

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Watertown

1101 Industrial Drive

Suites 9 & 10

Watertown, WI 53094

Tel: (920)261-1660

TestAmerica Job ID: 610-2138-1

Client Project/Site: Madison Kipp Site W1001283.0002.00001

For:

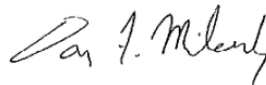
ARCADIS U.S., Inc.

126 North Jefferson Street

Suite 400

Milwaukee, Wisconsin 53202

Attn: Ms. Jennine Trask



Authorized for release by:

3/13/2012 4:36:06 PM

Dan Milewsky

Project Manager II

[dan.milewsky@testamericainc.com](mailto:dan.milewsky@testamericainc.com)

Designee for

Sandie Fredrick

Project Manager I

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

*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: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

### GC/MS Semi 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.
F	MS or MSD exceeds the control limits

### GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

### Metals

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

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
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: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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## Job ID: 610-2138-1

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### Laboratory: TestAmerica Watertown

#### Narrative

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#### Job Narrative 610-2138-1

#### Comments

No additional comments.

#### Receipt

All samples were received in good condition within temperature requirements.

#### GC/MS VOA

Method(s) 5030B: The Leachate Blank associated with this Sample contains a detection above the reporting limit (RL) for the following analyte: trichloroethene. The associated sample was detected for this analyte right at the reporting limit but well below the regulatory limit for this compound. Therefore, the data has been reported.

No other analytical or quality issues were noted.

#### GC/MS Semi VOA

Method(s) 8270C: The matrix spike(MS) recoveries for sample -1 were outside control limits for two analytes. The associated laboratory control sample (LCS) recovery met acceptance criteria. No corrective action was required. Trench Cuttings Composite (610-2138-1)

No other analytical or quality issues were noted.

#### GC Semi VOA

Method(s) 8082: The following sample(s) required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: Trench Cuttings Composite (610-2138-1). The reagent lot number used was: K30N01.

Method(s) 8082: The following sample was diluted due to the abundance of target analytes: Trench Cuttings Composite (610-2138-1). Elevated reporting limits (RLs) are provided.

Method(s) 8082: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: Trench Cuttings Composite (610-2138-1). This analysis was given additional review by the section supervisor, but not re-analyzed.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### General Chemistry

No analytical or quality issues were noted.

#### Organic Prep

No analytical or quality issues were noted.

# Detection Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 610-2138-1

Project/Site: Madison Kipp Site W1001283.0002.00001

**Client Sample ID: Trench Cuttings Composite**

**Lab Sample ID: 610-2138-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.14		0.020	0.010	mg/L	20		8260B	TCLP
Trichloroethene	0.020	B	0.020	0.010	mg/L	20		8260B	TCLP
PCB-1242	110000		16000	5300	ug/Kg	1000		8082	Total/NA
Polychlorinated biphenyls, Total	110000		16000	3100	ug/Kg	1000		8082	Total/NA
Barium	0.99		0.50	0.010	mg/L	1		6010B	TCLP
Cadmium	0.0058		0.0050	0.0020	mg/L	1		6010B	TCLP
Copper	0.064		0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.012	J	0.050	0.0050	mg/L	1		6010B	TCLP
Nickel	0.057		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	5.1		0.10	0.020	mg/L	1		6010B	TCLP
Flashpoint	>176		40	40	Degrees F	1		1010	Total/NA
Cyanide, Total	0.16	J B	0.50	0.056	mg/Kg	1		9014	Total/NA
pH	7.49				SU	1		9045D	Total/NA
Free Liquid	0.00				mL	1		9095B	Total/NA
Specific Gravity	1.645				%	1		SM 2710F	Total/NA

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Client Sample ID: Trench Cuttings Composite

Lab Sample ID: 610-2138-1

Date Collected: 03/03/12 11:00

Matrix: Soil

Date Received: 03/05/12 14:37

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
Carbon tetrachloride	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
Chlorobenzene	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
Chloroform	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
1,2-Dichloroethane	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
1,1-Dichloroethene	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
Methyl Ethyl Ketone	<0.050		0.10	0.050	mg/L			03/09/12 20:20	20
<b>Tetrachloroethene</b>	<b>0.14</b>		0.020	0.010	mg/L			03/09/12 20:20	20
<b>Trichloroethene</b>	<b>0.020</b>	<b>B</b>	0.020	0.010	mg/L			03/09/12 20:20	20
Vinyl chloride	<0.010		0.020	0.010	mg/L			03/09/12 20:20	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	96		75 - 131					03/09/12 20:20	20
Toluene-d8 (Surr)	100		80 - 120					03/09/12 20:20	20
4-Bromofluorobenzene (Surr)	100		79 - 120					03/09/12 20:20	20
Dibromofluoromethane	109		74 - 123					03/09/12 20:20	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
2,4-Dinitrotoluene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Hexachlorobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Hexachloro-1,3-butadiene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Hexachloroethane	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Phenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
2-Methyl-phenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
3 & 4 Methylphenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Nitrobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
Pentachlorophenol	<0.25		0.50	0.25	mg/L		03/08/12 09:35	03/08/12 16:11	1
Pyridine	<0.10		0.20	0.10	mg/L		03/08/12 09:35	03/08/12 16:11	1
2,4,5-Trichlorophenol	<0.25		0.50	0.25	mg/L		03/08/12 09:35	03/08/12 16:11	1
2,4,6-Trichlorophenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:11	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorobiphenyl	83		48 - 110				03/08/12 09:35	03/08/12 16:11	1
2-Fluorophenol	35		20 - 100				03/08/12 09:35	03/08/12 16:11	1
Nitrobenzene-d5	83		41 - 110				03/08/12 09:35	03/08/12 16:11	1
Phenol-d5	22		20 - 100				03/08/12 09:35	03/08/12 16:11	1
Terphenyl-d14	95		44 - 132				03/08/12 09:35	03/08/12 16:11	1
2,4,6-Tribromophenol	80		50 - 129				03/08/12 09:35	03/08/12 16:11	1

