

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-70109-1

Client Project/Site: 58505, Janesville WI, SSOW 108021

For:

GHD Services Inc.

45 Farmington Valley Drive

Plainville, Connecticut 06062

Attn: Ms. Kathy Shaw



Authorized for release by:

10/3/2016 3:16:14 PM

Denise Heckler, Project Manager II

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

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.
^c	CCV Recovery is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Reported value was between the limit of detection and the limit of quantitation.

General Chemistry

Qualifier	Qualifier Description
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.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Job ID: 240-70109-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-70109-1

Comments

No additional comments.

Receipt

The samples were received on 9/29/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6° C.

GC/MS VOA

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

GC/MS Semi VOA

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

Metals

Method(s) 245.1: Stannous Chloride reagent exceeded its shelf life on 10/01/16 due to vendor oversight. Reagent is verified as acceptable against the reanalysis of a CCV generated on the final day of expiration.

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

General Chemistry

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

Organic Prep

Method(s) 625: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 240-249170.

Method(s) 625: The following sample formed emulsions during the extraction procedure: WSS-092816-JN-005 (240-70109-1). The emulsions were broken up using a centrifuge.

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

Method Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method	Method Description	Protocol	Laboratory
624	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
625	Semivolatile Organic Compounds (GC/MS)	40CFR136A	TAL CAN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL CAN
1664A	HEM and SGT-HEM	1664A	TAL CAN
9040C	pH	SW846	TAL CAN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL CAN

Protocol References:

1664A = EPA-821-98-002

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

EPA = US Environmental Protection Agency

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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-70109-1	WSS-092816-JN-005	Water	09/28/16 13:00	09/29/16 09:30
240-70109-2	TB-092816-JN-001	Water	09/28/16 10:00	09/29/16 09:30

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Detection Summary

Client: GHD Services Inc.
 Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: WSS-092816-JN-005

Lab Sample ID: 240-70109-1

Analyte	Result	Qualifier	LOQ	LOD	Unit	Dil Fac	D	Method	Prep Type
2,4-Dinitrotoluene	0.40	J	9.9	0.27	ug/L	1		625	Total/NA
Benzo[b]fluoranthene	0.11	J	9.9	0.099	ug/L	1		625	Total/NA
Pyrene	0.11	J	9.9	0.099	ug/L	1		625	Total/NA
Arsenic	7.8	J	10.0	3.3	ug/L	1		200.7 Rev 4.4	Total Recoverable
Cadmium	0.55	J	2.0	0.29	ug/L	1		200.7 Rev 4.4	Total Recoverable
Chromium	4.4	J	5.0	0.55	ug/L	1		200.7 Rev 4.4	Total Recoverable
Copper	10.4	J	25.0	3.9	ug/L	1		200.7 Rev 4.4	Total Recoverable
Nickel	5.6	J	40.0	1.6	ug/L	1		200.7 Rev 4.4	Total Recoverable
Lead	300		5.0	1.9	ug/L	1		200.7 Rev 4.4	Total Recoverable
Antimony	227		10.0	3.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Selenium	5.2	J	15.0	5.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Zinc	148		50.0	16.0	ug/L	1		200.7 Rev 4.4	Total Recoverable
Flashpoint	>200		1.00	1.00	Degrees F	1		1010	Total/NA
pH	8.1	HF	0.1	0.1	SU	1		9040C	Total/NA
Total Suspended Solids	183		4.0	1.8	mg/L	1		SM 2540D	Total/NA

Client Sample ID: TB-092816-JN-001

Lab Sample ID: 240-70109-2

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: WSS-092816-JN-005

Lab Sample ID: 240-70109-1

Date Collected: 09/28/16 13:00

Matrix: Water

Date Received: 09/29/16 09:30

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			09/29/16 15:32	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			09/29/16 15:32	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			09/29/16 15:32	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			09/29/16 15:32	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			09/29/16 15:32	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:32	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			09/29/16 15:32	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			09/29/16 15:32	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			09/29/16 15:32	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/29/16 15:32	1
2-Chloroethyl vinyl ether	<0.59		2.0	0.59	ug/L			09/29/16 15:32	1
Acrolein	<4.5	F1	20	4.5	ug/L			09/29/16 15:32	1
Acrylonitrile	<6.3		20	6.3	ug/L			09/29/16 15:32	1
Benzene	<0.35		1.0	0.35	ug/L			09/29/16 15:32	1
Bromoform	<0.56		1.0	0.56	ug/L			09/29/16 15:32	1
Bromomethane	<0.44		2.0	0.44	ug/L			09/29/16 15:32	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			09/29/16 15:32	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:32	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			09/29/16 15:32	1
Chloroethane	<0.32		2.0	0.32	ug/L			09/29/16 15:32	1
Chloroform	<0.25		1.0	0.25	ug/L			09/29/16 15:32	1
Chloromethane	<0.44		2.0	0.44	ug/L			09/29/16 15:32	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			09/29/16 15:32	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			09/29/16 15:32	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:32	1
Methylene Chloride	<0.33		2.0	0.33	ug/L			09/29/16 15:32	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			09/29/16 15:32	1
Toluene	<0.23		1.0	0.23	ug/L			09/29/16 15:32	1
trans-1,2-Dichloroethene	<0.30		0.50	0.30	ug/L			09/29/16 15:32	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			09/29/16 15:32	1
Trichloroethene	<0.22		1.0	0.22	ug/L			09/29/16 15:32	1
Trichlorofluoromethane	<0.49		2.0	0.49	ug/L			09/29/16 15:32	1
Vinyl chloride	<0.29		2.0	0.29	ug/L			09/29/16 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 132		09/29/16 15:32	1
4-Bromofluorobenzene (Surr)	86		73 - 120		09/29/16 15:32	1
Toluene-d8 (Surr)	96		73 - 124		09/29/16 15:32	1

