1
Surrogate	%Recovery (Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	108		46 - 120				11/27/19 15:43	12/03/19 07:01	1
2-Fluorobiphenyl	111		48 - 120				11/27/19 15:43	12/03/19 07:01	1
p-Terphenyl-d14	129		60 - 148				11/27/19 15:43	12/03/19 07:01	1

11/27/19 15:43 12/03/19 07:01

11/27/19 15:43 12/03/19 07:01

11/27/19 15:43 12/03/19 07:01

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22 - 120

35 - 120

41 - 120

52

67

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

Client Sample ID: Post-Carbon 2 Date Collected: 11/26/19 09:45 Date Received: 11/26/19 10:30

Lab Sample ID: 480-163310-1

Matrix: Wastewater

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.049	0.0079	ug/L		11/27/19 08:53	11/29/19 13:28	1
alpha-BHC	ND		0.049	0.0075	ug/L		11/27/19 08:53	11/29/19 13:28	1
beta-BHC	ND		0.049	0.024	ug/L		11/27/19 08:53	11/29/19 13:28	1
delta-BHC	ND		0.049	0.0098	ug/L		11/27/19 08:53	11/29/19 13:28	1
gamma-BHC (Lindane)	ND		0.049	0.0078	ug/L		11/27/19 08:53	11/29/19 13:28	1
Chlordane (technical)	ND		0.49	0.28	ug/L		11/27/19 08:53	11/29/19 13:28	1
4,4'-DDD	ND		0.049	0.0090	ug/L		11/27/19 08:53	11/29/19 13:28	1
4,4'-DDE	ND		0.049	0.011	ug/L		11/27/19 08:53	11/29/19 13:28	1
4,4'-DDT	ND		0.049	0.011	ug/L		11/27/19 08:53	11/29/19 13:28	1
Dieldrin	ND		0.049	0.0096	ug/L		11/27/19 08:53	11/29/19 13:28	1
Endosulfan I	ND		0.049	0.011	ug/L		11/27/19 08:53	11/29/19 13:28	1
Endosulfan II	ND		0.049	0.012	ug/L		11/27/19 08:53	11/29/19 13:28	1
Endosulfan sulfate	ND		0.049	0.015	ug/L		11/27/19 08:53	11/29/19 13:28	1
Endrin	ND		0.049	0.014	ug/L		11/27/19 08:53	11/29/19 13:28	1
Endrin aldehyde	ND		0.049	0.016	ug/L		11/27/19 08:53	11/29/19 13:28	1
Heptachlor	ND		0.049	0.0083	ug/L		11/27/19 08:53	11/29/19 13:28	1
Heptachlor epoxide	ND		0.049	0.0073	ug/L		11/27/19 08:53	11/29/19 13:28	1
Toxaphene	ND		0.49	0.12	ug/L		11/27/19 08:53	11/29/19 13:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	51		23 - 120				11/27/19 08:53	11/29/19 13:28	1
Tetrachloro-m-xylene	75		44 - 120				11/27/19 08:53	11/29/19 13:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	4.0	J F1	4.8	1.3	mg/L		12/04/19 11:17	12/04/19 15:47	1
Cyanide, Total	0.11		0.010	0.0050	mg/L		12/04/19 10:30	12/04/19 12:50	1
Phenolics, Total Recoverable	0.020	F1	0.010	0.0050	mg/L		12/05/19 15:59	12/05/19 18:17	1
Total Dissolved Solids	961		10.0	4.0	mg/L			12/02/19 12:13	1
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			11/27/19 12:08	1
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.2		mg/L			11/29/19 13:59	1
рН	7.5	HF	0.1	0.1	SU			12/10/19 16:35	1
Temperature	18.6	HE	0.001	0.001	Degrees C			12/10/19 16:35	1

Client Sample ID: Pre-Carbon Date Collected: 11/26/19 09:55 Date Received: 11/26/19 10:30

