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: 500-76542-1
Client Project/Site: MadisonKipp WI001368.0017.00001

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

Attn: Ms. Jennine Trask

Sandie Fredrick

Authorized for release by:
5/16/2014 12:46:33 PM

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Job ID: 500-76542-1

Laboratory: TestAmerica Chicago

Narrative

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Comments
Sample results for 1 and 10 confirmed via re-analysis for PCB.

Receipt
The samples were received on 5/8/2014 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9º C.

GC Semi VOA
Method(s) 8082: The following samples were diluted to bring the concentration of target analytes within the calibration range: Dup-02 (500-76542-10), RG-25 (500-76542-1), RG-26 (500-76542-2), RG-26 (500-76542-2 MS), RG-26 (500-76542-2 MSD), RG-28 (500-76542-4), RG-30 (500-76542-6), RG-31 (500-76542-7), RG-32 (500-76542-8). Elevated reporting limits (RLs) are provided.

Method(s) 8082: Surrogate recovery for the following samples was outside control limits: RG-26 (500-76542-2), RG-30 (500-76542-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082: The following sample(s) required a dilution due to the nature of the sample matrix: Dup-02 (500-76542-10), RG-25 (500-76542-1), RG-32 (500-76542-8). Because of this dilution, the surrogate spike concentrations in the samples were reduced to a level where the recovery calculation does not provide useful information.

No other analytical or quality issues were noted.

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 WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Client Sample ID: RG-25 — Lab Sample ID: 500-76542-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	420000		47000	18000	ug/Kg	2000	☼	8082	Total/NA
PCB-1254	130000		47000	10000	ug/Kg	2000	☼	8082	Total/NA

Client Sample ID: RG-26 — Lab Sample ID: 500-76542-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	650		110	42	ug/Kg	5	☼	8082	Total/NA
PCB-1254	890		110	23	ug/Kg	5	☼	8082	Total/NA

Client Sample ID: RG-27 — Lab Sample ID: 500-76542-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	180		22	8.5	ug/Kg	1	☼	8082	Total/NA
PCB-1254	380		22	4.7	ug/Kg	1	☼	8082	Total/NA

Client Sample ID: RG-28 — Lab Sample ID: 500-76542-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	560		110	45	ug/Kg	5	☼	8082	Total/NA
PCB-1254	780		110	24	ug/Kg	5	☼	8082	Total/NA

Client Sample ID: RG-29 — Lab Sample ID: 500-76542-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	110		21	8.3	ug/Kg	1	☼	8082	Total/NA
PCB-1254	110		21	4.5	ug/Kg	1	☼	8082	Total/NA

Client Sample ID: RG-30 — Lab Sample ID: 500-76542-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1700		240	94	ug/Kg	10	☼	8082	Total/NA
PCB-1254	1000		240	52	ug/Kg	10	☼	8082	Total/NA

Client Sample ID: RG-31 — Lab Sample ID: 500-76542-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	820		120	46	ug/Kg	5	☼	8082	Total/NA
PCB-1254	620		120	25	ug/Kg	5	☼	8082	Total/NA

Client Sample ID: RG-32 — Lab Sample ID: 500-76542-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	11000		1200	250	ug/Kg	50	☼	8082	Total/NA

Client Sample ID: RG-33 — Lab Sample ID: 500-76542-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	16	J	19	4.2	ug/Kg	1	☼	8082	Total/NA

Client Sample ID: Dup-02 — Lab Sample ID: 500-76542-10

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Client Sample ID: Dup-02 (Continued)

Lab Sample ID: 500-76542-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	27000		2100	830	ug/Kg	100	☼	8082	Total/NA
PCB-1254	16000		2100	460	ug/Kg	100	☼	8082	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

