

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

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North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-67810-1

Client Project/Site: 58505, Janesville WI, SSOW 108017

For:

GHD Services Inc.

45 Farmington Valley Drive

Plainville, Connecticut 06062

Attn: Ms. Kathy Shaw



Authorized for release by:

8/10/2016 8:34:46 AM

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

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

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# Definitions/Glossary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

### Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

### 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 108017

TestAmerica Job ID: 240-67810-1

**Job ID: 240-67810-1**

**Laboratory: TestAmerica Canton**

## Narrative

**Job Narrative**  
**240-67810-1**

### Comments

No additional comments.

### Receipt

The sample was received on 8/2/2016 9:30 AM; the sample 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

No analytical or quality issues were noted, other than those described 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.

### Metals

No analytical or quality issues were noted, other than those described 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

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

### VOA Prep

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

# Method Summary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
9040B	pH	SW846	TAL CAN

**Protocol References:**

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 108017

TestAmerica Job ID: 240-67810-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-67810-1	W-080116-JN-103	Water	08/01/16 15:30	08/02/16 09:30

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- 2
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- 10
- 11
- 12
- 13
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# Detection Summary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

**Client Sample ID: W-080116-JN-103**

**Lab Sample ID: 240-67810-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Corrosivity	8.0	HF	0.1	SU	1		9040B	Total/NA

- 1
- 2
- 3
- 4
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- 6
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- 9
- 10
- 11
- 12
- 13
- 14

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 108017

TestAmerica Job ID: 240-67810-1

**Client Sample ID: W-080116-JN-103**

**Lab Sample ID: 240-67810-1**

**Date Collected: 08/01/16 15:30**

**Matrix: Water**

**Date Received: 08/02/16 09:30**

## Method: 8260B - Volatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	mg/L			08/08/16 21:03	1
1,2-Dichloroethane	0.025	U	0.025	mg/L			08/08/16 21:03	1
2-Butanone (MEK)	0.25	U	0.25	mg/L			08/08/16 21:03	1
Benzene	0.025	U	0.025	mg/L			08/08/16 21:03	1
Carbon tetrachloride	0.025	U	0.025	mg/L			08/08/16 21:03	1
Chlorobenzene	0.025	U	0.025	mg/L			08/08/16 21:03	1
Chloroform	0.025	U	0.025	mg/L			08/08/16 21:03	1
Tetrachloroethene	0.025	U	0.025	mg/L			08/08/16 21:03	1
Trichloroethene	0.025	U	0.025	mg/L			08/08/16 21:03	1
Vinyl chloride	0.025	U	0.025	mg/L			08/08/16 21:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		80 - 121		08/08/16 21:03	1
4-Bromofluorobenzene (Surr)	84		70 - 124		08/08/16 21:03	1
Toluene-d8 (Surr)	92		80 - 120		08/08/16 21:03	1
Dibromofluoromethane (Surr)	89		80 - 128		08/08/16 21:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
2,4,5-Trichlorophenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
2,4,6-Trichlorophenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
2,4-Dinitrotoluene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
Hexachlorobenzene	0.00080	U	0.00080	mg/L		08/04/16 13:43	08/08/16 12:04	1
Hexachlorobutadiene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
Hexachloroethane	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
3 & 4 Methylphenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
2-Methylphenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
Nitrobenzene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1
Pentachlorophenol	0.016	U	0.016	mg/L		08/04/16 13:43	08/08/16 12:04	1
Pyridine	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/08/16 12:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		42 - 120	08/04/16 13:43	08/08/16 12:04	1
2-Fluorophenol (Surr)	51		10 - 120	08/04/16 13:43	08/08/16 12:04	1
2,4,6-Tribromophenol (Surr)	73		35 - 125	08/04/16 13:43	08/08/16 12:04	1
Nitrobenzene-d5 (Surr)	72		36 - 120	08/04/16 13:43	08/08/16 12:04	1
Phenol-d5 (Surr)	39		10 - 120	08/04/16 13:43	08/08/16 12:04	1
Terphenyl-d14 (Surr)	79		17 - 120	08/04/16 13:43	08/08/16 12:04	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1
Barium	0.50	U	0.50	mg/L		08/04/16 16:04	08/05/16 21:46	1
Cadmium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1
Chromium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1
Lead	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1
Selenium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1
Silver	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 21:46	1