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<5700		16000	5700	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
PCB-1221	<7100		16000	7100	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
PCB-1232	<7100		16000	7100	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
<b>PCB-1242</b>	<b>110000</b>		16000	5300	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
PCB-1248	<6400		16000	6400	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
PCB-1254	<3500		16000	3500	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
PCB-1260	<8000		16000	8000	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000
<b>Polychlorinated biphenyls, Total</b>	<b>110000</b>		16000	3100	ug/Kg		03/06/12 17:05	03/07/12 18:00	1000

# Client Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Client Sample ID: Trench Cuttings Composite

Lab Sample ID: 610-2138-1

Date Collected: 03/03/12 11:00

Matrix: Soil

Date Received: 03/05/12 14:37

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D	50 - 116	03/06/12 17:05	03/07/12 18:00	1000
DCB Decachlorobiphenyl	0	D	48 - 142	03/06/12 17:05	03/07/12 18:00	1000

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.010		0.050	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Barium</b>	<b>0.99</b>		0.50	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Cadmium</b>	<b>0.0058</b>		0.0050	0.0020	mg/L		03/08/12 08:00	03/08/12 17:55	1
Chromium	<0.010		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Copper</b>	<b>0.064</b>		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Lead</b>	<b>0.012</b>	<b>J</b>	0.050	0.0050	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Nickel</b>	<b>0.057</b>		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
Selenium	<0.010		0.050	0.010	mg/L		03/08/12 08:00	03/08/12 17:55	1
Silver	<0.0050		0.025	0.0050	mg/L		03/08/12 08:00	03/08/12 17:55	1
<b>Zinc</b>	<b>5.1</b>		0.10	0.020	mg/L		03/08/12 08:00	03/08/12 17:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000020		0.00020	0.000020	mg/L		03/08/12 10:45	03/09/12 10:17	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Flashpoint</b>	<b>&gt;176</b>		40	40	Degrees F			03/07/12 12:00	1
<b>Cyanide, Total</b>	<b>0.16</b>	<b>J B</b>	0.50	0.056	mg/Kg		03/06/12 23:13	03/07/12 21:25	1
Sulfide	<9.0		23	9.0	mg/Kg		03/09/12 13:00	03/12/12 14:41	1
<b>pH</b>	<b>7.49</b>				SU			03/09/12 08:31	1
<b>Free Liquid</b>	<b>0.00</b>				mL			03/07/12 09:03	1
<b>Percent Solids</b>	<b>81</b>		0.013	0.013	%			03/05/12 14:59	1
<b>Specific Gravity</b>	<b>1.645</b>				%			03/07/12 09:06	1

# Surrogate Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

Matrix: Soil

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (75-131)	TOL (80-120)	BFB (79-120)	DBFM (74-123)
610-2138-1	Trench Cuttings Composite	96	100	100	109

**Surrogate Legend**

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 TOL = Toluene-d8 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (75-131)	TOL (80-120)	BFB (79-120)	DBFM (74-123)
LCS 500-142770/5	Lab Control Sample	92	101	101	103
LCS 500-142939/5	Lab Control Sample	90	101	101	103
MB 500-142770/4	Method Blank	90	101	104	101
MB 500-142939/4	Method Blank	89	100	94	95

**Surrogate Legend**

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 TOL = Toluene-d8 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (75-131)	TOL (80-120)	BFB (79-120)	DBFM (74-123)
LB 500-142678/1-A LB	Method Blank	87	100	98	95

**Surrogate Legend**

12DCE = 1,2-Dichloroethane-d4 (Surr)  
 TOL = Toluene-d8 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane

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

Matrix: Soil

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-110)	2FP (20-100)	NBZ (41-110)	PHL (20-100)	TPH (44-132)	TBP (50-129)
610-2138-1	Trench Cuttings Composite	83	35	83	22	95	80
610-2138-1 MS	Trench Cuttings Composite	74	21	71	21	96	94

**Surrogate Legend**

FBP = 2-Fluorobiphenyl  
 2FP = 2-Fluorophenol  
 NBZ = Nitrobenzene-d5



# Surrogate Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

PHL = Phenol-d5  
 TPH = Terphenyl-d14  
 TBP = 2,4,6-Tribromophenol

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-110)	2FP (20-100)	NBZ (41-110)	PHL (20-100)	TPH (44-132)	TBP (50-129)
LCS 500-142647/2-A	Lab Control Sample	80	38	76	30	106	100
MB 500-142647/1-A	Method Blank	80	39	81	26	96	83

**Surrogate Legend**

FBP = 2-Fluorobiphenyl  
 2FP = 2-Fluorophenol  
 NBZ = Nitrobenzene-d5  
 PHL = Phenol-d5  
 TPH = Terphenyl-d14  
 TBP = 2,4,6-Tribromophenol

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

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (48-110)	2FP (20-100)	NBZ (41-110)	PHL (20-100)	TPH (44-132)	TBP (50-129)
LB 500-142577/1-B LB	Method Blank	80	34	78	20	91	72

**Surrogate Legend**

FBP = 2-Fluorobiphenyl  
 2FP = 2-Fluorophenol  
 NBZ = Nitrobenzene-d5  
 PHL = Phenol-d5  
 TPH = Terphenyl-d14  
 TBP = 2,4,6-Tribromophenol

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Soil

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (50-116)	DCB1 (48-142)
610-2138-1	Trench Cuttings Composite	0 D	0 D

**Surrogate Legend**

TCX = Tetrachloro-m-xylene  
 DCB = DCB Decachlorobiphenyl

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (50-116)	DCB1 (48-142)
LCS 500-142464/4-A	Lab Control Sample	88	93
LCSD 500-142464/5-A	Lab Control Sample Dup	84	88
MB 500-142464/1-A	Method Blank	87	98

# Surrogate Summary

Client: ARCADIS U.S., Inc.

Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Surrogate Legend

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TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

**Lab Sample ID: MB 500-142770/4**

**Matrix: Solid**

**Analysis Batch: 142770**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Carbon tetrachloride	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Chlorobenzene	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Chloroform	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
1,2-Dichloroethane	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
1,1-Dichloroethene	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Methyl Ethyl Ketone	<0.0025		0.0050	0.0025	mg/L			03/09/12 11:59	1
Tetrachloroethene	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Trichloroethene	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1
Vinyl chloride	<0.00050		0.0010	0.00050	mg/L			03/09/12 11:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		75 - 131		03/09/12 11:59	1
Toluene-d8 (Surr)	101		80 - 120		03/09/12 11:59	1
4-Bromofluorobenzene (Surr)	104		79 - 120		03/09/12 11:59	1
Dibromofluoromethane	101		74 - 123		03/09/12 11:59	1

**Lab Sample ID: LCS 500-142770/5**

**Matrix: Solid**

**Analysis Batch: 142770**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0483		mg/L		97	74 - 115
Carbon tetrachloride	0.0500	0.0464		mg/L		93	72 - 124
Chlorobenzene	0.0500	0.0490		mg/L		98	80 - 120
Chloroform	0.0500	0.0507		mg/L		101	76 - 117
1,2-Dichloroethane	0.0500	0.0452		mg/L		90	76 - 117
1,1-Dichloroethene	0.0500	0.0438		mg/L		88	58 - 115
Methyl Ethyl Ketone	0.0500	0.0607		mg/L		121	53 - 140
Tetrachloroethene	0.0500	0.0427		mg/L		85	71 - 120
Trichloroethene	0.0500	0.0463		mg/L		93	75 - 120
Vinyl chloride	0.0500	0.0603		mg/L		121	51 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		75 - 131
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		79 - 120
Dibromofluoromethane	103		74 - 123

**Lab Sample ID: MB 500-142939/4**

**Matrix: Solid**

**Analysis Batch: 142939**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Carbon tetrachloride	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Chlorobenzene	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Chloroform	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
1,2-Dichloroethane	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

**Lab Sample ID: MB 500-142939/4**

**Matrix: Solid**

**Analysis Batch: 142939**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Methyl Ethyl Ketone	<0.0025		0.0050	0.0025	mg/L			03/12/12 09:47	1
Tetrachloroethene	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Trichloroethene	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1
Vinyl chloride	<0.00050		0.0010	0.00050	mg/L			03/12/12 09:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		75 - 131		03/12/12 09:47	1
Toluene-d8 (Surr)	100		80 - 120		03/12/12 09:47	1
4-Bromofluorobenzene (Surr)	94		79 - 120		03/12/12 09:47	1
Dibromofluoromethane	95		74 - 123		03/12/12 09:47	1

**Lab Sample ID: LCS 500-142939/5**

**Matrix: Solid**

**Analysis Batch: 142939**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0466		mg/L		93	74 - 115
Carbon tetrachloride	0.0500	0.0435		mg/L		87	72 - 124
Chlorobenzene	0.0500	0.0475		mg/L		95	80 - 120
Chloroform	0.0500	0.0490		mg/L		98	76 - 117
1,2-Dichloroethane	0.0500	0.0439		mg/L		88	76 - 117
1,1-Dichloroethene	0.0500	0.0426		mg/L		85	58 - 115
Methyl Ethyl Ketone	0.0500	0.0582		mg/L		116	53 - 140
Tetrachloroethene	0.0500	0.0432		mg/L		86	71 - 120
Trichloroethene	0.0500	0.0450		mg/L		90	75 - 120
Vinyl chloride	0.0500	0.0485		mg/L		97	51 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	90		75 - 131
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		79 - 120
Dibromofluoromethane	103		74 - 123

**Lab Sample ID: LB 500-142678/1-A LB**

**Matrix: Solid**

**Analysis Batch: 142939**

**Client Sample ID: Method Blank**

**Prep Type: TCLP**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
Carbon tetrachloride	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
Chlorobenzene	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
Chloroform	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
1,2-Dichloroethane	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
1,1-Dichloroethene	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
Methyl Ethyl Ketone	<0.050		0.10	0.050	mg/L			03/12/12 10:37	20
Tetrachloroethene	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20
Trichloroethene	0.274		0.020	0.010	mg/L			03/12/12 10:37	20
Vinyl chloride	<0.010		0.020	0.010	mg/L			03/12/12 10:37	20

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

Lab Sample ID: LB 500-142678/1-A LB  
Matrix: Solid  
Analysis Batch: 142939

Client Sample ID: Method Blank  
Prep Type: TCLP

Surrogate	LB LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	87		75 - 131		03/12/12 10:37	20
Toluene-d8 (Surr)	100		80 - 120		03/12/12 10:37	20
4-Bromofluorobenzene (Surr)	98		79 - 120		03/12/12 10:37	20
Dibromofluoromethane	95		74 - 123		03/12/12 10:37	20