Lab Sample ID: 480-163310-2

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	50		ug/L			11/27/19 18:23	50
1,1,2,2-Tetrachloroethane	ND	50		ug/L			11/27/19 18:23	50
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	50		ug/L			11/27/19 18:23	50
1,1,2-Trichloroethane	ND	50		ug/L			11/27/19 18:23	50
1,1-Dichloroethane	ND	50		ug/L			11/27/19 18:23	50
1,1-Dichloroethene	ND	50	15	ug/L			11/27/19 18:23	50
1,2,4-Trichlorobenzene	ND	50		ug/L			11/27/19 18:23	50
1,2,4-Trimethylbenzene	ND	50	38	ug/L			11/27/19 18:23	50
1,2-Dibromo-3-Chloropropane	ND	50		ug/L			11/27/19 18:23	50
1,2-Dichlorobenzene	ND	50	40	ug/L			11/27/19 18:23	50
1,2-Dichloroethane	ND	50	11	ug/L			11/27/19 18:23	50
1,2-Dichloropropane	ND	50	36	ug/L			11/27/19 18:23	50
1,3,5-Trimethylbenzene	ND	50	39	ug/L			11/27/19 18:23	50
1,3-Dichlorobenzene	ND	50	39	ug/L			11/27/19 18:23	50
1,4-Dichlorobenzene	ND	50	42	ug/L			11/27/19 18:23	50
2-Butanone (MEK)	ND	500	66	ug/L			11/27/19 18:23	50
2-Hexanone	ND	250	62	ug/L			11/27/19 18:23	50
4-Isopropyltoluene	ND	50	16	ug/L			11/27/19 18:23	50
4-Methyl-2-pentanone (MIBK)	ND	250	110	ug/L			11/27/19 18:23	50
Acetone	ND	500	150	ug/L			11/27/19 18:23	50
Benzene	2800	50	21	ug/L			11/27/19 18:23	50
Bromoform	ND	50		ug/L			11/27/19 18:23	50
Bromomethane	ND	50	35	ug/L			11/27/19 18:23	50
Carbon disulfide	ND	50		ug/L			11/27/19 18:23	50
Carbon tetrachloride	ND	50		ug/L			11/27/19 18:23	50
Chlorobenzene	ND	50		ug/L			11/27/19 18:23	50
Dibromochloromethane	ND	50		ug/L			11/27/19 18:23	50
Chloroethane	ND	50		ug/L			11/27/19 18:23	50
Chloroform	ND	50		ug/L			11/27/19 18:23	50
Chloromethane	ND	50		ug/L			11/27/19 18:23	50
cis-1,2-Dichloroethene	ND	50		ug/L			11/27/19 18:23	50
Cyclohexane	ND	50		ug/L			11/27/19 18:23	50
Bromodichloromethane	ND	50		ug/L			11/27/19 18:23	50
Dichlorodifluoromethane	ND	50		ug/L			11/27/19 18:23	50
Ethylbenzene	130	50		ug/L			11/27/19 18:23	50
1,2-Dibromoethane	ND	50		ug/L			11/27/19 18:23	50
Isopropylbenzene	ND	50		ug/L			11/27/19 18:23	50
Methyl acetate	ND	130		ug/L			11/27/19 18:23	50
Methyl tert-butyl ether	ND	50		ug/L ug/L			11/27/19 18:23	50
Methylcyclohexane	ND	50		ug/L			11/27/19 18:23	50
• •								
Methylene Chloride	ND	50 100		ug/L			11/27/19 18:23	50
m,p-Xylene	64 J	100		ug/L			11/27/19 18:23	50
Naphthalene Butukenzene	200	50		ug/L			11/27/19 18:23	50
n-Butylbenzene	ND	50		ug/L			11/27/19 18:23	50
N-Propylbenzene	ND	50		ug/L			11/27/19 18:23	50
o-Xylene	56	50		ug/L			11/27/19 18:23	50
sec-Butylbenzene	ND	50		ug/L			11/27/19 18:23	50
Tetrachloroethene	ND	50	18	ug/L			11/27/19 18:23	50

Eurofins TestAmerica, Buffalo

Client Sample ID: Pre-Carbon Date Collected: 11/26/19 09:55 Date Received: 11/26/19 10:30

Lab Sample ID: 480-163310-2

Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		50	45	ug/L			11/27/19 18:23	50
trans-1,3-Dichloropropene	ND		50	19	ug/L			11/27/19 18:23	50
Trichloroethene	ND		50	23	ug/L			11/27/19 18:23	50
Trichlorofluoromethane	ND		50	44	ug/L			11/27/19 18:23	50
Vinyl chloride	ND		50	45	ug/L			11/27/19 18:23	50
Xylenes, Total	120		100	33	ug/L			11/27/19 18:23	50
cis-1,3-Dichloropropene	ND		50	18	ug/L			11/27/19 18:23	50
Styrene	ND		50	37	ug/L			11/27/19 18:23	50
tert-Butylbenzene	ND		50	41	ug/L			11/27/19 18:23	50
Surrogate	%Recovery	Qualifier	l imits				Prenared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		11/27/19 18:23	50	
4-Bromofluorobenzene (Surr)	101		73 - 120		11/27/19 18:23	50	
Toluene-d8 (Surr)	96		80 - 120		11/27/19 18:23	50	
Dibromofluoromethane (Surr)	110		75_123		11/27/19 18:23	50	