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# Client Sample Results

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

**Client Sample ID: W-080116-JN-103**

**Lab Sample ID: 240-67810-1**

**Date Collected: 08/01/16 15:30**

**Matrix: Water**

**Date Received: 08/02/16 09:30**

## Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	mg/L		08/04/16 12:00	08/05/16 10:24	1

## General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Corrosivity	8.0	HF	0.1	SU			08/02/16 15:13	1

- 1
- 2
- 3
- 4
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- 7
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- 10
- 11
- 12
- 13
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# Surrogate Summary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (80-120)	DBFM (80-128)
LCS 240-241580/12	Lab Control Sample	88	91	96	91

### Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (80-121)	BFB (70-124)	TOL (80-120)	DBFM (80-128)
240-67810-1	W-080116-JN-103	90	84	92	89
LB 240-241220/1-A MB	Method Blank	92	86	95	91

### Surrogate Legend

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

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (42-120)	2FP (10-120)	TBP (35-125)	NBZ (36-120)	PHL (10-120)	TPH (17-120)
LCS 240-241264/8-A	Lab Control Sample	72	57	84	77	45	85
MB 240-241264/7-A	Method Blank	70	55	76	75	43	82

### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

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

Matrix: Water

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (42-120)	2FP (10-120)	TBP (35-125)	NBZ (36-120)	PHL (10-120)	TPH (17-120)
240-67810-1	W-080116-JN-103	63	51	73	72	39	79

### Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

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# Surrogate Summary

Client: GHD Services Inc.

Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

TBP = 2,4,6-Tribromophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL = Phenol-d5 (Surr)

TPH = Terphenyl-d14 (Surr)

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: LCS 240-241580/12**

**Matrix: Water**

**Analysis Batch: 241580**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	1.00	0.984		mg/L		98	71 - 133
1,2-Dichloroethane	1.00	0.972		mg/L		97	80 - 120
2-Butanone (MEK)	2.00	1.65		mg/L		83	49 - 120
Benzene	1.00	1.02		mg/L		102	80 - 120
Carbon tetrachloride	1.00	0.685		mg/L		69	54 - 122
Chlorobenzene	1.00	1.00		mg/L		100	80 - 120
Chloroform	1.00	1.00		mg/L		100	80 - 123
Tetrachloroethene	1.00	1.02		mg/L		102	79 - 134
Trichloroethene	1.00	0.983		mg/L		98	78 - 130
Vinyl chloride	1.00	0.893		mg/L		89	56 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	88		80 - 121
4-Bromofluorobenzene (Surr)	91		70 - 124
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128

**Lab Sample ID: LB 240-241220/1-A MB**

**Matrix: Water**

**Analysis Batch: 241580**

**Client Sample ID: Method Blank**

**Prep Type: TCLP**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.025	U	0.025	mg/L			08/08/16 15:16	1
1,2-Dichloroethane	0.025	U	0.025	mg/L			08/08/16 15:16	1
2-Butanone (MEK)	0.25	U	0.25	mg/L			08/08/16 15:16	1
Benzene	0.025	U	0.025	mg/L			08/08/16 15:16	1
Carbon tetrachloride	0.025	U	0.025	mg/L			08/08/16 15:16	1
Chlorobenzene	0.025	U	0.025	mg/L			08/08/16 15:16	1
Chloroform	0.025	U	0.025	mg/L			08/08/16 15:16	1
Tetrachloroethene	0.025	U	0.025	mg/L			08/08/16 15:16	1
Trichloroethene	0.025	U	0.025	mg/L			08/08/16 15:16	1
Vinyl chloride	0.025	U	0.025	mg/L			08/08/16 15:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 121		08/08/16 15:16	1
4-Bromofluorobenzene (Surr)	86		70 - 124		08/08/16 15:16	1
Toluene-d8 (Surr)	95		80 - 120		08/08/16 15:16	1
Dibromofluoromethane (Surr)	91		80 - 128		08/08/16 15:16	1

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

**Lab Sample ID: MB 240-241264/7-A**

**Matrix: Water**

**Analysis Batch: 241364**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 241264**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1