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 WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-76542-1	RG-25	Solid	05/06/14 11:00	05/08/14 10:10
500-76542-2	RG-26	Solid	05/06/14 11:10	05/08/14 10:10
500-76542-3	RG-27	Solid	05/06/14 13:10	05/08/14 10:10
500-76542-4	RG-28	Solid	05/06/14 13:15	05/08/14 10:10
500-76542-5	RG-29	Solid	05/06/14 13:20	05/08/14 10:10
500-76542-6	RG-30	Solid	05/06/14 13:25	05/08/14 10:10
500-76542-7	RG-31	Solid	05/06/14 14:25	05/08/14 10:10
500-76542-8	RG-32	Solid	05/06/14 14:30	05/08/14 10:10
500-76542-9	RG-33	Solid	05/06/14 14:35	05/08/14 10:10
500-76542-10	Dup-02	Solid	05/06/14 00:00	05/08/14 10:10

Client Sample ID: RG-25

Lab Sample ID: 500-76542-1

Date Collected: 05/06/14 11:00
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 69.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<17000		47000	17000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1221	<21000		47000	21000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1232	<20000		47000	20000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1242	<15000		47000	15000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1248	**420000**		47000	18000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1254	**130000**		47000	10000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000
PCB-1260	<23000		47000	23000	ug/Kg	☼	05/12/14 07:00	05/14/14 16:09	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*0*	*D*	*50 - 116*	*05/12/14 07:00*	*05/14/14 16:09*	*2000*
DCB Decachlorobiphenyl	*0*	*D*	*48 - 142*	*05/12/14 07:00*	*05/14/14 16:09*	*2000*

Client Sample ID: RG-26

Lab Sample ID: 500-76542-2

Date Collected: 05/06/14 11:10
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 75.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<38		110	38	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1221	<47		110	47	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1232	<46		110	46	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1242	<35		110	35	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1248	**650**		110	42	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1254	**890**		110	23	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5
PCB-1260	<52		110	52	ug/Kg	☼	05/14/14 07:27	05/15/14 09:36	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*126*	*X*	*50 - 116*	*05/14/14 07:27*	*05/15/14 09:36*	*5*
DCB Decachlorobiphenyl	*118*		*48 - 142*	*05/14/14 07:27*	*05/15/14 09:36*	*5*

Client Sample ID: RG-27

Lab Sample ID: 500-76542-3

Date Collected: 05/06/14 13:10
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 76.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<7.6		22	7.6	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1221	<9.5		22	9.5	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1232	<9.4		22	9.4	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1242	<7.1		22	7.1	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1248	**180**		22	8.5	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1254	**380**		22	4.7	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1
PCB-1260	<11		22	11	ug/Kg	☼	05/12/14 07:00	05/13/14 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*50 - 116*	*05/12/14 07:00*	*05/13/14 19:29*	*1*
DCB Decachlorobiphenyl	*94*		*48 - 142*	*05/12/14 07:00*	*05/13/14 19:29*	*1*

Client Sample ID: RG-28

Lab Sample ID: 500-76542-4

Date Collected: 05/06/14 13:15
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 72.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<40		110	40	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1221	<50		110	50	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1232	<49		110	49	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1242	<37		110	37	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1248	**560**		110	45	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1254	**780**		110	24	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5
PCB-1260	<55		110	55	ug/Kg	☼	05/12/14 07:00	05/14/14 15:01	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*99*		*50 - 116*	*05/12/14 07:00*	*05/14/14 15:01*	*5*
DCB Decachlorobiphenyl	*114*		*48 - 142*	*05/12/14 07:00*	*05/14/14 15:01*	*5*

Client Sample ID: RG-29

Lab Sample ID: 500-76542-5

Date Collected: 05/06/14 13:20
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 76.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<7.4		21	7.4	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1221	<9.2		21	9.2	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1232	<9.1		21	9.1	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1242	<6.9		21	6.9	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1248	**110**		21	8.3	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1254	**110**		21	4.5	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1
PCB-1260	<10		21	10	ug/Kg	☼	05/12/14 07:00	05/13/14 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*50 - 116*	*05/12/14 07:00*	*05/13/14 20:10*	*1*
DCB Decachlorobiphenyl	*99*		*48 - 142*	*05/12/14 07:00*	*05/13/14 20:10*	*1*