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.28		9.9	0.28	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,4,6-Trichlorophenol	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,4-Dichlorophenol	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,4-Dimethylphenol	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,4-Dinitrotoluene	0.40	J	9.9	0.27	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,6-Dinitrotoluene	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
2-Chloronaphthalene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
2-Chlorophenol	<0.29		9.9	0.29	ug/L		09/30/16 09:14	09/30/16 14:15	1
2-Nitrophenol	<0.28		9.9	0.28	ug/L		09/30/16 09:14	09/30/16 14:15	1

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Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: WSS-092816-JN-005

Lab Sample ID: 240-70109-1

Date Collected: 09/28/16 13:00

Matrix: Water

Date Received: 09/29/16 09:30

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	<0.37		9.9	0.37	ug/L		09/30/16 09:14	09/30/16 14:15	1
4,6-Dinitro-2-methylphenol	<2.4	^c	50	2.4	ug/L		09/30/16 09:14	09/30/16 14:15	1
4-Bromophenyl phenyl ether	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
4-Chlorophenyl phenyl ether	<0.30		9.9	0.30	ug/L		09/30/16 09:14	09/30/16 14:15	1
4-Nitrophenol	<2.4		50	2.4	ug/L		09/30/16 09:14	09/30/16 14:15	1
Acenaphthene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Acenaphthylene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Anthracene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzidine	<2.4	^c	5.0	2.4	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzo[a]anthracene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzo[a]pyrene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzo[b]fluoranthene	0.11	J	9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzo[g,h,i]perylene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Benzo[k]fluoranthene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Bis(2-chloroethoxy)methane	<0.32		9.9	0.32	ug/L		09/30/16 09:14	09/30/16 14:15	1
Bis(2-chloroethyl)ether	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Bis(2-ethylhexyl) phthalate	<1.7		9.9	1.7	ug/L		09/30/16 09:14	09/30/16 14:15	1
2,2'-oxybis[1-chloropropane]	<0.40		9.9	0.40	ug/L		09/30/16 09:14	09/30/16 14:15	1
Butyl benzyl phthalate	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
Chrysene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Dibenz(a,h)anthracene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Diethyl phthalate	<0.59		9.9	0.59	ug/L		09/30/16 09:14	09/30/16 14:15	1
Dimethyl phthalate	<0.29		9.9	0.29	ug/L		09/30/16 09:14	09/30/16 14:15	1
Di-n-butyl phthalate	<1.7		9.9	1.7	ug/L		09/30/16 09:14	09/30/16 14:15	1
Di-n-octyl phthalate	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
Fluoranthene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Fluorene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Hexachlorobenzene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Hexachlorobutadiene	<0.27		9.9	0.27	ug/L		09/30/16 09:14	09/30/16 14:15	1
Hexachlorocyclopentadiene	<0.24		9.9	0.24	ug/L		09/30/16 09:14	09/30/16 14:15	1
Hexachloroethane	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
Indeno[1,2,3-cd]pyrene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Isophorone	<0.27		9.9	0.27	ug/L		09/30/16 09:14	09/30/16 14:15	1
Naphthalene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Nitrobenzene	<0.040		9.9	0.040	ug/L		09/30/16 09:14	09/30/16 14:15	1
N-Nitrosodimethylamine	<0.31		0.99	0.31	ug/L		09/30/16 09:14	09/30/16 14:15	1
N-Nitrosodi-n-propylamine	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
N-Nitrosodiphenylamine	<0.31		9.9	0.31	ug/L		09/30/16 09:14	09/30/16 14:15	1
4-Chloro-3-methylphenol	<0.79		9.9	0.79	ug/L		09/30/16 09:14	09/30/16 14:15	1
Pentachlorophenol	<2.4		9.9	2.4	ug/L		09/30/16 09:14	09/30/16 14:15	1
Phenanthrene	<0.099		9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
Phenol	<0.59		9.9	0.59	ug/L		09/30/16 09:14	09/30/16 14:15	1
Pyrene	0.11	J	9.9	0.099	ug/L		09/30/16 09:14	09/30/16 14:15	1
1,2-Diphenylhydrazine	<0.29		0.99	0.29	ug/L		09/30/16 09:14	09/30/16 14:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	23		10 - 120	09/30/16 09:14	09/30/16 14:15	1
2,4,6-Tribromophenol	61		35 - 125	09/30/16 09:14	09/30/16 14:15	1
Nitrobenzene-d5	51		36 - 120	09/30/16 09:14	09/30/16 14:15	1
Phenol-d5	14		10 - 120	09/30/16 09:14	09/30/16 14:15	1