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# QC Sample Results

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

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

**Lab Sample ID: MB 240-241264/7-A**  
**Matrix: Water**  
**Analysis Batch: 241364**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 241264**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
2,4,6-Trichlorophenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
2,4-Dinitrotoluene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
Hexachlorobenzene	0.00080	U	0.00080	mg/L		08/04/16 13:43	08/05/16 13:17	1
Hexachlorobutadiene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
Hexachloroethane	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
3 & 4 Methylphenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
2-Methylphenol	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
Nitrobenzene	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1
Pentachlorophenol	0.016	U	0.016	mg/L		08/04/16 13:43	08/05/16 13:17	1
Pyridine	0.0040	U	0.0040	mg/L		08/04/16 13:43	08/05/16 13:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		42 - 120	08/04/16 13:43	08/05/16 13:17	1
2-Fluorophenol (Surr)	55		10 - 120	08/04/16 13:43	08/05/16 13:17	1
2,4,6-Tribromophenol (Surr)	76		35 - 125	08/04/16 13:43	08/05/16 13:17	1
Nitrobenzene-d5 (Surr)	75		36 - 120	08/04/16 13:43	08/05/16 13:17	1
Phenol-d5 (Surr)	43		10 - 120	08/04/16 13:43	08/05/16 13:17	1
Terphenyl-d14 (Surr)	82		17 - 120	08/04/16 13:43	08/05/16 13:17	1

**Lab Sample ID: LCS 240-241264/8-A**  
**Matrix: Water**  
**Analysis Batch: 241364**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 241264**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dichlorobenzene	0.0800	0.0486		mg/L		61	48 - 120
2,4,5-Trichlorophenol	0.0800	0.0615		mg/L		77	57 - 120
2,4,6-Trichlorophenol	0.0800	0.0574		mg/L		72	60 - 120
2,4-Dinitrotoluene	0.0800	0.0656		mg/L		82	65 - 120
Hexachlorobenzene	0.0800	0.0569		mg/L		71	47 - 127
Hexachlorobutadiene	0.0800	0.0525		mg/L		66	50 - 120
Hexachloroethane	0.0800	0.0469		mg/L		59	50 - 120
3 & 4 Methylphenol	0.0800	0.0544		mg/L		68	46 - 120
2-Methylphenol	0.0800	0.0665		mg/L		83	52 - 120
Nitrobenzene	0.0800	0.0562		mg/L		70	58 - 120
Pentachlorophenol	0.160	0.115		mg/L		72	35 - 121
Pyridine	0.0800	0.0458		mg/L		57	10 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	72		42 - 120
2-Fluorophenol (Surr)	57		10 - 120
2,4,6-Tribromophenol (Surr)	84		35 - 125
Nitrobenzene-d5 (Surr)	77		36 - 120
Phenol-d5 (Surr)	45		10 - 120
Terphenyl-d14 (Surr)	85		17 - 120

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# QC Sample Results

Client: GHD Services Inc.  
 Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 240-241297/2-A**  
**Matrix: Water**  
**Analysis Batch: 241419**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 241297**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1
Barium	0.50	U	0.50	mg/L		08/04/16 16:04	08/05/16 10:49	1
Cadmium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1
Chromium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1
Lead	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1
Selenium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1
Silver	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:49	1

**Lab Sample ID: LCS 240-241297/3-A**  
**Matrix: Water**  
**Analysis Batch: 241419**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 241297**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	2.00	2.22		mg/L		111	50 - 150
Barium	2.00	1.92		mg/L		96	50 - 150
Cadmium	0.0500	0.0524		mg/L		105	50 - 150
Chromium	0.200	0.205		mg/L		102	50 - 150
Lead	0.500	0.471		mg/L		94	50 - 150
Selenium	2.00	2.24		mg/L		112	50 - 150
Silver	0.0500	0.0527		mg/L		105	50 - 150

**Lab Sample ID: LB 240-241213/1-E**  
**Matrix: Water**  
**Analysis Batch: 241419**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 241297**

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1
Barium	0.50	U	0.50	mg/L		08/04/16 16:04	08/05/16 10:44	1
Cadmium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1
Chromium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1
Lead	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1
Selenium	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1
Silver	0.050	U	0.050	mg/L		08/04/16 16:04	08/05/16 10:44	1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 240-241232/2-A**  
**Matrix: Water**  
**Analysis Batch: 241433**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 241232**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	mg/L		08/04/16 12:00	08/05/16 09:15	1