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	125000		500	100	ug/L		11/29/19 07:21	11/30/19 12:51	1
Magnesium	45000		200	43.4	ug/L		11/29/19 07:21	11/30/19 12:51	1
Potassium	4840		500	100	ug/L		11/29/19 07:21	11/30/19 12:51	1
Sodium	115000		1000	324	ug/L		11/29/19 07:21	11/30/19 12:51	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	182		2.5	1.4	mg/L			11/29/19 20:28	5
Sulfate	112		10.0	1.7	mg/L			11/29/19 20:28	5
Alkalinity, Total	349		40.0	16.0	mg/L			12/06/19 18:49	4

Batch

Number

Prepared

507223 11/27/19 23:09 BTP

507183 11/27/19 15:43 AAP

or Analyzed Analyst

Dilution

Run

Factor

1

Client Sample ID: Post-Carbon 2 Date Collected: 11/26/19 09:45 Date Received: 11/26/19 10:30

Batch

Туре

Prep

Analysis

Prep Type

Total/NA

Total/NA

Batch

Method

8260C

3510C

Lab Sample ID: 480-163310-1 **Matrix: Wastewater**

Lab Sample ID: 480-163310-2

Matrix: Wastewater

Lab

TAL BUF

TAL BUF

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Total/NA	Analysis	8270D	1	507678	12/03/19 07:01	RJS	TAL BUF
Total/NA	Prep	3510C		507055	11/27/19 08:53	JMP	TAL BUF
Total/NA	Analysis	608.3	1	507295	11/29/19 13:28	MAN	TAL BUF
Total/NA	Prep	1664B		508046	12/04/19 11:17	CRK	TAL BUF
Total/NA	Analysis	1664B	1	508139	12/04/19 15:47	CRK	TAL BUF
Total/NA	Prep	Distill/CN		508039	12/04/19 10:30	JRF	TAL BUF
Total/NA	Analysis	335.4	1	508078	12/04/19 12:50	CLT	TAL BUF
T - 1 - 1/0 1 A	During	Distill/Dhanel		E00271	12/05/19 15:59		TAL BUF
Total/NA	Prep	Distill/Phenol		506571	12/05/19 15.59	NLA	TAL BUF
Total/NA Total/NA	Prep Analysis	420.1	1		12/05/19 15:59		TAL BUF
			1 1	508405		SRW	
Total/NA	Analysis	420.1	1 1 1	508405 507641	12/05/19 18:17	SRW CSS	TAL BUF
Total/NA Total/NA	Analysis Analysis	420.1 SM 2540C	1 1 1 1	508405 507641 507378	12/05/19 18:17 12/02/19 12:13	SRW CSS CSS	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 11/26/19 09:55 Date Received: 11/26/19 10:30

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		50	507035	11/27/19 18:23	CDC	TAL BUF
Total/NA	Prep	200.7			507000	11/29/19 07:21	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	507572	11/30/19 12:51	AMH	TAL BUF
Total/NA	Analysis	300.0		5	507360	11/29/19 20:28	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	508622	12/06/19 18:49	SRW	TAL BUF

Laboratory References:

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

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

Job ID: 480-163310-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte	
335.4	Distill/CN	Wastewater	Cyanide, Total	
SM 4500 H+ B		Wastewater	рН	
SM 4500 H+ B		Wastewater	Temperature	

Method Summary

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

lethod	Method Description	Protocol	Laboratory
260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
608.3	Organochlorine Pesticides in Water	40CFR136A	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
664B	HEM and SGT-HEM	1664B	TAL BUF
0.00	Anions, Ion Chromatography	MCAWW	TAL BUF
310.2	Alkalinity	MCAWW	TAL BUF
35.4	Cyanide, Total	MCAWW	TAL BUF
20.1	Phenolics, Total Recoverable	MCAWW	TAL BUF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL BUF
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL BUF
SM 4500 H+ B	pH	SM	TAL BUF
SM 5210B	BOD, 5-Day	SM	TAL BUF
664B	HEM and SGT-HEM (Aqueous)	1664B	TAL BUF
200.7	Preparation, Total Metals	EPA	TAL BUF
510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
6030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	TAL BUF
Distill/Phenol	Distillation, Phenolics	None	TAL BUF

Protocol References:

1664B = 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.