TestAmerica Canton

Client Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: WSS-092816-JN-005

Lab Sample ID: 240-70109-1

Date Collected: 09/28/16 13:00

Matrix: Water

Date Received: 09/29/16 09:30

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	55		17 - 120	09/30/16 09:14	09/30/16 14:15	1
2-Fluorobiphenyl (Surr)	53		42 - 120	09/30/16 09:14	09/30/16 14:15	1

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.92		5.0	0.92	ug/L		09/29/16 14:00	09/30/16 14:21	1
Arsenic	7.8	J	10.0	3.3	ug/L		09/29/16 14:00	09/30/16 14:21	1
Beryllium	<0.21		5.0	0.21	ug/L		09/29/16 14:00	09/30/16 14:21	1
Cadmium	0.55	J	2.0	0.29	ug/L		09/29/16 14:00	09/30/16 14:21	1
Chromium	4.4	J	5.0	0.55	ug/L		09/29/16 14:00	09/30/16 14:21	1
Copper	10.4	J	25.0	3.9	ug/L		09/29/16 14:00	09/30/16 14:21	1
Nickel	5.6	J	40.0	1.6	ug/L		09/29/16 14:00	09/30/16 14:21	1
Lead	300		5.0	1.9	ug/L		09/29/16 14:00	09/30/16 14:21	1
Antimony	227		10.0	3.1	ug/L		09/29/16 14:00	09/30/16 14:21	1
Selenium	5.2	J	15.0	5.1	ug/L		09/29/16 14:00	09/30/16 14:21	1
Thallium	<2.1		10.0	2.1	ug/L		09/29/16 14:00	09/30/16 14:21	1
Zinc	148		50.0	16.0	ug/L		09/29/16 14:00	09/30/16 14:21	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.090		0.20	0.090	ug/L		10/03/16 14:00	10/03/16 14:33	1

General Chemistry

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint	>200		1.00	1.00	Degrees F			09/30/16 06:08	1
HEM	<1.2		4.8	1.2	mg/L			09/30/16 08:20	1
SGT-HEM	<0.49		4.8	0.49	mg/L			09/30/16 08:20	1
pH	8.1	HF	0.1	0.1	SU			09/29/16 13:58	1
Total Suspended Solids	183		4.0	1.8	mg/L			09/30/16 09:53	1

Client Sample Results

Client: GHD Services Inc.
 Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: TB-092816-JN-001

Lab Sample ID: 240-70109-2

Date Collected: 09/28/16 10:00

Matrix: Water

Date Received: 09/29/16 09:30

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			09/29/16 15:56	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			09/29/16 15:56	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			09/29/16 15:56	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			09/29/16 15:56	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			09/29/16 15:56	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:56	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			09/29/16 15:56	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			09/29/16 15:56	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			09/29/16 15:56	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/29/16 15:56	1
2-Chloroethyl vinyl ether	<0.59		2.0	0.59	ug/L			09/29/16 15:56	1
Acrolein	<4.5		20	4.5	ug/L			09/29/16 15:56	1
Acrylonitrile	<6.3		20	6.3	ug/L			09/29/16 15:56	1
Benzene	<0.35		1.0	0.35	ug/L			09/29/16 15:56	1
Bromoform	<0.56		1.0	0.56	ug/L			09/29/16 15:56	1
Bromomethane	<0.44		2.0	0.44	ug/L			09/29/16 15:56	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			09/29/16 15:56	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:56	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			09/29/16 15:56	1
Chloroethane	<0.32		2.0	0.32	ug/L			09/29/16 15:56	1
Chloroform	<0.25		1.0	0.25	ug/L			09/29/16 15:56	1
Chloromethane	<0.44		2.0	0.44	ug/L			09/29/16 15:56	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			09/29/16 15:56	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			09/29/16 15:56	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			09/29/16 15:56	1
Methylene Chloride	<0.33		2.0	0.33	ug/L			09/29/16 15:56	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			09/29/16 15:56	1
Toluene	<0.23		1.0	0.23	ug/L			09/29/16 15:56	1
trans-1,2-Dichloroethene	<0.30		0.50	0.30	ug/L			09/29/16 15:56	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			09/29/16 15:56	1
Trichloroethene	<0.22		1.0	0.22	ug/L			09/29/16 15:56	1
Trichlorofluoromethane	<0.49		2.0	0.49	ug/L			09/29/16 15:56	1
Vinyl chloride	<0.29		2.0	0.29	ug/L			09/29/16 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 132		09/29/16 15:56	1
4-Bromofluorobenzene (Surr)	84		73 - 120		09/29/16 15:56	1
Toluene-d8 (Surr)	92		73 - 124		09/29/16 15:56	1