**Lab Sample ID: LCS 240-241232/3-A**  
**Matrix: Water**  
**Analysis Batch: 241433**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 241232**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00500	0.00523		mg/L		105	80 - 120

TestAmerica Canton

# QC Sample Results

Client: GHD Services Inc.  
 Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

**Lab Sample ID: LB 240-241213/1-C**  
**Matrix: Water**  
**Analysis Batch: 241433**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 241232**

Analyte	LB Result	LB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0020	U	0.0020	mg/L		08/04/16 12:00	08/05/16 09:13	1

## Method: 9040B - pH

**Lab Sample ID: LCS 240-240880/2**  
**Matrix: Water**  
**Analysis Batch: 240880**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Corrosivity	6.15	6.2		SU		101	97 - 103

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

# QC Association Summary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## GC/MS VOA

### Leach Batch: 241220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	1311	
LB 240-241220/1-A MB	Method Blank	TCLP	Water	1311	

### Analysis Batch: 241580

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	8260B	241220
LB 240-241220/1-A MB	Method Blank	TCLP	Water	8260B	241220
LCS 240-241580/12	Lab Control Sample	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Leach Batch: 241213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	1311	

### Prep Batch: 241264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	3510C	241213
MB 240-241264/7-A	Method Blank	Total/NA	Water	3510C	
LCS 240-241264/8-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 241364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-241264/7-A	Method Blank	Total/NA	Water	8270C	241264
LCS 240-241264/8-A	Lab Control Sample	Total/NA	Water	8270C	241264

### Analysis Batch: 241575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	8270C	241264

## Metals

### Leach Batch: 241213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	1311	
LB 240-241213/1-C	Method Blank	TCLP	Water	1311	
LB 240-241213/1-E	Method Blank	TCLP	Water	1311	

### Prep Batch: 241232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	7470A	241213
LB 240-241213/1-C	Method Blank	TCLP	Water	7470A	241213
MB 240-241232/2-A	Method Blank	Total/NA	Water	7470A	
LCS 240-241232/3-A	Lab Control Sample	Total/NA	Water	7470A	

### Prep Batch: 241297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	3010A	241213
LB 240-241213/1-E	Method Blank	TCLP	Water	3010A	241213
MB 240-241297/2-A	Method Blank	Total/NA	Water	3010A	

TestAmerica Canton



# QC Association Summary

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

## Metals (Continued)

### Prep Batch: 241297 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-241297/3-A	Lab Control Sample	Total/NA	Water	3010A	

### Analysis Batch: 241419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	6010B	241297
LB 240-241213/1-E	Method Blank	TCLP	Water	6010B	241297
MB 240-241297/2-A	Method Blank	Total/NA	Water	6010B	241297
LCS 240-241297/3-A	Lab Control Sample	Total/NA	Water	6010B	241297

### Analysis Batch: 241433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	TCLP	Water	7470A	241232
LB 240-241213/1-C	Method Blank	TCLP	Water	7470A	241232
MB 240-241232/2-A	Method Blank	Total/NA	Water	7470A	241232
LCS 240-241232/3-A	Lab Control Sample	Total/NA	Water	7470A	241232

## General Chemistry

### Analysis Batch: 240880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-67810-1	W-080116-JN-103	Total/NA	Water	9040B	
LCS 240-240880/2	Lab Control Sample	Total/NA	Water	9040B	