None = None

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

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-163310-1	Post-Carbon 2	Wastewater	11/26/19 09:45	11/26/19 10:30	
480-163310-2	Pre-Carbon	Wastewater	11/26/19 09:55	11/26/19 10:30	

TestAmerica Buffalo

10 Hazelwood Drive

Chain of Custody Record



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

Client Information		r Za	ffram	Lab F Johi	nson, (Orlett	e S					Ca	rrier Tr	acking	No(s):				COC No: 480-123669-280	89.1
lient Contact: 'homas Palmer	Phone: 7/6	553-	-5129	E-Ma orle		nson	@test	americ	caind	c.com									Page: Page 1 of 1	
ompany:	100		(Í					alysi	e P	0011	osto	4					Job #:	
Groundwater & Environmental Services Inc	Due Date Requeste	ed:				1	T	ГТ		alysi		equ	ester						Preservation Cod	es:
15 Lawrence Bell Drive Suite 6	TAT Requested (da																	A Star	A - HCL	M - Hexane
ity: Villiamsville	TAT Requested (da	iys):																R	B - NaOH C - Zn Acetate	N - None O - AsNaO2
tate, Zip: IY, 14221	Standard																		D - Nitric Acid E - NaHSO4	P - Na2O4S Q - Na2SO3
Phone:	PO #:																		F - MeOH G - Amchlor	R - Na2S2O3 S - H2SO4
518-402-9662(Tel)	CallOut ID 1360	076			9	e e		cides		and		lids							H - Ascorbic Acid	T - TSP Dodecahydra U - Acetone
palmer@gesonline.com	GES Project # 0	901691 -	-05-2	20	No!	Recoverable		Pesti		Dem	Solids	og So						2	J - DI Water K - EDTA	V - MCAA W - pH 4-5
roject Name: Bastown WWTP #915171 - Quarterly Event Desc: Quarterly	Project #: 48002525				Ye	Reco	ars)	Pollutant Pesticides	A	ygen	2020	solve			\$04			aine	L - EDA	Z - other (specify)
ite:	SSOW#:				- du	Total	CP-51 (Stars)	Pollt	SVOA	al Ox	ende			Grease	CI, S	a	otal	cont	Other:	
New York					d Sai		CP	ority) TCL	emic	Susp	- Tota	PH IG	d Gr	(qov	, K, I	ity, T	er of		
			Sample	Matrix (W=water,	Itere	Phenolics,	- TCL +	608_Pest - Priority	8270C - (MOD) TCL	5210B - Biochemical Oxygen Demand	- Total Suspended	2540C_Calcd - Total Dissolved Solids	335.4 - Cyanide, lotal SM4500 H+ - pH	1664B - Oil and	300.0_28D - (MOD) CI,	200.7 - Ca, Mg, K, Na	310.2 - Alkalinity, Total	Total Number of containers		
		Sample	Type (C=comp,	S=solid, O=waste/oil,	Id Fi		- 20	Pes	- 20	· 80	25400 -		4500	48	0.28	1-0	-2-A	tal N		
Sample Identification	Sample Date	Time	G=grab)	BT=Tissue, A=Air		-	8260C			-				and the second			10,000,000	Tol	Special In	structions/Note:
		\times	Preserva	tion Code:	Y	X s	A		N	NN	-	N E		S	N	D	N	X		
Post-Carbon 2	11/26/19	0945	9	Water		×	X	X	Х	X	X	X	x >	(X				A		
Pre-Carbon	11/26/19	0955	5	Water			X								X	X	x	報		
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Possible Hazard Identification			1		1	Samp	le Di	sposa	I (A	fee n	ay l	be as	sesse	ed if s	amp	les a	re re	tain	ed longer than the the the the the the the test of test	(month)
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	i.				_			udeno	115/6	ao ne	quire	mem	_	-				_		
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Custody Seals Intact: Custody Seal No.:						С	ooler T	emperat	ture(s	s) ⁰C an	d Oth	er Ren	narks:	h		-	21		11 1 10	
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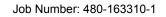
12/12/2019

Login Sample Receipt Checklist

Client: New York State D.E.C.