Client Sample ID: RG-30

Lab Sample ID: 500-76542-6

Date Collected: 05/06/14 13:25
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 67.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<85		240	85	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1221	<110		240	110	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1232	<100		240	100	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1242	<79		240	79	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1248	**1700**		240	94	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1254	**1000**		240	52	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10
PCB-1260	<120		240	120	ug/Kg	☼	05/12/14 07:00	05/14/14 15:14	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*120*	*X*	*50 - 116*	*05/12/14 07:00*	*05/14/14 15:14*	*10*
DCB Decachlorobiphenyl	*153*	*X*	*48 - 142*	*05/12/14 07:00*	*05/14/14 15:14*	*10*

Client Sample ID: RG-31

Lab Sample ID: 500-76542-7

Date Collected: 05/06/14 14:25
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 66.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<41		120	41	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1221	<52		120	52	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1232	<51		120	51	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1242	<39		120	39	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1248	**820**		120	46	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1254	**620**		120	25	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5
PCB-1260	<58		120	58	ug/Kg	☼	05/12/14 07:00	05/14/14 15:28	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*109*		*50 - 116*	*05/12/14 07:00*	*05/14/14 15:28*	*5*
DCB Decachlorobiphenyl	*136*		*48 - 142*	*05/12/14 07:00*	*05/14/14 15:28*	*5*

Client Sample ID: RG-32

Lab Sample ID: 500-76542-8

Date Collected: 05/06/14 14:30
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 70.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<410		1200	410	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1221	<510		1200	510	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1232	<500		1200	500	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1242	<380		1200	380	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1248	<450		1200	450	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1254	**11000**		1200	250	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50
PCB-1260	<570		1200	570	ug/Kg	☼	05/12/14 07:00	05/14/14 15:42	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*0*	*D*	*50 - 116*	*05/12/14 07:00*	*05/14/14 15:42*	*50*
DCB Decachlorobiphenyl	*0*	*D*	*48 - 142*	*05/12/14 07:00*	*05/14/14 15:42*	*50*

Client Sample ID: RG-33

Lab Sample ID: 500-76542-9

Date Collected: 05/06/14 14:35
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<6.8		19	6.8	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1221	<8.5		19	8.5	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1232	<8.4		19	8.4	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1242	<6.3		19	6.3	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1248	<7.6		19	7.6	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1254	**16**	**J**	19	4.2	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1
PCB-1260	<9.5		19	9.5	ug/Kg	☼	05/12/14 07:00	05/13/14 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*50 - 116*	*05/12/14 07:00*	*05/13/14 21:05*	*1*
DCB Decachlorobiphenyl	*101*		*48 - 142*	*05/12/14 07:00*	*05/13/14 21:05*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Client Sample ID: Dup-02
Date Collected: 05/06/14 00:00
Date Received: 05/08/14 10:10

Lab Sample ID: 500-76542-10
Matrix: Solid
Percent Solids: 76.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<750		2100	750	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1221	<930		2100	930	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1232	<920		2100	920	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1242	<690		2100	690	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1248	**27000**		2100	830	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1254	**16000**		2100	460	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100
PCB-1260	<1000		2100	1000	ug/Kg	☼	05/12/14 07:00	05/14/14 15:55	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*0*	*D*	*50 - 116*	*05/12/14 07:00*	*05/14/14 15:55*	*100*
DCB Decachlorobiphenyl	*0*	*D*	*48 - 142*	*05/12/14 07:00*	*05/14/14 15:55*	*100*

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.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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
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)