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

Lab Sample ID: MB 500-142647/1-A  
Matrix: Solid  
Analysis Batch: 142637

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 142647

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
2,4-Dinitrotoluene	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Hexachlorobenzene	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Hexachloro-1,3-butadiene	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Hexachloroethane	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Phenol	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
2-Methyl-phenol	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
3 & 4 Methylphenol	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Nitrobenzene	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1
Pentachlorophenol	<0.025		0.050	0.025	mg/L		03/08/12 09:35	03/08/12 14:51	1
Pyridine	<0.010		0.020	0.010	mg/L		03/08/12 09:35	03/08/12 14:51	1
2,4,5-Trichlorophenol	<0.025		0.050	0.025	mg/L		03/08/12 09:35	03/08/12 14:51	1
2,4,6-Trichlorophenol	<0.0050		0.010	0.0050	mg/L		03/08/12 09:35	03/08/12 14:51	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	80		48 - 110	03/08/12 09:35	03/08/12 14:51	1
2-Fluorophenol	39		20 - 100	03/08/12 09:35	03/08/12 14:51	1
Nitrobenzene-d5	81		41 - 110	03/08/12 09:35	03/08/12 14:51	1
Phenol-d5	26		20 - 100	03/08/12 09:35	03/08/12 14:51	1
Terphenyl-d14	96		44 - 132	03/08/12 09:35	03/08/12 14:51	1
2,4,6-Tribromophenol	83		50 - 129	03/08/12 09:35	03/08/12 14:51	1

Lab Sample ID: LCS 500-142647/2-A  
Matrix: Solid  
Analysis Batch: 142785

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 142647

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
1,4-Dichlorobenzene	0.0500	0.0397		mg/L		79	34 - 100
2,4-Dinitrotoluene	0.0500	0.0410		mg/L		82	68 - 121
Hexachlorobenzene	0.0500	0.0501		mg/L		100	70 - 119
Hexachloro-1,3-butadiene	0.0500	0.0344		mg/L		69	32 - 110
Hexachloroethane	0.0500	0.0406		mg/L		81	28 - 100
Phenol	0.0500	0.0126		mg/L		25	21 - 100
2-Methyl-phenol	0.0500	0.0296		mg/L		59	47 - 100
3 & 4 Methylphenol	0.0500	0.0288		mg/L		58	43 - 110
Nitrobenzene	0.0500	0.0394		mg/L		79	54 - 110
Pentachlorophenol	0.0500	0.0378	J	mg/L		76	42 - 144

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

**Lab Sample ID: LCS 500-142647/2-A**

**Matrix: Solid**

**Analysis Batch: 142785**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 142647**

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Pyridine	0.0500	0.0232		mg/L		46	10 - 110
2,4,5-Trichlorophenol	0.0500	0.0422	J	mg/L		84	68 - 115
2,4,6-Trichlorophenol	0.0500	0.0405		mg/L		81	64 - 110

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	80		48 - 110
2-Fluorophenol	38		20 - 100
Nitrobenzene-d5	76		41 - 110
Phenol-d5	30		20 - 100
Terphenyl-d14	106		44 - 132
2,4,6-Tribromophenol	100		50 - 129

**Lab Sample ID: LB 500-142577/1-B LB**

**Matrix: Solid**

**Analysis Batch: 142637**

**Client Sample ID: Method Blank**

**Prep Type: TCLP**

**Prep Batch: 142647**

Analyte	LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
2,4-Dinitrotoluene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Hexachlorobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Hexachloro-1,3-butadiene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Hexachloroethane	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Phenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
2-Methyl-phenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
3 & 4 Methylphenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Nitrobenzene	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1
Pentachlorophenol	<0.25		0.50	0.25	mg/L		03/08/12 09:35	03/08/12 16:31	1
Pyridine	<0.10		0.20	0.10	mg/L		03/08/12 09:35	03/08/12 16:31	1
2,4,5-Trichlorophenol	<0.25		0.50	0.25	mg/L		03/08/12 09:35	03/08/12 16:31	1
2,4,6-Trichlorophenol	<0.050		0.10	0.050	mg/L		03/08/12 09:35	03/08/12 16:31	1

Surrogate	LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	80		48 - 110	03/08/12 09:35	03/08/12 16:31	1
2-Fluorophenol	34		20 - 100	03/08/12 09:35	03/08/12 16:31	1
Nitrobenzene-d5	78		41 - 110	03/08/12 09:35	03/08/12 16:31	1
Phenol-d5	20		20 - 100	03/08/12 09:35	03/08/12 16:31	1
Terphenyl-d14	91		44 - 132	03/08/12 09:35	03/08/12 16:31	1
2,4,6-Tribromophenol	72		50 - 129	03/08/12 09:35	03/08/12 16:31	1

**Lab Sample ID: 610-2138-1 MS**

**Matrix: Soil**

**Analysis Batch: 142785**

**Client Sample ID: Trench Cuttings Composite**

**Prep Type: TCLP**

**Prep Batch: 142647**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,4-Dichlorobenzene	<0.050		0.500	0.300		mg/L		60	34 - 100
2,4-Dinitrotoluene	<0.050		0.500	0.396		mg/L		79	68 - 121
Hexachlorobenzene	<0.050		0.500	0.500		mg/L		100	70 - 119
Hexachloro-1,3-butadiene	<0.050		0.500	0.320		mg/L		64	32 - 110
Hexachloroethane	<0.050		0.500	0.309		mg/L		62	28 - 100