Login Number: 163310 List Number: 1 Creator: Manhardt, Kara 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 (Excluding tests with immediate HTs)	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	



List Source: Eurofins TestAmerica, Buffalo

🛟 eurofins

Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 480-164546-1

Client Project/Site: Gastown WWTP #915171 Sampling Event: Monthly

For:

New York State D.E.C. 625 Broadway 11th Floor Albany, New York 12233-3256

Attn: Mr. Doug K MacNeal

Joeph V. Giscomayer

Authorized for release by: 1/6/2020 11:57:54 AM Joe Giacomazza, Project Management Assistant II joe.giacomazza@testamericainc.com

Designee for

..... Links

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Expert

Orlette Johnson, Senior Project Manager (484)685-0864 orlette.johnson@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. Giacomage

Joe Giacomazza Project Management Assistant II 1/6/2020 11:57:54 AM

Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Client Sample Results	6
Lab Chronicle	10
Certification Summary	11
Method Summary	12
Sample Summary	13
Chain of Custody	14
Receipt Checklists	15

Qualifiers		3
GC/MS VOA Qualifier	Qualifier Description	4
*	LCS or LCSD is outside acceptance limits.	
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	5
General Chen	nistry	
Qualifier	Qualifier Description	
*	LCS or LCSD is outside acceptance limits.	
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	6
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	C
%R	Percent Recovery	
CFL	Contains Free Liquid	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	

Limit of Detection (DoD/DOE) LOD LOQ Limit of Quantitation (DoD/DOE) MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit

ML Minimum Level (Dioxin)

Not Calculated NC

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

PQL Practical Quantitation Limit

Quality Control QC RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

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

TEF Toxicity Equivalent Factor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-164546-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative 480-164546-1

Comments

No additional comments.

Receipt

The samples were received on 12/20/2019 3:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

GC/MS VOA

Method 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) associated with batch 511738. The following samples were affected : Post-Carbon-2 (480-164546-1) and Pre-Carbon (480-164546-2).

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-164546-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: Pre-Carbon (480-164546-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Methods 335.4, 9012B: The laboratory control sample (LCS) associated with preparation batch 480-511457 and analytical batch 480-511660 was outside acceptance criteria. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Methods 9040C, 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-2 (480-164546-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: Post-Carbon-2 Date Collected: 12/20/19 13:30 Date Received: 12/20/19 15:52

Toluene

Lab Sample ID: 480-164546-1

Matrix: Wastewater

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1-Trichloroethane	ND	1.0	0.82	ug/L			12/26/19 14:58	
,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L			12/26/19 14:58	
,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L			12/26/19 14:58	
,1,2-Trichloroethane	ND	1.0	0.23	ug/L			12/26/19 14:58	
,1-Dichloroethane	ND	1.0	0.38	ug/L			12/26/19 14:58	
,1-Dichloroethene	ND	1.0	0.29	ug/L			12/26/19 14:58	
,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L			12/26/19 14:58	
,2,4-Trimethylbenzene	ND	1.0	0.75	ug/L			12/26/19 14:58	
,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L			12/26/19 14:58	
2-Dichlorobenzene	ND	1.0	0.79	ug/L			12/26/19 14:58	
,2-Dichloroethane	ND	1.0	0.21	ug/L			12/26/19 14:58	
2-Dichloropropane	ND	1.0	0.72	ug/L			12/26/19 14:58	
,3,5-Trimethylbenzene	ND	1.0	0.77	ug/L			12/26/19 14:58	
,3-Dichlorobenzene	ND	1.0	0.78	ug/L			12/26/19 14:58	
4-Dichlorobenzene	ND	1.0	0.84	ug/L			12/26/19 14:58	
-Butanone (MEK)	ND *	10	1.3	ug/L			12/26/19 14:58	
Hexanone	ND	5.0	1.2	ug/L			12/26/19 14:58	
-Isopropyltoluene	ND	1.0	0.31	ug/L			12/26/19 14:58	
Methyl-2-pentanone (MIBK)	ND	5.0	2.1	ug/L			12/26/19 14:58	
cetone	ND	10	3.0	ug/L			12/26/19 14:58	
enzene	14	1.0	0.41	ug/L			12/26/19 14:58	
omoform	ND	1.0	0.26	ug/L			12/26/19 14:58	
omomethane	ND	1.0	0.69	ug/L			12/26/19 14:58	
arbon disulfide	ND	1.0	0.19	ug/L			12/26/19 14:58	
arbon tetrachloride	ND	1.0	0.27	ug/L			12/26/19 14:58	
hlorobenzene	ND	1.0	0.75	ug/L			12/26/19 14:58	
ibromochloromethane	ND	1.0	0.32	ug/L			12/26/19 14:58	
hloroethane	ND	1.0	0.32	ug/L			12/26/19 14:58	
hloroform	2.6	1.0	0.34	ug/L			12/26/19 14:58	
hloromethane	ND	1.0	0.35	ug/L			12/26/19 14:58	
s-1,2-Dichloroethene	ND	1.0	0.81	ug/L			12/26/19 14:58	
yclohexane	ND	1.0	0.18	ug/L			12/26/19 14:58	
romodichloromethane	ND	1.0	0.39	ug/L			12/26/19 14:58	
ichlorodifluoromethane	ND	1.0	0.68	ug/L			12/26/19 14:58	
thylbenzene	ND	1.0	0.74	ug/L			12/26/19 14:58	
2-Dibromoethane	ND	1.0	0.73	ug/L			12/26/19 14:58	
opropylbenzene	ND	1.0	0.79	ug/L			12/26/19 14:58	
lethyl acetate	ND	2.5	1.3	ug/L			12/26/19 14:58	
ethyl tert-butyl ether	ND	1.0		ug/L			12/26/19 14:58	
ethylcyclohexane	ND	1.0	0.16	ug/L			12/26/19 14:58	
ethylene Chloride	ND	1.0		ug/L			12/26/19 14:58	
,p-Xylene	ND	2.0	0.66	ug/L			12/26/19 14:58	
aphthalene	ND	1.0	0.43	ug/L			12/26/19 14:58	
Butylbenzene	ND	1.0		ug/L			12/26/19 14:58	
-Propylbenzene	ND	1.0	0.69	ug/L			12/26/19 14:58	
Xylene	ND	1.0	0.76	ug/L			12/26/19 14:58	
ec-Butylbenzene	ND	1.0		ug/L			12/26/19 14:58	
etrachloroethene	ND	1.0		ug/L			12/26/19 14:58	
aluana	ND	1.0	0.51	.			12/26/10 14-58	