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	12DCE (63-132)	BFB (73-120)	TOL (73-124)
240-70109-1	WSS-092816-JN-005	86	86	96
240-70109-1 MS	WSS-092816-JN-005	82	88	95
240-70109-2	TB-092816-JN-001	86	84	92
LCS 240-249034/5	Lab Control Sample	82	89	94
MB 240-249034/9	Method Blank	82	85	93

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2FP (10-120)	TBP (35-125)	NBZ (36-120)	PHL (10-120)	TPH (17-120)	FBP (42-120)
240-70109-1	WSS-092816-JN-005	23	61	51	14	55	53
LCS 240-249170/4-A	Lab Control Sample	62	86	71	50	93	71
MB 240-249170/3-A	Method Blank	65	74	73	52	81	69

Surrogate Legend

2FP = 2-Fluorophenol

TBP = 2,4,6-Tribromophenol

NBZ = Nitrobenzene-d5

PHL = Phenol-d5

TPH = Terphenyl-d14

FBP = 2-Fluorobiphenyl (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 624 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-249034/9

Matrix: Water

Analysis Batch: 249034

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.44		1.0	0.44	ug/L			09/29/16 13:13	1
1,1,2,2-Tetrachloroethane	<0.22		1.0	0.22	ug/L			09/29/16 13:13	1
1,1,2-Trichloroethane	<0.24		1.0	0.24	ug/L			09/29/16 13:13	1
1,1-Dichloroethane	<0.30		1.0	0.30	ug/L			09/29/16 13:13	1
1,1-Dichloroethene	<0.45		1.0	0.45	ug/L			09/29/16 13:13	1
1,2-Dichlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 13:13	1
1,2-Dichloroethane	<0.23		1.0	0.23	ug/L			09/29/16 13:13	1
1,2-Dichloropropane	<0.25		1.0	0.25	ug/L			09/29/16 13:13	1
1,3-Dichlorobenzene	<0.19		1.0	0.19	ug/L			09/29/16 13:13	1
1,4-Dichlorobenzene	<0.27		1.0	0.27	ug/L			09/29/16 13:13	1
2-Chloroethyl vinyl ether	<0.59		2.0	0.59	ug/L			09/29/16 13:13	1
Acrolein	<4.5		20	4.5	ug/L			09/29/16 13:13	1
Acrylonitrile	<6.3		20	6.3	ug/L			09/29/16 13:13	1
Benzene	<0.35		1.0	0.35	ug/L			09/29/16 13:13	1
Bromoform	<0.56		1.0	0.56	ug/L			09/29/16 13:13	1
Bromomethane	<0.44		2.0	0.44	ug/L			09/29/16 13:13	1
Carbon tetrachloride	<0.43		1.0	0.43	ug/L			09/29/16 13:13	1
Chlorobenzene	<0.25		1.0	0.25	ug/L			09/29/16 13:13	1
Chlorodibromomethane	<0.43		1.0	0.43	ug/L			09/29/16 13:13	1
Chloroethane	<0.32		2.0	0.32	ug/L			09/29/16 13:13	1
Chloroform	<0.25		1.0	0.25	ug/L			09/29/16 13:13	1
Chloromethane	<0.44		2.0	0.44	ug/L			09/29/16 13:13	1
cis-1,3-Dichloropropene	<0.46		1.0	0.46	ug/L			09/29/16 13:13	1
Dichlorobromomethane	<0.29		1.0	0.29	ug/L			09/29/16 13:13	1
Ethylbenzene	<0.25		1.0	0.25	ug/L			09/29/16 13:13	1
Methylene Chloride	<0.33		2.0	0.33	ug/L			09/29/16 13:13	1
Tetrachloroethene	<0.31		1.0	0.31	ug/L			09/29/16 13:13	1
Toluene	<0.23		1.0	0.23	ug/L			09/29/16 13:13	1
trans-1,2-Dichloroethene	<0.30		0.50	0.30	ug/L			09/29/16 13:13	1
trans-1,3-Dichloropropene	<0.56		1.0	0.56	ug/L			09/29/16 13:13	1
Trichloroethene	<0.22		1.0	0.22	ug/L			09/29/16 13:13	1
Trichlorofluoromethane	<0.49		2.0	0.49	ug/L			09/29/16 13:13	1
Vinyl chloride	<0.29		2.0	0.29	ug/L			09/29/16 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		63 - 132		09/29/16 13:13	1
4-Bromofluorobenzene (Surr)	85		73 - 120		09/29/16 13:13	1
Toluene-d8 (Surr)	93		73 - 124		09/29/16 13:13	1

Lab Sample ID: LCS 240-249034/5

Matrix: Water

Analysis Batch: 249034

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	82		63 - 132
4-Bromofluorobenzene (Surr)	89		73 - 120
Toluene-d8 (Surr)	94		73 - 124