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

Lab Sample ID: 610-2138-1 MS

Matrix: Soil

Analysis Batch: 142785

Client Sample ID: Trench Cuttings Composite

Prep Type: TCLP

Prep Batch: 142647

Analyte	Sample	Sample	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Phenol	<0.050		0.500	0.0873	J F	mg/L		17	21 - 100
2-Methyl-phenol	<0.050		0.500	0.218	F	mg/L		44	47 - 100
3 & 4 Methylphenol	<0.050		0.500	0.213		mg/L		43	43 - 110
Nitrobenzene	<0.050		0.500	0.353		mg/L		71	54 - 110
Pentachlorophenol	<0.25		0.500	0.401	J	mg/L		80	42 - 144
Pyridine	<0.10		0.500	0.150	J	mg/L		30	10 - 110
2,4,5-Trichlorophenol	<0.25		0.500	0.400	J	mg/L		80	68 - 115
2,4,6-Trichlorophenol	<0.050		0.500	0.393		mg/L		79	64 - 110

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	74		48 - 110
2-Fluorophenol	21		20 - 100
Nitrobenzene-d5	71		41 - 110
Phenol-d5	21		20 - 100
Terphenyl-d14	96		44 - 132
2,4,6-Tribromophenol	94		50 - 129

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 500-142464/1-A

Matrix: Solid

Analysis Batch: 142539

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 142464

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	<5.9		17	5.9	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1221	<7.3		17	7.3	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1232	<7.3		17	7.3	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1242	<5.5		17	5.5	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1248	<6.6		17	6.6	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1254	<3.6		17	3.6	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
PCB-1260	<8.2		17	8.2	ug/Kg		03/06/12 17:05	03/07/12 12:54	1
Polychlorinated biphenyls, Total	<3.2		17	3.2	ug/Kg		03/06/12 17:05	03/07/12 12:54	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	87		50 - 116	03/06/12 17:05	03/07/12 12:54	1
DCB Decachlorobiphenyl	98		48 - 142	03/06/12 17:05	03/07/12 12:54	1

Lab Sample ID: LCS 500-142464/4-A

Matrix: Solid

Analysis Batch: 142539

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 142464

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
PCB-1016	167	158		ug/Kg		95	59 - 110
PCB-1260	167	155		ug/Kg		93	69 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	88		50 - 116
DCB Decachlorobiphenyl	93		48 - 142

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 500-142464/5-A

Matrix: Solid

Analysis Batch: 142539

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 142464

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
PCB-1016	167	150		ug/Kg		90	59 - 110	5	30	
PCB-1260	167	148		ug/Kg		89	69 - 120	5	30	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	84		50 - 116
DCB Decachlorobiphenyl	88		48 - 142

## Method: 6010B - Metals (ICP)

Lab Sample ID: LCS 500-142649/2-A

Matrix: Solid

Analysis Batch: 142741

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 142649

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	RPD
Arsenic	0.100	0.0917		mg/L		92	80 - 120	
Barium	0.500	0.497	J	mg/L		99	80 - 120	
Cadmium	0.0500	0.0480		mg/L		96	80 - 120	
Chromium	0.200	0.198		mg/L		99	80 - 120	
Copper	0.250	0.248		mg/L		99	80 - 120	
Lead	0.100	0.0979		mg/L		98	80 - 120	
Nickel	0.500	0.488		mg/L		98	80 - 120	
Selenium	0.100	0.0862		mg/L		86	80 - 120	
Silver	0.0500	0.0474		mg/L		95	80 - 120	
Zinc	0.500	0.478		mg/L		96	80 - 120	

Lab Sample ID: LB 500-142577/1-C LB

Matrix: Solid

Analysis Batch: 142741

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 142649

Analyte	LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.010		0.050	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Barium	<0.010		0.50	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Cadmium	<0.0020		0.0050	0.0020	mg/L		03/08/12 08:00	03/08/12 17:34	1
Chromium	<0.010		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Copper	<0.010		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Lead	<0.0050		0.050	0.0050	mg/L		03/08/12 08:00	03/08/12 17:34	1
Nickel	<0.010		0.025	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Selenium	<0.010		0.050	0.010	mg/L		03/08/12 08:00	03/08/12 17:34	1
Silver	<0.0050		0.025	0.0050	mg/L		03/08/12 08:00	03/08/12 17:34	1
Zinc	<0.020		0.10	0.020	mg/L		03/08/12 08:00	03/08/12 17:34	1

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 500-142656/7-A

Matrix: Solid

Analysis Batch: 142799

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 142656

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000020		0.00020	0.000020	mg/L		03/08/12 10:45	03/09/12 09:36	1



# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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

**Lab Sample ID:** LCS 500-142656/8-A  
**Matrix:** Solid  
**Analysis Batch:** 142799

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 142656

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00208		mg/L		104	80 - 120

**Lab Sample ID:** LB 500-142577/1-D LB  
**Matrix:** Solid  
**Analysis Batch:** 142799

**Client Sample ID:** Method Blank  
**Prep Type:** TCLP  
**Prep Batch:** 142656

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000020		0.00020	0.000020	mg/L		03/08/12 10:45	03/09/12 10:16	1

## Method: 9014 - Cyanide

**Lab Sample ID:** MB 500-142480/14-A  
**Matrix:** Solid  
**Analysis Batch:** 142611

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 142480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.130	J	0.50	0.056	mg/Kg		03/06/12 23:13	03/07/12 21:22	1

**Lab Sample ID:** LCS 500-142480/15-A  
**Matrix:** Solid  
**Analysis Batch:** 142611

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 142480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	5.00	4.93		mg/Kg		99	80 - 120