Eurofins TestAmerica, Buffalo

12/26/19 14:58

1.0

0.51 ug/L

ND

Client Sample ID: Post-Carbon-2 Date Collected: 12/20/19 13:30

Date Received: 12/20/19 15:52

ī.

Analyte

Temperature

рН

Lab Sample ID: 480-164546-1

Matrix: Wastewater

5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			12/26/19 14:58	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			12/26/19 14:58	1
Trichloroethene	ND		1.0	0.46	ug/L			12/26/19 14:58	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			12/26/19 14:58	1
Vinyl chloride	1.1		1.0	0.90	ug/L			12/26/19 14:58	1
Xylenes, Total	ND		2.0	0.66	ug/L			12/26/19 14:58	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			12/26/19 14:58	1
Styrene	ND		1.0	0.73	ug/L			12/26/19 14:58	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			12/26/19 14:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 _ 120					12/26/19 14:58	1
4-Bromofluorobenzene (Surr)	99		73 - 120					12/26/19 14:58	1
Toluene-d8 (Surr)	98		80 - 120					12/26/19 14:58	1
Dibromofluoromethane (Surr)	107		75 - 123					12/26/19 14:58	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.11	*	0.010	0.0050	ma/L		12/23/19 12:53	12/24/19 11:46	1

RL

0.1

0.001

RL Unit

0.1 SU

0.001 Degrees C

D

Prepared

Analyzed

12/31/19 09:30

12/31/19 09:30

Dil Fac

1

1

Result Qualifier

8.6 HF

19.2 HF

Client Sample ID: Pre-Carbon Date Collected: 12/20/19 13:35 Date Received: 12/20/19 15:52