GC Semi VOA

Prep Batch: 235744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-1	RG-25	Total/NA	Solid	3541	
500-76542-3	RG-27	Total/NA	Solid	3541	
500-76542-4	RG-28	Total/NA	Solid	3541	
500-76542-5	RG-29	Total/NA	Solid	3541	
500-76542-6	RG-30	Total/NA	Solid	3541	
500-76542-7	RG-31	Total/NA	Solid	3541	
500-76542-8	RG-32	Total/NA	Solid	3541	
500-76542-9	RG-33	Total/NA	Solid	3541	
500-76542-10	Dup-02	Total/NA	Solid	3541	
LCS 500-235744/3-A	Lab Control Sample	Total/NA	Solid	3541	
MB 500-235744/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 235967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-1	RG-25	Total/NA	Solid	8082	235744
500-76542-3	RG-27	Total/NA	Solid	8082	235744
500-76542-4	RG-28	Total/NA	Solid	8082	235744
500-76542-5	RG-29	Total/NA	Solid	8082	235744
500-76542-6	RG-30	Total/NA	Solid	8082	235744
500-76542-7	RG-31	Total/NA	Solid	8082	235744
500-76542-8	RG-32	Total/NA	Solid	8082	235744
500-76542-9	RG-33	Total/NA	Solid	8082	235744
500-76542-10	Dup-02	Total/NA	Solid	8082	235744
LCS 500-235744/3-A	Lab Control Sample	Total/NA	Solid	8082	235744
MB 500-235744/1-A	Method Blank	Total/NA	Solid	8082	235744

Prep Batch: 236136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-2	RG-26	Total/NA	Solid	3541	
500-76542-2 MS	RG-26	Total/NA	Solid	3541	
500-76542-2 MSD	RG-26	Total/NA	Solid	3541	
LCS 500-236136/2-A	Lab Control Sample	Total/NA	Solid	3541	
MB 500-236136/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 236164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-2	RG-26	Total/NA	Solid	8082	236136
500-76542-2 MS	RG-26	Total/NA	Solid	8082	236136
500-76542-2 MSD	RG-26	Total/NA	Solid	8082	236136
LCS 500-236136/2-A	Lab Control Sample	Total/NA	Solid	8082	236136
MB 500-236136/1-A	Method Blank	Total/NA	Solid	8082	236136

General Chemistry

Analysis Batch: 235364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-1	RG-25	Total/NA	Solid	Moisture	
500-76542-2	RG-26	Total/NA	Solid	Moisture	
500-76542-2 DU	RG-26	Total/NA	Solid	Moisture	
500-76542-2 MS	RG-26	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 235364 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-76542-2 MSD	RG-26	Total/NA	Solid	Moisture	
500-76542-3	RG-27	Total/NA	Solid	Moisture	
500-76542-4	RG-28	Total/NA	Solid	Moisture	
500-76542-5	RG-29	Total/NA	Solid	Moisture	
500-76542-6	RG-30	Total/NA	Solid	Moisture	
500-76542-7	RG-31	Total/NA	Solid	Moisture	
500-76542-8	RG-32	Total/NA	Solid	Moisture	
500-76542-9	RG-33	Total/NA	Solid	Moisture	
500-76542-10	Dup-02	Total/NA	Solid	Moisture	

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		TCX1	DCB1										
Lab Sample ID	Client Sample ID	(50-116)	(48-142)										
500-76542-1	RG-25	0 D	0 D										
500-76542-2	RG-26	126 X	118										
500-76542-2 MS	RG-26	109	93										
500-76542-2 MSD	RG-26	115	112										
500-76542-3	RG-27	82	94										
500-76542-4	RG-28	99	114										
500-76542-5	RG-29	81	99										
500-76542-6	RG-30	120 X	153 X										
500-76542-7	RG-31	109	136										
500-76542-8	RG-32	0 D	0 D										
500-76542-9	RG-33	79	101										
500-76542-10	Dup-02	0 D	0 D										
LCS 500-235744/3-A	Lab Control Sample	91	102										
LCS 500-236136/2-A	Lab Control Sample	79	84										
MB 500-235744/1-A	Method Blank	86	98										
MB 500-236136/1-A	Method Blank	86	77										