# Lab Chronicle

Client: GHD Services Inc.  
Project/Site: 58505, Janesville WI, SSOW 108017

TestAmerica Job ID: 240-67810-1

**Client Sample ID: W-080116-JN-103**

**Lab Sample ID: 240-67810-1**

**Date Collected: 08/01/16 15:30**

**Matrix: Water**

**Date Received: 08/02/16 09:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			241220	08/03/16 20:35	DRJ	TAL CAN
TCLP	Analysis	8260B		1	241580	08/08/16 21:03	HMB	TAL CAN
TCLP	Leach	1311			241213	08/03/16 18:15	DRJ	TAL CAN
TCLP	Prep	3510C			241264	08/04/16 13:43	JDR	TAL CAN
TCLP	Analysis	8270C		1	241575	08/08/16 12:04	JMG	TAL CAN
TCLP	Leach	1311			241213	08/03/16 18:15	DRJ	TAL CAN
TCLP	Prep	3010A			241297	08/04/16 16:04	DEE	TAL CAN
TCLP	Analysis	6010B		1	241419	08/05/16 21:46	RKT	TAL CAN
TCLP	Leach	1311			241213	08/03/16 18:15	DRJ	TAL CAN
TCLP	Prep	7470A			241232	08/04/16 12:00	AJC	TAL CAN
TCLP	Analysis	7470A		1	241433	08/05/16 10:24	WKD	TAL CAN
Total/NA	Analysis	9040B		1	240880	08/02/16 15:13	DTN	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 108017

TestAmerica Job ID: 240-67810-1

## 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	08-31-16 *

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

Analysis Method	Prep Method	Matrix	Analyte
9040B		Water	Corrosivity

\* Certification renewal pending - certification considered valid.



0.711.7 #372.3

LOW# 058901 -108017

**GHD**  
6400 Shafer Court - Suite 400  
Rosemont, Illinois, 60018  
773 380 9933 phone  
WWW.GHD.COM

SHIPPED TO  
(Laboratory Name):

TEST AMERICA - NORTH CANTON

REFERENCE NUMBER:  
5855-A-20404

PROJECT NAME: GM JAMESVILLE  
ASSEMBLY PLANT

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: *[Signature]*  
PRINTED NAME: JEFF KOLODZIEFSKI

PARAMETERS  
TOP VOCs  
TRP SVCS  
TRP METALS  
TRP PAHs  
PH

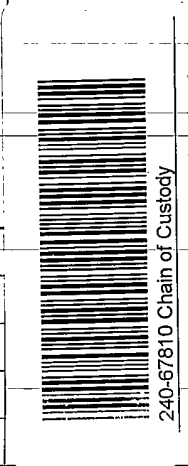
SAMPLE MATRIX  
WATER

SAMPLE IDENTIFICATION No.

9/1/16 1530 W-080116-JN-103

No OF CONTAINERS  
4

REMARKS



TOTAL NUMBER OF CONTAINERS  
4

RELINQUISHED BY: ① <i>[Signature]</i>	DATE: 9/1/16 TIME: 1800	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

TRACKING No. 8742 2219 391

White - Fully Executed Copy  
 Yellow - Receiving Laboratory Copy  
 Pink - Shipper Copy  
 Goldenrod - Sampler Copy

SAMPLE TEAM:  
*J. KOLODZIEFSKI*  
*J. NICHOLS*

RECEIVED FOR LABORATORY BY:  
*[Signature]*  
 DATE: 8-2-16 TIME: 930

8411

11034001-00(PRES001)GN-CO001



**TestAmerica Canton Sample Receipt Form/Narrative**  
**Canton Facility**

Login # : 67810

Client <u>CTHD</u>	Site Name _____	Cooler unpacked by: _____
Cooler Received on <u>8-2-16</u>	Opened on <u>8-2-16</u>	
FedEx: 1 <sup>st</sup> Grd <u>EXP</u> UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____		
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____
TestAmerica Cooler # _____ Foam Box <input checked="" type="checkbox"/> Client Cooler Box Other _____		
Packing material used: <u>Bubble Wrap</u> Foam Plastic Bag None Other _____		
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water None		
1. Cooler temperature upon receipt <input type="checkbox"/> See Multiple Cooler Form		
IR GUN# IR-8 (CF +1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C		
IR-GUN #36 (CF +1.0°C) Observed Cooler Temp. <u>1.7</u> °C Corrected Cooler Temp. <u>1.7</u> °C		
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity <u>2</u> 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 <u>NO</u>		
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 <u>NO</u>		
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# <u>HC574756</u>		
12. Were VOAs on the COC? Yes <u>NO</u>		
13. Were air bubbles >6 mm in any VOA vials? Yes No <u>NA</u>		
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes <u>NO</u>		
15. Was a LL Hg or Me Hg trip blank present? _____ Yes <u>NO</u>		
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

<b>14. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES</b>	Samples processed by: _____
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	

**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): \_\_\_\_\_

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

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>
W-080116-JN-103	240-67810-A-1	Plastic 500ml - with Nitric Acid	<2	_____	_____