Lab Sample ID: 480-164546-2

Matrix: Wastewater

5

Analyte	Result Qualifier	RL	MDL	Unit	D Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	1.0	0.82	ug/L		12/26/19 15:22	1
1,1,2,2-Tetrachloroethane	ND	1.0	0.21	ug/L		12/26/19 15:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	0.31	ug/L		12/26/19 15:22	1
1,1,2-Trichloroethane	ND	1.0	0.23	ug/L		12/26/19 15:22	1
1,1-Dichloroethane	ND	1.0	0.38	ug/L		12/26/19 15:22	1
1,1-Dichloroethene	ND	1.0	0.29	ug/L		12/26/19 15:22	1
1,2,4-Trichlorobenzene	ND	1.0	0.41	ug/L		12/26/19 15:22	1
1,2,4-Trimethylbenzene	9.7	1.0	0.75	ug/L		12/26/19 15:22	1
1,2-Dibromo-3-Chloropropane	ND	1.0	0.39	ug/L		12/26/19 15:22	1
1,2-Dichlorobenzene	ND	1.0	0.79	ug/L		12/26/19 15:22	1
1,2-Dichloroethane	ND	1.0	0.21	ug/L		12/26/19 15:22	1
1,2-Dichloropropane	ND	1.0	0.72	ug/L		12/26/19 15:22	1
I,3,5-Trimethylbenzene	2.1	1.0		ug/L		12/26/19 15:22	1
1,3-Dichlorobenzene	ND	1.0		ug/L		12/26/19 15:22	1
1,4-Dichlorobenzene	ND	1.0		ug/L		12/26/19 15:22	1
2-Butanone (MEK)	ND *	10		ug/L		12/26/19 15:22	1
2-Hexanone	ND	5.0		ug/L		12/26/19 15:22	1
-Isopropyltoluene	ND	1.0		ug/L		12/26/19 15:22	1
-Methyl-2-pentanone (MIBK)	ND	5.0	2.1			12/26/19 15:22	
Acetone	5.2 J	10	3.0	0		12/26/19 15:22	1
Bromoform	ND	1.0		ug/L		12/26/19 15:22	1
Bromomethane	ND	1.0				12/26/19 15:22	
Carbon disulfide	ND	1.0		ug/L		12/26/19 15:22	1
Carbon tetrachloride	ND	1.0		ug/L		12/26/19 15:22	1
Chlorobenzene	ND	1.0		ug/L		12/26/19 15:22	1
Dibromochloromethane	ND	1.0		ug/L		12/26/19 15:22	1
Chloroethane	ND	1.0		ug/L		12/26/19 15:22	1
Chloroform	1.7	1.0		ug/L		12/26/19 15:22	
Chloromethane	ND	1.0		ug/L		12/26/19 15:22	1
	6.1	1.0	0.81	-		12/26/19 15:22	1
-is-1,2-Dichloroethene Cyclohexane	ND	1.0				12/26/19 15:22	
Bromodichloromethane	ND	1.0	0.10	•		12/26/19 15:22	1
Dichlorodifluoromethane	ND	1.0	0.68			12/26/19 15:22	1
,2-Dibromoethane	ND	1.0	0.08			12/26/19 15:22	
		1.0	0.79	-		12/26/19 15:22	1
sopropylbenzene	1.4 ND	2.5				12/26/19 15:22	1
Aethyl acetate		2.5 1.0		ug/L			ا 1
Aethyl tert-butyl ether	0.18 J			ug/L		12/26/19 15:22	1
Aethylcyclohexane	ND	1.0		ug/L		12/26/19 15:22	1
Aethylene Chloride	ND	1.0		ug/L		12/26/19 15:22	· · · · · · ·
n,p-Xylene	83	2.0		ug/L		12/26/19 15:22	1
	ND	1.0		ug/L		12/26/19 15:22	1
J-Propylbenzene	ND	1.0		ug/L		12/26/19 15:22	ا م
o-Xylene	55 ND	1.0		ug/L		12/26/19 15:22	1
ec-Butylbenzene	ND	1.0		ug/L		12/26/19 15:22	1
	ND	1.0		ug/L		12/26/19 15:22	1
rans-1,2-Dichloroethene	ND	1.0		ug/L		12/26/19 15:22	1
rans-1,3-Dichloropropene	ND	1.0		ug/L "		12/26/19 15:22	1
Trichloroethene Trichlorofluoromethane	ND ND	1.0 1.0		ug/L ug/L		12/26/19 15:22 12/26/19 15:22	1

Eurofins TestAmerica, Buffalo

Client Sample ID: Pre-Carbon

Date Collected: 12/20/19 13:35 Date Received: 12/20/19 15:52

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.6		1.0	0.90	ug/L			12/26/19 15:22	1
Xylenes, Total	140		2.0	0.66	ug/L			12/26/19 15:22	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			12/26/19 15:22	1
Styrene	ND		1.0	0.73	ug/L			12/26/19 15:22	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			12/26/19 15:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		77 - 120		12/26/19 15:22	1
4-Bromofluorobenzene (Surr)	100		73 - 120		12/26/19 15:22	1
Toluene-d8 (Surr)	96		80 - 120		12/26/19 15:22	1
Dibromofluoromethane (Surr)	110		75 - 123		12/26/19 15:22	1