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QC Sample Results

Client: GHD Services Inc.
 Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 624 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-70109-1 MS

Matrix: Water

Analysis Batch: 249034

Client Sample ID: WSS-092816-JN-005

Prep Type: Total/NA

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	82		63 - 132
4-Bromofluorobenzene (Surr)	88		73 - 120
Toluene-d8 (Surr)	95		73 - 124

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-249170/3-A

Matrix: Water

Analysis Batch: 249260

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 249170

Analyte	MB MB		LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	<0.28		10	0.28	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,4,6-Trichlorophenol	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,4-Dichlorophenol	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,4-Dimethylphenol	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,4-Dinitrotoluene	<0.27		10	0.27	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,6-Dinitrotoluene	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
2-Chloronaphthalene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
2-Chlorophenol	<0.29		10	0.29	ug/L		09/30/16 09:14	09/30/16 13:28	1
2-Nitrophenol	<0.28		10	0.28	ug/L		09/30/16 09:14	09/30/16 13:28	1
3,3'-Dichlorobenzidine	<0.37		10	0.37	ug/L		09/30/16 09:14	09/30/16 13:28	1
4,6-Dinitro-2-methylphenol	<2.4		50	2.4	ug/L		09/30/16 09:14	09/30/16 13:28	1
4-Bromophenyl phenyl ether	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
4-Chlorophenyl phenyl ether	<0.30		10	0.30	ug/L		09/30/16 09:14	09/30/16 13:28	1
4-Nitrophenol	<2.4		50	2.4	ug/L		09/30/16 09:14	09/30/16 13:28	1
Acenaphthene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Acenaphthylene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Anthracene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzidine	<2.4		5.0	2.4	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzo[a]anthracene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzo[a]pyrene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzo[b]fluoranthene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzo[g,h,i]perylene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Benzo[k]fluoranthene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Bis(2-chloroethoxy)methane	<0.32		10	0.32	ug/L		09/30/16 09:14	09/30/16 13:28	1
Bis(2-chloroethyl)ether	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Bis(2-ethylhexyl) phthalate	2.01	J	10	1.7	ug/L		09/30/16 09:14	09/30/16 13:28	1
2,2'-oxybis[1-chloropropane]	<0.40		10	0.40	ug/L		09/30/16 09:14	09/30/16 13:28	1
Butyl benzyl phthalate	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
Chrysene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Dibenz(a,h)anthracene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Diethyl phthalate	<0.60		10	0.60	ug/L		09/30/16 09:14	09/30/16 13:28	1
Dimethyl phthalate	<0.29		10	0.29	ug/L		09/30/16 09:14	09/30/16 13:28	1
Di-n-butyl phthalate	<1.7		10	1.7	ug/L		09/30/16 09:14	09/30/16 13:28	1
Di-n-octyl phthalate	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
Fluoranthene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Fluorene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-249170/3-A
Matrix: Water
Analysis Batch: 249260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 249170

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Hexachlorobutadiene	<0.27		10	0.27	ug/L		09/30/16 09:14	09/30/16 13:28	1
Hexachlorocyclopentadiene	<0.24		10	0.24	ug/L		09/30/16 09:14	09/30/16 13:28	1
Hexachloroethane	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
Indeno[1,2,3-cd]pyrene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Isophorone	<0.27		10	0.27	ug/L		09/30/16 09:14	09/30/16 13:28	1
Naphthalene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Nitrobenzene	<0.040		10	0.040	ug/L		09/30/16 09:14	09/30/16 13:28	1
N-Nitrosodimethylamine	<0.31		1.0	0.31	ug/L		09/30/16 09:14	09/30/16 13:28	1
N-Nitrosodi-n-propylamine	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
N-Nitrosodiphenylamine	<0.31		10	0.31	ug/L		09/30/16 09:14	09/30/16 13:28	1
4-Chloro-3-methylphenol	<0.80		10	0.80	ug/L		09/30/16 09:14	09/30/16 13:28	1
Pentachlorophenol	<2.4		10	2.4	ug/L		09/30/16 09:14	09/30/16 13:28	1
Phenanthrene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
Phenol	<0.60		10	0.60	ug/L		09/30/16 09:14	09/30/16 13:28	1
Pyrene	<0.10		10	0.10	ug/L		09/30/16 09:14	09/30/16 13:28	1
1,2-Diphenylhydrazine	<0.29		1.0	0.29	ug/L		09/30/16 09:14	09/30/16 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	65		10 - 120	09/30/16 09:14	09/30/16 13:28	1
2,4,6-Tribromophenol	74		35 - 125	09/30/16 09:14	09/30/16 13:28	1
Nitrobenzene-d5	73		36 - 120	09/30/16 09:14	09/30/16 13:28	1
Phenol-d5	52		10 - 120	09/30/16 09:14	09/30/16 13:28	1
Terphenyl-d14	81		17 - 120	09/30/16 09:14	09/30/16 13:28	1
2-Fluorobiphenyl (Surr)	69		42 - 120	09/30/16 09:14	09/30/16 13:28	1