**Lab Sample ID:** 610-2138-1 MS  
**Matrix:** Soil  
**Analysis Batch:** 142611

**Client Sample ID:** Trench Cuttings Composite  
**Prep Type:** Total/NA  
**Prep Batch:** 142480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.16	J B	1.42	1.64		mg/Kg		104	75 - 125

**Lab Sample ID:** 610-2138-1 MSD  
**Matrix:** Soil  
**Analysis Batch:** 142611

**Client Sample ID:** Trench Cuttings Composite  
**Prep Type:** Total/NA  
**Prep Batch:** 142480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.16	J B	1.34	1.46		mg/Kg		97	75 - 125	12	20

## Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

**Lab Sample ID:** MB 500-142802/1-A  
**Matrix:** Solid  
**Analysis Batch:** 143014

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 142802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<9.7		25	9.7	mg/Kg		03/09/12 13:00	03/12/12 14:40	1

# QC Sample Results

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 500-142802/2-A  
 Matrix: Solid  
 Analysis Batch: 143014

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 142802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Sulfide	203	170		mg/Kg		84	80 - 120

## Method: 9045D - pH

Lab Sample ID: 610-2138-1 DU  
 Matrix: Soil  
 Analysis Batch: 1960

Client Sample ID: Trench Cuttings Composite  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.49		7.760		SU		4	10

# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## GC/MS VOA

### Leach Batch: 142678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	1311	
LB 500-142678/1-A LB	Method Blank	TCLP	Solid	1311	

### Analysis Batch: 142770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	8260B	
LCS 500-142770/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 500-142770/4	Method Blank	Total/NA	Solid	8260B	

### Analysis Batch: 142939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 500-142678/1-A LB	Method Blank	TCLP	Solid	8260B	
LCS 500-142939/5	Lab Control Sample	Total/NA	Solid	8260B	
MB 500-142939/4	Method Blank	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Leach Batch: 142577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	1311	
610-2138-1 MS	Trench Cuttings Composite	TCLP	Soil	1311	
LB 500-142577/1-B LB	Method Blank	TCLP	Solid	1311	

### Analysis Batch: 142637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	8270C	142647
LB 500-142577/1-B LB	Method Blank	TCLP	Solid	8270C	142647
MB 500-142647/1-A	Method Blank	Total/NA	Solid	8270C	142647

### Prep Batch: 142647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	3510C	142577
610-2138-1 MS	Trench Cuttings Composite	TCLP	Soil	3510C	142577
LB 500-142577/1-B LB	Method Blank	TCLP	Solid	3510C	142577
LCS 500-142647/2-A	Lab Control Sample	Total/NA	Solid	3510C	
MB 500-142647/1-A	Method Blank	Total/NA	Solid	3510C	

### Analysis Batch: 142785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1 MS	Trench Cuttings Composite	TCLP	Soil	8270C	142647
LCS 500-142647/2-A	Lab Control Sample	Total/NA	Solid	8270C	142647

## GC Semi VOA

### Prep Batch: 142464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	3541	
LCS 500-142464/4-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 500-142464/5-A	Lab Control Sample Dup	Total/NA	Solid	3541	
MB 500-142464/1-A	Method Blank	Total/NA	Solid	3541	

# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## GC Semi VOA (Continued)

### Analysis Batch: 142539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	8082	142464
LCS 500-142464/4-A	Lab Control Sample	Total/NA	Solid	8082	142464
LCSD 500-142464/5-A	Lab Control Sample Dup	Total/NA	Solid	8082	142464
MB 500-142464/1-A	Method Blank	Total/NA	Solid	8082	142464

## Metals

### Leach Batch: 142577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	1311	
LB 500-142577/1-C LB	Method Blank	TCLP	Solid	1311	
LB 500-142577/1-D LB	Method Blank	TCLP	Solid	1311	

### Prep Batch: 142649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	3010A	142577
LB 500-142577/1-C LB	Method Blank	TCLP	Solid	3010A	142577
LCS 500-142649/2-A	Lab Control Sample	Total/NA	Solid	3010A	

### Prep Batch: 142656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	7470A	142577
LB 500-142577/1-D LB	Method Blank	TCLP	Solid	7470A	142577
LCS 500-142656/8-A	Lab Control Sample	Total/NA	Solid	7470A	
MB 500-142656/7-A	Method Blank	Total/NA	Solid	7470A	

### Analysis Batch: 142741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	6010B	142649
LB 500-142577/1-C LB	Method Blank	TCLP	Solid	6010B	142649
LCS 500-142649/2-A	Lab Control Sample	Total/NA	Solid	6010B	142649

### Analysis Batch: 142799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	TCLP	Soil	7470A	142656
LB 500-142577/1-D LB	Method Blank	TCLP	Solid	7470A	142656
LCS 500-142656/8-A	Lab Control Sample	Total/NA	Solid	7470A	142656
MB 500-142656/7-A	Method Blank	Total/NA	Solid	7470A	142656

## General Chemistry

### Analysis Batch: 1898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	Moisture	

### Analysis Batch: 1920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9095B	

### Analysis Batch: 1921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	SM 2710F	

# QC Association Summary

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

## General Chemistry (Continued)

### Analysis Batch: 1960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9045D	
610-2138-1 DU	Trench Cuttings Composite	Total/NA	Soil	9045D	

### Prep Batch: 142480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9010B	
610-2138-1 MS	Trench Cuttings Composite	Total/NA	Soil	9010B	
610-2138-1 MSD	Trench Cuttings Composite	Total/NA	Soil	9010B	
LCS 500-142480/15-A	Lab Control Sample	Total/NA	Solid	9010B	
MB 500-142480/14-A	Method Blank	Total/NA	Solid	9010B	