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2800	40	16	ug/L			12/27/19 15:55	40
Ethylbenzene	170	40	30	ug/L			12/27/19 15:55	40
Naphthalene	240	40	17	ug/L			12/27/19 15:55	40
Toluene	470	40	20	ug/L			12/27/19 15:55	40

Surrogate	%Recovery	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109	77 - 120		12/27/19 15:55	40
4-Bromofluorobenzene (Surr)	98	73 - 120		12/27/19 15:55	40
Toluene-d8 (Surr)	98	80 - 120		12/27/19 15:55	40
Dibromofluoromethane (Surr)	109	75 - 123		12/27/19 15:55	40

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	122000		500	100	ug/L		12/24/19 09:27	12/27/19 11:52	1
Magnesium	39000		200	43.4	ug/L		12/24/19 09:27	12/26/19 16:12	1
Potassium	3670		500	100	ug/L		12/24/19 09:27	12/26/19 16:12	1
Sodium	89400		1000	324	ug/L		12/24/19 09:27	12/27/19 11:52	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	164		2.5	1.4	mg/L			12/30/19 20:19	5
Sulfate	125		10.0	1.7	mg/L			12/30/19 20:19	5
Alkalinity, Total	341		40.0	16.0	mg/L			12/26/19 19:22	4

Lab Sample ID: 480-164546-2 Matrix: Wastewater

Client Sample ID: Post-Carbon-2 Date Collected: 12/20/19 13:30 Date Received: 12/20/19 15:52

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	511738	12/26/19 14:58	BTP	TAL BUF
Total/NA	Prep	Distill/CN			511457	12/23/19 12:53	AJL	TAL BUF
Total/NA	Analysis	335.4		1	511660	12/24/19 11:46	MDL	TAL BUF
Total/NA	Analysis	SM 4500 H+ B		1	512372	12/31/19 09:30	CSS	TAL BUF

Client Sample ID: Pre-Carbon Date Collected: 12/20/19 13:35 Date Received: 12/20/19 15:52

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	511738	12/26/19 15:22	BTP	TAL BUF
Total/NA	Analysis	8260C	DL	40	511927	12/27/19 15:55	BTP	TAL BUF
Total/NA	Prep	200.7			511608	12/24/19 09:27	NSW	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	511904	12/26/19 16:12	AMH	TAL BUF
Total/NA	Prep	200.7			511608	12/24/19 09:27	NSW	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	512012	12/27/19 11:52	AMH	TAL BUF
Total/NA	Analysis	300.0		5	512244	12/30/19 20:19	IMZ	TAL BUF
Total/NA	Analysis	310.2		4	511893	12/26/19 19:22	SRW	TAL BUF

Laboratory References:

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

Job ID: 480-164546-1

Lab Sample ID: 480-164546-1

Matrix: Wastewater

Lab Sample ID: 480-164546-2 Matrix: Wastewater

rix: wastewater

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Laboratory: Eurofins TestAmerica, Buffalo Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. Authority Program **Identification Number Expiration Date** New York NELAP 10026 03-31-20 The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. Analysis Method Prep Method Matrix Analyte 335.4 Distill/CN Wastewater Cyanide, Total Wastewater SM 4500 H+ B pН SM 4500 H+ B Wastewater Temperature

Eurofins TestAmerica, Buffalo

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

lethod	Method Description	Protocol	Laboratory
3260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
800.0	Anions, Ion Chromatography	MCAWW	TAL BUF
310.2	Alkalinity	MCAWW	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
SM 4500 H+ B	рН	SM	TAL BUF
200.7	Preparation, Total Metals	EPA	TAL BUF
6030C	Purge and Trap	SW846	TAL BUF
Distill/CN	Distillation, Cyanide	None	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.

None = None

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

Sample Summary

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

Client Sample ID	Matrix	Collected	Received	Asset ID
Post-Carbon-2	Wastewater	12/20/19 13:30	12/20/19 15:52	
Pre-Carbon	Wastewater	12/20/19 13:35	12/20/19 15:52	
	Post-Carbon-2	Post-Carbon-2 Wastewater	Post-Carbon-2 Wastewater 12/20/19 13:30	Post-Carbon-2 Wastewater 12/20/19 13:30 12/20/19 15:52

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TestAmerica Buffalo

10 Hazelwood Drive Amherst, NY 14228-2298

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Phone (716) 691	-2600 F	ax (716)	691-7991

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Client: New York State D.E.C.

Login Number: 164546 List Number: 1

Creator: Wallace, Cameron

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 (Excluding tests with immediate HTs)	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	

List Source: Eurofins TestAmerica, Buffalo