Lab Sample ID: LCS 240-249170/4-A
Matrix: Water
Analysis Batch: 249260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 249170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	20.0	13.0		ug/L		65	44 - 142
2,4,6-Trichlorophenol	20.0	15.3		ug/L		76	37 - 144
2,4-Dichlorophenol	20.0	13.9		ug/L		70	39 - 135
2,4-Dimethylphenol	20.0	13.9		ug/L		69	32 - 119
2,4-Dinitrotoluene	20.0	17.8		ug/L		89	39 - 139
2,6-Dinitrotoluene	20.0	17.0		ug/L		85	50 - 158
2-Chloronaphthalene	20.0	14.1		ug/L		71	60 - 118
2-Chlorophenol	20.0	13.6		ug/L		68	23 - 134
2-Nitrophenol	20.0	13.8		ug/L		69	29 - 182
3,3'-Dichlorobenzidine	40.0	35.5		ug/L		89	0 - 262
4,6-Dinitro-2-methylphenol	40.0	35.6	J	ug/L		89	0 - 181
4-Bromophenyl phenyl ether	20.0	15.8		ug/L		79	53 - 127
4-Chlorophenyl phenyl ether	20.0	15.8		ug/L		79	25 - 158
4-Nitrophenol	40.0	23.0	J	ug/L		58	0 - 132
Acenaphthene	20.0	15.1		ug/L		75	47 - 145
Acenaphthylene	20.0	14.6		ug/L		73	33 - 145
Anthracene	20.0	16.6		ug/L		83	27 - 133

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-249170/4-A
Matrix: Water
Analysis Batch: 249260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 249170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzidine	40.0	28.7		ug/L		72	5 - 160
Benzo[a]anthracene	20.0	16.8		ug/L		84	33 - 143
Benzo[a]pyrene	20.0	17.6		ug/L		88	17 - 163
Benzo[b]fluoranthene	20.0	16.9		ug/L		85	24 - 159
Benzo[g,h,i]perylene	20.0	17.0		ug/L		85	0 - 219
Benzo[k]fluoranthene	20.0	17.6		ug/L		88	11 - 162
Bis(2-chloroethoxy)methane	20.0	14.0		ug/L		70	33 - 184
Bis(2-chloroethyl)ether	20.0	14.2		ug/L		71	12 - 158
Bis(2-ethylhexyl) phthalate	20.0	19.4		ug/L		97	8 - 158
2,2'-oxybis[1-chloropropane]	20.0	13.4		ug/L		67	36 - 166
Butyl benzyl phthalate	20.0	18.2		ug/L		91	0 - 152
Chrysene	20.0	17.0		ug/L		85	17 - 168
Dibenz(a,h)anthracene	20.0	17.2		ug/L		86	0 - 227
Diethyl phthalate	20.0	16.0		ug/L		80	0 - 114
Dimethyl phthalate	20.0	15.3		ug/L		77	0 - 112
Di-n-butyl phthalate	20.0	17.4		ug/L		87	1 - 118
Di-n-octyl phthalate	20.0	19.3		ug/L		97	4 - 146
Fluoranthene	20.0	17.0		ug/L		85	26 - 137
Fluorene	20.0	15.8		ug/L		79	59 - 121
Hexachlorobenzene	20.0	14.8		ug/L		74	0 - 152
Hexachlorobutadiene	20.0	12.5		ug/L		62	24 - 116
Hexachlorocyclopentadiene	20.0	11.1		ug/L		55	25 - 120
Hexachloroethane	20.0	13.1		ug/L		66	40 - 113
Indeno[1,2,3-cd]pyrene	20.0	17.4		ug/L		87	0 - 171
Isophorone	20.0	14.0		ug/L		70	21 - 196
Naphthalene	20.0	13.6		ug/L		68	21 - 133
Nitrobenzene	20.0	13.4		ug/L		67	35 - 180
N-Nitrosodimethylamine	20.0	12.9		ug/L		65	30 - 120
N-Nitrosodi-n-propylamine	20.0	14.8		ug/L		74	0 - 230
N-Nitrosodiphenylamine	20.0	16.4		ug/L		82	54 - 122
4-Chloro-3-methylphenol	20.0	14.9		ug/L		74	22 - 147
Pentachlorophenol	40.0	30.0		ug/L		75	14 - 176
Phenanthrene	20.0	16.0		ug/L		80	54 - 120
Phenol	20.0	9.88	J	ug/L		49	5 - 112
Pyrene	20.0	17.0		ug/L		85	52 - 115
1,2-Diphenylhydrazine	20.0	15.8		ug/L		79	10 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol	62		10 - 120
2,4,6-Tribromophenol	86		35 - 125
Nitrobenzene-d5	71		36 - 120
Phenol-d5	50		10 - 120
Terphenyl-d14	93		17 - 120
2-Fluorobiphenyl (Surr)	71		42 - 120

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 240-249077/1-A
Matrix: Water
Analysis Batch: 249292