### Analysis Batch: 142611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9014	142480
610-2138-1 MS	Trench Cuttings Composite	Total/NA	Soil	9014	142480
610-2138-1 MSD	Trench Cuttings Composite	Total/NA	Soil	9014	142480
LCS 500-142480/15-A	Lab Control Sample	Total/NA	Solid	9014	142480
MB 500-142480/14-A	Method Blank	Total/NA	Solid	9014	142480

### Analysis Batch: 142645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	1010	

### Prep Batch: 142802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9030B	
LCS 500-142802/2-A	Lab Control Sample	Total/NA	Solid	9030B	
MB 500-142802/1-A	Method Blank	Total/NA	Solid	9030B	

### Analysis Batch: 143014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
610-2138-1	Trench Cuttings Composite	Total/NA	Soil	9034	142802
LCS 500-142802/2-A	Lab Control Sample	Total/NA	Solid	9034	142802
MB 500-142802/1-A	Method Blank	Total/NA	Solid	9034	142802

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
 Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

**Client Sample ID: Trench Cuttings Composite**

**Lab Sample ID: 610-2138-1**

**Date Collected: 03/03/12 11:00**

**Matrix: Soil**

**Date Received: 03/05/12 14:37**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			142678	03/08/12 13:40	MBG	TAL CHI
TCLP	Analysis	8260B		20	142770	03/09/12 20:20	BDA	TAL CHI
TCLP	Leach	1311			142577	03/07/12 14:06	JR	TAL CHI
TCLP	Prep	3510C			142647	03/08/12 09:35	JD	TAL CHI
TCLP	Analysis	8270C		1	142637	03/08/12 16:11	DA	TAL CHI
Total/NA	Prep	3541			142464	03/06/12 17:05	DEA	TAL CHI
Total/NA	Analysis	8082		1000	142539	03/07/12 18:00	PG	TAL CHI
TCLP	Leach	1311			142577	03/07/12 14:06	JR	TAL CHI
TCLP	Prep	3010A			142649	03/08/12 08:00	LAH	TAL CHI
TCLP	Analysis	6010B		1	142741	03/08/12 17:55	TDS	TAL CHI
TCLP	Prep	7470A			142656	03/08/12 10:45	JR	TAL CHI
TCLP	Analysis	7470A		1	142799	03/09/12 10:17	JR	TAL CHI
Total/NA	Prep	9010B			142480	03/06/12 23:13	TAB	TAL CHI
Total/NA	Analysis	9014		1	142611		TAB	TAL CHI
						(Start) 03/07/12 21:25		
						(End) 03/07/12 21:26		
Total/NA	Analysis	1010		1	142645		APW	TAL CHI
						(Start) 03/07/12 12:00		
						(End) 03/07/12 13:00		
Total/NA	Prep	9030B			142802	03/09/12 13:00	CLM	TAL CHI
Total/NA	Analysis	9034		1	143014	03/12/12 14:41	CLM	TAL CHI
Total/NA	Analysis	Moisture		1	1898	03/05/12 14:59	MM	TAL WAT
Total/NA	Analysis	9095B		1	1920	03/07/12 09:03	MM	TAL WAT
Total/NA	Analysis	SM 2710F		1	1921	03/07/12 09:06	MM	TAL WAT
Total/NA	Analysis	9045D		1	1960	03/09/12 08:31	MP	TAL WAT

**Laboratory References:**

SFAL = SF Analytical Laboratories, 2345 South 170th Street, New Berlin, WI 53151

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL WAT = TestAmerica Watertown, 1101 Industrial Drive, Suites 9 & 10, Watertown, WI 53094, TEL (920)261-1660

## Certification Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 610-2138-1

Project/Site: Madison Kipp Site W1001283.0002.00001

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Watertown	Illinois	NELAC	5	100453
TestAmerica Watertown	WI Dept. of Agriculture	State Program	5	105-266
TestAmerica Watertown	Wisconsin	State Program	5	128053530
TestAmerica Chicago	Alabama	State Program	4	40461
TestAmerica Chicago	California	NELAC	9	01132CA
TestAmerica Chicago	Florida	NELAC	4	E871072
TestAmerica Chicago	Georgia	State Program	4	939
TestAmerica Chicago	Georgia	State Program	4	N/A
TestAmerica Chicago	Hawaii	State Program	9	N/A
TestAmerica Chicago	Illinois	NELAC	5	100201
TestAmerica Chicago	Indiana	State Program	5	C-IL-02
TestAmerica Chicago	Iowa	State Program	7	82
TestAmerica Chicago	Kansas	NELAC	7	E-10161
TestAmerica Chicago	Kentucky	State Program	4	90023
TestAmerica Chicago	Kentucky (UST)	State Program	4	66
TestAmerica Chicago	L-A-B	DoD ELAP		L2304
TestAmerica Chicago	L-A-B	ISO/IEC 17025		L2304
TestAmerica Chicago	Louisiana	NELAC	6	30720
TestAmerica Chicago	Massachusetts	State Program	1	M-IL035
TestAmerica Chicago	Mississippi	State Program	4	N/A
TestAmerica Chicago	North Carolina DENR	State Program	4	291
TestAmerica Chicago	Oklahoma	State Program	6	8908
TestAmerica Chicago	South Carolina	State Program	4	77001
TestAmerica Chicago	Texas	NELAC	6	T104704252-09-TX
TestAmerica Chicago	USDA	Federal		P330-12-00038
TestAmerica Chicago	Virginia	NELAC Secondary AB	3	460142
TestAmerica Chicago	Wisconsin	State Program	5	999580010
TestAmerica Chicago	Wyoming	State Program	8	8TMS-Q

