

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-77554-1
Client Project/Site: MadisonKipp - PCB

For:
ARCADIS U.S., Inc.
126 North Jefferson Street
Suite 400
Milwaukee, Wisconsin 53202

Attn: Ms. Jennine Trask



Authorized for release by:
5/30/2014 1:29:29 PM

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

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

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

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Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Job ID: 500-77554-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-77554-1

Comments

No additional comments.

Receipt

The samples were received on 5/23/2014 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC Semi VOA

Method(s) 8082: The following samples were diluted to bring the concentration of target analytes within the calibration range: DUP (500-77554-3), RG 34 (500-77554-2), RG 34 (500-77554-2 MS), RG 34 (500-77554-2 MSD), RG 35 (500-77554-1). Elevated reporting limits (RLs) are provided.

Method(s) 8082: The following sample required a dilution due to the nature of the sample matrix: RG 35 (500-77554-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

Metals

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

Organic Prep

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

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Client Sample ID: RG 35

Lab Sample ID: 500-77554-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	600000		61000	24000	ug/Kg	2500	☼	8082	Total/NA
PCB-1254	420000		61000	13000	ug/Kg	2500	☼	8082	Total/NA

Client Sample ID: RG 34

Lab Sample ID: 500-77554-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	850		110	41	ug/Kg	5	☼	8082	Total/NA
PCB-1254	440		110	23	ug/Kg	5	☼	8082	Total/NA

Client Sample ID: DUP

Lab Sample ID: 500-77554-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	600		100	40	ug/Kg	5	☼	8082	Total/NA
PCB-1254	460		100	22	ug/Kg	5	☼	8082	Total/NA

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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



Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-77554-1	RG 35	Solid	05/22/14 13:30	05/23/14 10:10
500-77554-2	RG 34	Solid	05/22/14 11:00	05/23/14 10:10
500-77554-3	DUP	Solid	05/22/14 11:00	05/23/14 10:10

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Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Client Sample ID: RG 35

Lab Sample ID: 500-77554-1

Date Collected: 05/22/14 13:30

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 68.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<21000		61000	21000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1221	<27000		61000	27000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1232	<26000		61000	26000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1242	<20000		61000	20000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1248	600000		61000	24000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1254	420000		61000	13000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
PCB-1260	<30000		61000	30000	ug/Kg	☼	05/28/14 19:11	05/29/14 12:17	2500
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D	50 - 116				05/28/14 19:11	05/29/14 12:17	2500
DCB Decachlorobiphenyl	0	D	48 - 142				05/28/14 19:11	05/29/14 12:17	2500

Client Sample ID: RG 34

Lab Sample ID: 500-77554-2

Date Collected: 05/22/14 11:00

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<37		110	37	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1221	<46		110	46	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1232	<46		110	46	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1242	<35		110	35	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1248	850		110	41	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1254	440		110	23	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
PCB-1260	<52		110	52	ug/Kg	☼	05/28/14 19:11	05/29/14 11:22	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		50 - 116				05/28/14 19:11	05/29/14 11:22	5
DCB Decachlorobiphenyl	111		48 - 142				05/28/14 19:11	05/29/14 11:22	5

Client Sample ID: DUP

Lab Sample ID: 500-77554-3

Date Collected: 05/22/14 11:00

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<36		100	36	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1221	<45		100	45	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1232	<44		100	44	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1242	<33		100	33	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1248	600		100	40	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1254	460		100	22	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
PCB-1260	<50		100	50	ug/Kg	☼	05/28/14 19:11	05/29/14 12:03	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		50 - 116				05/28/14 19:11	05/29/14 12:03	5
DCB Decachlorobiphenyl	100		48 - 142				05/28/14 19:11	05/29/14 12:03	5

TestAmerica Chicago

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Qualifiers

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.
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, 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)

QC Association Summary

Client: ARCADIS U.S., Inc.
 Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

GC Semi VOA

Prep Batch: 238398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-77554-1	RG 35	Total/NA	Solid	3541	
500-77554-2	RG 34	Total/NA	Solid	3541	
500-77554-2 MS	RG 34	Total/NA	Solid	3541	
500-77554-2 MSD	RG 34	Total/NA	Solid	3541	
500-77554-3	DUP	Total/NA	Solid	3541	
LCS 500-238398/3-A	Lab Control Sample	Total/NA	Solid	3541	
MB 500-238398/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 238436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-77554-1	RG 35	Total/NA	Solid	8082	238398
500-77554-2	RG 34	Total/NA	Solid	8082	238398
500-77554-2 MS	RG 34	Total/NA	Solid	8082	238398
500-77554-2 MSD	RG 34	Total/NA	Solid	8082	238398
500-77554-3	DUP	Total/NA	Solid	8082	238398
LCS 500-238398/3-A	Lab Control Sample	Total/NA	Solid	8082	238398
MB 500-238398/1-A	Method Blank	Total/NA	Solid	8082	238398