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 249077

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.92		5.0	0.92	ug/L		09/29/16 14:00	09/30/16 14:13	1
Arsenic	<3.3		10.0	3.3	ug/L		09/29/16 14:00	09/30/16 14:13	1
Beryllium	<0.21		5.0	0.21	ug/L		09/29/16 14:00	09/30/16 14:13	1
Cadmium	<0.29		2.0	0.29	ug/L		09/29/16 14:00	09/30/16 14:13	1
Chromium	<0.55		5.0	0.55	ug/L		09/29/16 14:00	09/30/16 14:13	1
Copper	<3.9		25.0	3.9	ug/L		09/29/16 14:00	09/30/16 14:13	1
Nickel	<1.6		40.0	1.6	ug/L		09/29/16 14:00	09/30/16 14:13	1
Lead	<1.9		5.0	1.9	ug/L		09/29/16 14:00	09/30/16 14:13	1
Antimony	<3.1		10.0	3.1	ug/L		09/29/16 14:00	09/30/16 14:13	1
Selenium	<5.1		15.0	5.1	ug/L		09/29/16 14:00	09/30/16 14:13	1
Thallium	<2.1		10.0	2.1	ug/L		09/29/16 14:00	09/30/16 14:13	1
Zinc	<16.0		50.0	16.0	ug/L		09/29/16 14:00	09/30/16 14:13	1

Lab Sample ID: LCS 240-249077/2-A
Matrix: Water
Analysis Batch: 249292

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 249077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	50.0	53.82		ug/L		108	85 - 115
Arsenic	2000	2212		ug/L		111	85 - 115
Beryllium	50.0	52.44		ug/L		105	85 - 115
Cadmium	50.0	54.45		ug/L		109	85 - 115
Chromium	200	208.5		ug/L		104	85 - 115
Copper	250	266.3		ug/L		107	85 - 115
Nickel	500	528.1		ug/L		106	85 - 115
Lead	500	509.9		ug/L		102	85 - 115
Antimony	500	542.1		ug/L		108	85 - 115
Selenium	2000	2218		ug/L		111	85 - 115
Thallium	2000	2086		ug/L		104	85 - 115
Zinc	500	542.5		ug/L		109	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-249472/1-A
Matrix: Water
Analysis Batch: 249570

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 249472

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.090		0.20	0.090	ug/L		10/03/16 14:00	10/03/16 14:20	1

Lab Sample ID: LCS 240-249472/2-A
Matrix: Water
Analysis Batch: 249570

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 249472

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.97		ug/L		99	85 - 115

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
 Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: 1010 - Ignitability, Pensky-Martens Closed-Cup Method

Lab Sample ID: LCS 240-249140/1
 Matrix: Water
 Analysis Batch: 249140

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Flashpoint	81.0	81.00		Degrees F		100	97 - 103

Lab Sample ID: 240-70109-1 DU
 Matrix: Water
 Analysis Batch: 249140

Client Sample ID: WSS-092816-JN-005
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>200		>200		Degrees F		NC	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 240-249152/1
 Matrix: Water
 Analysis Batch: 249152

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.2		5.0	1.2	mg/L			09/30/16 08:20	1

Lab Sample ID: LCS 240-249152/2
 Matrix: Water
 Analysis Batch: 249152

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	36.80		mg/L		92	78 - 114

Method: 9040C - pH

Lab Sample ID: LCS 240-249028/23
 Matrix: Water
 Analysis Batch: 249028

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	9.14	9.2		SU		100	97 - 103

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 240-249184/1
 Matrix: Water
 Analysis Batch: 249184

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.8		4.0	1.8	mg/L			09/30/16 09:53	1

TestAmerica Canton

QC Sample Results

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 240-249184/2
Matrix: Water
Analysis Batch: 249184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	78.0	74.00		mg/L		95	64 - 120

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QC Association Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

GC/MS VOA

Analysis Batch: 249034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	624	
240-70109-2	TB-092816-JN-001	Total/NA	Water	624	
MB 240-249034/9	Method Blank	Total/NA	Water	624	
LCS 240-249034/5	Lab Control Sample	Total/NA	Water	624	
240-70109-1 MS	WSS-092816-JN-005	Total/NA	Water	624	

GC/MS Semi VOA

Prep Batch: 249170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	625	
MB 240-249170/3-A	Method Blank	Total/NA	Water	625	
LCS 240-249170/4-A	Lab Control Sample	Total/NA	Water	625	

Analysis Batch: 249260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	625	249170
MB 240-249170/3-A	Method Blank	Total/NA	Water	625	249170
LCS 240-249170/4-A	Lab Control Sample	Total/NA	Water	625	249170

Metals

Prep Batch: 249077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total Recoverable	Water	200.7	
MB 240-249077/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 240-249077/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 249292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total Recoverable	Water	200.7 Rev 4.4	249077
MB 240-249077/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	249077
LCS 240-249077/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	249077