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

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

Lab Sample ID: MB 500-235744/1-A
Matrix: Solid
Analysis Batch: 235967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<5.9		17	5.9	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1221	<7.3		17	7.3	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1232	<7.3		17	7.3	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1242	<5.5		17	5.5	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1248	<6.6		17	6.6	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1254	<3.6		17	3.6	ug/Kg		05/12/14 07:00	05/13/14 17:26	1
PCB-1260	<8.2		17	8.2	ug/Kg		05/12/14 07:00	05/13/14 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*50 - 116*	*05/12/14 07:00*	*05/13/14 17:26*	*1*
DCB Decachlorobiphenyl	*98*		*48 - 142*	*05/12/14 07:00*	*05/13/14 17:26*	*1*

Lab Sample ID: LCS 500-235744/3-A
Matrix: Solid
Analysis Batch: 235967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235744

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			167	152		ug/Kg		91	59 - 110		
PCB-1260			167	156		ug/Kg		94	69 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*91*		*50 - 116*
DCB Decachlorobiphenyl	*102*		*48 - 142*

Lab Sample ID: MB 500-236136/1-A
Matrix: Solid
Analysis Batch: 236164

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 236136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<5.9		17	5.9	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1221	<7.3		17	7.3	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1232	<7.3		17	7.3	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1242	<5.5		17	5.5	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1248	<6.6		17	6.6	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1254	<3.6		17	3.6	ug/Kg		05/14/14 07:27	05/14/14 15:58	1
PCB-1260	<8.2		17	8.2	ug/Kg		05/14/14 07:27	05/14/14 15:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*50 - 116*	*05/14/14 07:27*	*05/14/14 15:58*	*1*
DCB Decachlorobiphenyl	*77*		*48 - 142*	*05/14/14 07:27*	*05/14/14 15:58*	*1*

Lab Sample ID: LCS 500-236136/2-A
Matrix: Solid
Analysis Batch: 236164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			167	133		ug/Kg		80	59 - 110		

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

Lab Sample ID: LCS 500-236136/2-A
Matrix: Solid
Analysis Batch: 236164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236136

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1260			167	141		ug/Kg		85	69 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*79*		*50 - 116*
DCB Decachlorobiphenyl	*84*		*48 - 142*

Lab Sample ID: 500-76542-2 MS
Matrix: Solid
Analysis Batch: 236164

Client Sample ID: RG-26
Prep Type: Total/NA
Prep Batch: 236136

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	<38		214	512	F1	ug/Kg	☼	239	59 - 110		
PCB-1260	<52		214	630	F1	ug/Kg	☼	294	69 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*109*		*50 - 116*
DCB Decachlorobiphenyl	*93*		*48 - 142*

Lab Sample ID: 500-76542-2 MSD
Matrix: Solid
Analysis Batch: 236164

Client Sample ID: RG-26
Prep Type: Total/NA
Prep Batch: 236136

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	<38		214	561	F1	ug/Kg	☼	262	59 - 110	9	30
PCB-1260	<52		214	684	F1	ug/Kg	☼	319	69 - 120	8	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*115*		*50 - 116*
DCB Decachlorobiphenyl	*112*		*48 - 142*

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Client Sample ID: RG-25

Lab Sample ID: 500-76542-1
Date Collected: 05/06/14 11:00
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 69.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		2000	235967	05/14/14 16:09	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-26

Lab Sample ID: 500-76542-2
Date Collected: 05/06/14 11:10
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			236136	05/14/14 07:27	STW	TAL CHI
Total/NA	Analysis	8082		5	236164	05/15/14 09:36	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-27

Lab Sample ID: 500-76542-3
Date Collected: 05/06/14 13:10
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 76.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		1	235967	05/13/14 19:29	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-28

Lab Sample ID: 500-76542-4
Date Collected: 05/06/14 13:15
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 72.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		5	235967	05/14/14 15:01	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-29

Lab Sample ID: 500-76542-5
Date Collected: 05/06/14 13:20
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		1	235967	05/13/14 20:10	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: MadisonKipp WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

Client Sample ID: RG-30

Lab Sample ID: 500-76542-6

Date Collected: 05/06/14 13:25
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 67.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		10	235967	05/14/14 15:14	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-31