General Chemistry

Analysis Batch: 237795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-77554-1	RG 35	Total/NA	Solid	Moisture	
500-77554-2	RG 34	Total/NA	Solid	Moisture	
500-77554-2 DU	RG 34	Total/NA	Solid	Moisture	
500-77554-2 MS	RG 34	Total/NA	Solid	Moisture	
500-77554-2 MSD	RG 34	Total/NA	Solid	Moisture	
500-77554-3	DUP	Total/NA	Solid	Moisture	

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (50-116)	DCB1 (48-142)
500-77554-1	RG 35	0 D	0 D
500-77554-2	RG 34	88	111
500-77554-2 MS	RG 34	92	108
500-77554-2 MSD	RG 34	103	116
500-77554-3	DUP	86	100
LCS 500-238398/3-A	Lab Control Sample	88	99
MB 500-238398/1-A	Method Blank	79	89

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

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

Lab Sample ID: MB 500-238398/1-A

Matrix: Solid

Analysis Batch: 238436

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 238398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<5.9		17	5.9	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1221	<7.3		17	7.3	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1232	<7.3		17	7.3	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1242	<5.5		17	5.5	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1248	<6.6		17	6.6	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1254	<3.6		17	3.6	ug/Kg		05/28/14 19:11	05/29/14 08:11	1
PCB-1260	<8.2		17	8.2	ug/Kg		05/28/14 19:11	05/29/14 08:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		50 - 116	05/28/14 19:11	05/29/14 08:11	1
DCB Decachlorobiphenyl	89		48 - 142	05/28/14 19:11	05/29/14 08:11	1

Lab Sample ID: LCS 500-238398/3-A

Matrix: Solid

Analysis Batch: 238436

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 238398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	167	147		ug/Kg		88	59 - 110
PCB-1260	167	155		ug/Kg		93	69 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	88		50 - 116
DCB Decachlorobiphenyl	99		48 - 142

Lab Sample ID: 500-77554-2 MS

Matrix: Solid

Analysis Batch: 238436

Client Sample ID: RG 34

Prep Type: Total/NA

Prep Batch: 238398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	<37		211	651	F1	ug/Kg	☼	309	59 - 110
PCB-1260	<52		211	506	F1	ug/Kg	☼	240	69 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	92		50 - 116
DCB Decachlorobiphenyl	108		48 - 142

Lab Sample ID: 500-77554-2 MSD

Matrix: Solid

Analysis Batch: 238436

Client Sample ID: RG 34

Prep Type: Total/NA

Prep Batch: 238398

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
PCB-1016	<37		210	735	F1	ug/Kg	☼	350	59 - 110	12	30
PCB-1260	<52		210	507	F1	ug/Kg	☼	242	69 - 120	0	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	103		50 - 116
DCB Decachlorobiphenyl	116		48 - 142

TestAmerica Chicago

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Client Sample ID: RG 35

Lab Sample ID: 500-77554-1

Date Collected: 05/22/14 13:30

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 68.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			238398	05/28/14 19:11	DEA	TAL CHI
Total/NA	Analysis	8082		2500	238436	05/29/14 12:17	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	237795	05/23/14 17:04	PFK	TAL CHI

Client Sample ID: RG 34

Lab Sample ID: 500-77554-2

Date Collected: 05/22/14 11:00

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			238398	05/28/14 19:11	DEA	TAL CHI
Total/NA	Analysis	8082		5	238436	05/29/14 11:22	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	237795	05/23/14 17:04	PFK	TAL CHI

Client Sample ID: DUP

Lab Sample ID: 500-77554-3

Date Collected: 05/22/14 11:00

Matrix: Solid

Date Received: 05/23/14 10:10

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			238398	05/28/14 19:11	DEA	TAL CHI
Total/NA	Analysis	8082		5	238436	05/29/14 12:03	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	237795	05/23/14 17:04	PFK	TAL CHI

Laboratory References:

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

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp - PCB

TestAmerica Job ID: 500-77554-1

Laboratory: TestAmerica Chicago

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	999580010	08-31-14

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

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

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Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-77554-1

Login Number: 77554

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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	3.8
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 containers received 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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