Prep Batch: 249472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	245.1	
MB 240-249472/1-A	Method Blank	Total/NA	Water	245.1	
LCS 240-249472/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 249570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	245.1	249472
MB 240-249472/1-A	Method Blank	Total/NA	Water	245.1	249472
LCS 240-249472/2-A	Lab Control Sample	Total/NA	Water	245.1	249472

TestAmerica Canton

QC Association Summary

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

General Chemistry

Analysis Batch: 249028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	9040C	
LCS 240-249028/23	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 249140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	1010	
LCS 240-249140/1	Lab Control Sample	Total/NA	Water	1010	
240-70109-1 DU	WSS-092816-JN-005	Total/NA	Water	1010	

Analysis Batch: 249152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	1664A	
MB 240-249152/1	Method Blank	Total/NA	Water	1664A	
LCS 240-249152/2	Lab Control Sample	Total/NA	Water	1664A	

Analysis Batch: 249184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-70109-1	WSS-092816-JN-005	Total/NA	Water	SM 2540D	
MB 240-249184/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 240-249184/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Client Sample ID: WSS-092816-JN-005

Date Collected: 09/28/16 13:00

Date Received: 09/29/16 09:30

Lab Sample ID: 240-70109-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	249034	09/29/16 15:32	HMB	TAL CAN
Total/NA	Prep	625			249170	09/30/16 09:14	JDR	TAL CAN
Total/NA	Analysis	625		1	249260	09/30/16 14:15	MRU	TAL CAN
Total Recoverable	Prep	200.7			249077	09/29/16 14:00	AJC	TAL CAN
Total Recoverable	Analysis	200.7 Rev 4.4		1	249292	09/30/16 14:21	RKT	TAL CAN
Total/NA	Prep	245.1			249472	10/03/16 14:00	AJC	TAL CAN
Total/NA	Analysis	245.1		1	249570	10/03/16 14:33	DSH	TAL CAN
Total/NA	Analysis	1010		1	249140	09/30/16 06:08	TPH	TAL CAN
Total/NA	Analysis	1664A		1	249152	09/30/16 08:20	BLW	TAL CAN
Total/NA	Analysis	9040C		1	249028	09/29/16 13:58	BLW	TAL CAN
Total/NA	Analysis	SM 2540D		1	249184	09/30/16 09:53	JW	TAL CAN

Client Sample ID: TB-092816-JN-001

Date Collected: 09/28/16 10:00

Date Received: 09/29/16 09:30

Lab Sample ID: 240-70109-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624		1	249034	09/29/16 15:56	HMB	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: GHD Services Inc.
 Project/Site: 58505, Janesville WI, SSOW 108021

TestAmerica Job ID: 240-70109-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999518190	08-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1010		Water	Flashpoint
1664A		Water	HEM
1664A		Water	SGT-HEM
624		Water	1,1,1-Trichloroethane
624		Water	1,1,2,2-Tetrachloroethane
624		Water	1,1,2-Trichloroethane
624		Water	1,1-Dichloroethane
624		Water	1,1-Dichloroethene
624		Water	1,2-Dichlorobenzene
624		Water	1,2-Dichloroethane
624		Water	1,2-Dichloropropane
624		Water	1,3-Dichlorobenzene
624		Water	1,4-Dichlorobenzene
624		Water	2-Chloroethyl vinyl ether
624		Water	Acrolein
624		Water	Acrylonitrile
624		Water	Benzene
624		Water	Bromoform
624		Water	Bromomethane
624		Water	Carbon tetrachloride
624		Water	Chlorobenzene
624		Water	Chlorodibromomethane
624		Water	Chloroethane
624		Water	Chloroform
624		Water	Chloromethane
624		Water	cis-1,3-Dichloropropene
624		Water	Dichlorobromomethane
624		Water	Ethylbenzene
624		Water	Methylene Chloride
624		Water	Tetrachloroethene
624		Water	Toluene
624		Water	trans-1,2-Dichloroethene
624		Water	trans-1,3-Dichloropropene
624		Water	Trichloroethene
624		Water	Trichlorofluoromethane
624		Water	Vinyl chloride
625	625	Water	1,2-Diphenylhydrazine
9040C		Water	pH

TestAmerica Canton Sample Receipt Form/Narrative Login # : 70109

Canton Facility _____

Client AHD Site Name _____ Cooler unpacked by: B. Mac

Cooler Received on 9/24/14 Opened on 9/24/14

FedEx: 1st Grd. Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box _____ Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

See Multiple Cooler Form

1. Cooler temperature upon receipt
 IR GUN# IR-8 (CF +0.4 °C) Observed Cooler Temp. 3.2 °C Corrected Cooler Temp. 3.4 °C
 IR GUN #36 (CF +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC574756

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Yes No NA

14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 2018012B Yes No

15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container pH</u>	<u>Preservative Added (mls)</u>	<u>Lot #</u>
WSS-092816-JN-005	240-70109-G-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
WSS-092816-JN-005	240-70109-I-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____
WSS-092816-JN-005	240-70109-J-1	Amber Glass 1 liter - Sulfuric Acid	_____	_____	_____

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