Lab Sample ID: 500-76542-7

Date Collected: 05/06/14 14:25
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 66.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		5	235967	05/14/14 15:28	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-32

Lab Sample ID: 500-76542-8

Date Collected: 05/06/14 14:30
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 70.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		50	235967	05/14/14 15:42	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: RG-33

Lab Sample ID: 500-76542-9

Date Collected: 05/06/14 14:35
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		1	235967	05/13/14 21:05	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	TAL CHI

Client Sample ID: Dup-02

Lab Sample ID: 500-76542-10

Date Collected: 05/06/14 00:00
Matrix: Solid
Date Received: 05/08/14 10:10
Percent Solids: 76.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			235744	05/12/14 07:00	STW	TAL CHI
Total/NA	Analysis	8082		100	235967	05/14/14 15:55	GMO	TAL CHI
Total/NA	Analysis	Moisture		1	235364	05/08/14 15:17	LWN	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 WI001368.0017.00001

TestAmerica Job ID: 500-76542-1

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

ARCADIS
Infrastructure · Water · Environment · Buildings

ID#:

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Page 1 of 1

Lab Work Order #: 500- 76542

Send Results to:

Contact & Company Name: Jennine Trask/ARCADIS
Telephone: 414-276-7742
Address:
Fax:
City State Zip
E-mail Address: jennine.trask@arcadis-us.com
Project Name/Location (City, State): Madison Kipp/Madison, WI
Project #: WI001368.0017.00001
Sampler's Printed Name: J. Reed
Sampler's Signature:

Sample ID	Collection Date	Collection Time	Type (✓) Comp	Type (✓) Grab	Matrix	PCBs 8082 Pest 8081	Preservative	Filtered (✓)	# of Containers	Container Information
							–	–	1	4 oz.
1 RG-25	5/6/14	1100		✓	SO	X				
2 RG-26		1110		✓		X				
3 RG-27		1310		✓		X				
4 RG-28		1315		✓		X				
5 RG-29		1320		✓		X				
6 RG-30		1325		✓		X				
7 RG-31		1425		✓		X				
8 RG-32		1430		✓		X				
9 RG-33		1435		✓		X				
10 DUP-02		–		✓		X				

PARAMETER ANALYSIS & METHOD

Keys

Preservation Key:
A. H_2SO_4
B. HCL
C. HNO_3
D. NaOH
E. None
F. Other: _____
G. Other: _____
H. Other: _____

Container Information Key:
1. 40 ml Vial
2. 1 L Amber
3. 250 ml Plastic
4. 500 ml Plastic
5. Encore
6. 2 oz. Glass
7. 4 oz. Glass
8. 8 oz. Glass
9. Other: _____
10. Other: _____

Matrix Key:
SO - Soil
W - Water
T - Tissue
SE - Sediment
SL - Sludge
A - Air
NL - NAPL/Oil
SW - Sample Wipe
Other: _____

REMARKS

MS/MSD

500-76542 COC

Special Instructions/Comments:

5 Day TAT

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By	Received By	Relinquished By	Laboratory Received By
Lab Name: TestAmerica	Cooler Custody Seal (✓)	Printed Name: Jay Reed	Printed Name: S. Kelsey	Printed Name:	Printed Name:
☑ Cooler packed with ice (✓)	☐ Intact ☐ Not Intact	Signature:	Signature:	Signature:	Signature:
Specify Turnaround Requirements: 5-Day TAT	Sample Receipt:	Firm: ARCADIS	Firm/Courier: TAL Chicago	Firm/Courier:	Firm:
Shipping Tracking #: 8057-7526-9076	Condition/Cooler Temp: 1.9	Date/Time: 5/7/14 1500	Date/Time: 05/08/14 @ 1010	Date/Time:	Date/Time:

20730826 CofC AR Form 01.12.2007

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

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 500-76542-1

Login Number: 76542

List Source: TestAmerica Chicago

List Number: 1

Creator: Kelsey, Shawn M

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	1.9c
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.	True	