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

# Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CHI
6010B	Metals (ICP)	SW846	TAL CHI
7470A	Mercury (CVAA)	SW846	TAL CHI
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW846	TAL CHI
9014	Cyanide	SW846	TAL CHI
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL CHI
9045D	pH	SW846	TAL WAT
9095B	Paint Filter	SW846	TAL WAT
Moisture	Percent Moisture	EPA	TAL WAT
SM 2710F	Specific Gravity, Density	SM	TAL WAT
Chlorine Parr Bomb	Chlorine titration curve	NONE	SFAL

#### Protocol References:

EPA = US Environmental Protection Agency

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:

SFAL = SF Analytical Laboratories, 2345 South 170th Street, New Berlin, WI 53151

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL WAT = TestAmerica Watertown, 1101 Industrial Drive, Suites 9 & 10, Watertown, WI 53094, TEL (920)261-1660



# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: Madison Kipp Site W1001283.0002.00001

TestAmerica Job ID: 610-2138-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
610-2138-1	Trench Cuttings Composite	Soil	03/03/12 11:00	03/05/12 14:37

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- 1
- 2
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**TestAmerica Laboratories, Inc.**  
 Attention: Sandie Fredrick  
 1101 Industrial Drive Suites 9 & 10  
 Watertown, WI 53094

**Date Received:** 03/06/2012  
**Date Reported:** 03/13/12 08:57  
**Client Project:** Soil/Waste  
**Client Project ID:** 61000687  
**PO#** 664163  
**Project #:** 61000687

**Certificate of Analysis**

All quality control samples and checks were within acceptance limits unless otherwise indicated. Test results pertain only to those items tested. All samples were in good condition when received by the laboratory unless otherwise noted. All LOD/LOQs are adjusted to reflect dilutions.

DNR #	Analyte	Result Wet Wt.	LOD Wet Wt.	Result Dry Wt.	LOD Dry Wt.	Units	Dilution Factor	Date Prepared	Date Analyzed	Method	Notes
<b>SVC0212-01</b>	<b>Trench Cuttings Compoiste (610-2138-1)</b>					<b>Date Sampled: 03/03/2012</b>					
	<b>Preparation: SW-846 5050</b>					<b>Prepared By: HTM</b>					
	Chlorine as Cl	0.044	0.019	0.052	0.023	% Wt.	5	3/8/12	03/13/12	D808	
	Solids		83.51			% Wt.		3/9/12	03/12/12	SM2540G 20th Ed.	

This report was prepared and printed by:

Page 1 of 1

Heather Martel for Gary Geipel, SIA Department Manager

SF Analytical Laboratories • 2345 South 170th Street • New Berlin, WI 53151  
 Phone: (262) 754-5300 • Toll Free: (800) 300-6700 • Fax: (262) 754-5310 • sflabs.com



Wisconsin Dept. of Trade and Consumer Protection Certified #168 • Dept. of Natural Resources State Certified Laboratory #241249360  
 FDA Registered Laboratory #2134640 • USDA Soil Permit #S-76521





# CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#: **610-2138**

Lab Work Order #

Page 1 of 1

Contact & Company Name: <b>MARIJA SEPAPAN@ARCADIS</b> Address: <b>126 N. JEFFERSON ST. #400</b> City State Zip <b>MILWAUKEE WI 53202</b> Project Name/Location (City, State): <b>MADISON - WAPP / MADISON, WI</b> Sample's Printed Name: <b>MARIJA SEPAPAN</b>	Telephone: <b>414-276-7742</b> Fax: <b>414-276-7603</b> E-mail Address: <b>marija.sepapan@arcadis-us.com</b> Project #: <b>WI001263.0002-00001</b> Sampler's Signature: 	Preservative Filtered (✓) <b>NO</b> # of Containers <b>3</b> Container Information <b>7, 2</b> PARAMETER ANALYSIS & METHOD <b>FRONTLOADER</b> <b>3002 of 3000</b>	Matrix <b>SOIL</b> Type (✓) <b>Comp</b> Date <b>3/5/12</b> Time <b>1100</b>
<b>01 TRENCH CUTTINGS</b>			
REMARKS <b>15 POINT COMPOSITE</b> <b>5-DAY TAT</b>			

Special Instructions/Comments:

Special QA/QC Instructions(✓):

330C

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name: <b>TEST AMERICA</b>	Cooler Custody Seal (✓) <input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Printed Name: <b>TONI SCHUEN</b>	Signature: 	Printed Name: <b>ADAM SPARK</b>	Signature: 	Printed Name: <b>ADAM SPARK</b>	Signature: 	Printed Name: <b>D. HERRITZ</b>	Signature: 
Sample Receipt: <b>5 DAY TAT</b>	Condition/Cooler Temp: _____	Firm: <b>ARCADIS</b>	Date/Time: <b>3/5/12 0810</b>	Firm/Counter: <b>JA</b>	Date/Time: <b>3/5/12 1118</b>	Firm/Counter: <b>JA</b>	Date/Time: <b>3/5/12 1300</b>	Firm: <b>TA</b>	Date/Time: <b>3-5-12 1437</b>

Distribution: WHITE - Laboratory returns with results  
YELLOW - Lab copy  
PINK - Retained by ARCADIS



## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 610-2138-1

**Login Number: 2138**

**List Source: TestAmerica Watertown**

**List Number: 1**

**Creator: Herritz, Danica**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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	3.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 610-2138-1

Login Number: 2138

List Number: 1

Creator: Kelsey, Shawn M

List Source: TestAmerica Chicago

List Creation: 03/06/12 11:43 AM

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