

ANALYTICAL REPORT

Job Number: 200-5934-1

SDG Number: PRR1140

Job Description: LPRSA - Phase I Removal Action

For:

ARCADIS U.S. Inc
2300 Eastlake Avenue, East
Suite 140
Seattle, WA 98102

Attention: Ms. Shannon Dunn

Designee for

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

07/25/2011

cc: Mr. Joe Houser
Mr. Don Reed

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

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Preliminary Data

CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: LPRSA - Phase I Removal Action

Report Number: PRR1140 (200-5934-1)

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met. Calibration and calibration verification were assessed on an analyte specific basis. Initial calibration and continuing calibration criteria may not have been met in all instances.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods of analysis.

Manual integration was employed in deriving certain of the analytical results.

Positive instrument responses in the analysis of samples and quality controls were evaluated to the established method detection limit (MDL).

This report is submitted as a preliminary report. All reported values are in a final, reviewed state with the exception of those for antimony, selenium, silver, and thallium. The results for those elements are reported from an ICP/AES analysis, and may not reflect the required sensitivity for the project work. The ICP/MS analysis of the sample in this sample set for those elements is currently in process.

This is an abbreviated report. A more formal report will be issued in a CLP-like format, with supportive documentation and further narrative discussion.

METHOD SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Low/Medium Volatiles	TAL BUR	SOM01.2 SOM01.2/VOA	
Volatile sample preservation, Lab Preserved Low	TAL BUR		SOM01.2 SOM01.2/VOA_PR
Semivolatiles	TAL BUR	SOM01.2 SOM01.2/SV	
Extraction Solid/Sediment Samples	TAL BUR		SOM01.2 SONC
Gel-Permeation Clean up	TAL BUR		SOM01.2 SOM01.2/GPC
Semivolatiles by SIM	TAL BUR	SOM01.2 SOM01.2/SV SIM	
Extraction Solid/Sediment Samples	TAL BUR		SOM01.2 SONC
Gel-Permeation Clean up	TAL BUR		SOM01.2 SOM01.2/GPC
Aroclors	TAL BUR	SOM01.2 SOM01.2/PCB	
Extraction Solid/Sediment Samples	TAL BUR		SOM01.2 SONC
Sulfuric Acid/Permanganate Cleanup	TAL BUR		SOM01.2 SOM01.2/SO4CU
Pesticides	TAL BUR	SOM01.2 SOM01.2/Pest	
Extraction Solid/Sediment Samples	TAL BUR		SOM01.2 SONC
Gel-Permeation Clean up	TAL BUR		SOM01.2 SOM01.2/GPC
ISM01.2 Mercury	TAL BUR	ISM01.2 ISM01.2/HG	
7471B	TAL BUR		SW846 7471B
ISM01.2 Metals (ICP)	TAL BUR	ISM01.2 ISM01.2/ICP	
3050B	TAL BUR		SW846 3050B
Matrix: Water			
Low/Medium Volatiles	TAL BUR	SOM01.2 SOM01.2/VOA	
Volatile sample preservation, Field Preserved Water	TAL BUR		SOM01.2 SOM01.2/VOA_PR

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

ISM01.2 = U.S. Environmental Protection Agency

SOM01.2 = U.S. Environmental Protection Agency

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

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Method	Analyst	Analyst ID
SOM01.2 SOM01.2/VOA	Phillips, Mark T	MTP
SOM01.2 SOM01.2/SV	Bissonette, Donald J	DJB
SOM01.2 SOM01.2/SV SIM	White, Matthew T	MTW
SOM01.2 SOM01.2/PCB	Malaspina, Richard R	RRM
SOM01.2 SOM01.2/Pest	Bailey, Jacob L	JLB
SOM01.2 SOM01.2/Pest	Hammond, Ryan J	RJH
ISM01.2 ISM01.2/HG	Sachs, Austin L	ALS
ISM01.2 ISM01.2/ICP	Lyons, Benjamin	BL

Preliminary Data

SAMPLE SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-5934-1	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1MS	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1MSD	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1DU	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-2TB	TB07082011-01	Water	07/08/2011 0000	07/09/2011 0940
200-5934-4STOBLK	VHBLKLS	Solid	07/09/2011 1145	07/09/2011 0940

Preliminary Data

SAMPLE RESULTS

Preliminary Data

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 1.8

Date Received: 07/09/2011 0940

SOM01.2/VOA Low/Medium Volatiles

Analysis Method: SOM01.2/VOA	Analysis Batch: 200-21426	Instrument ID: N.i
Prep Method: SOM01.2/VOA_PR	Prep Batch: 200-21159	Lab File ID: neqa05.d
Dilution: 1.0		Initial Weight/Volume: 3.62 g
Analysis Date: 07/12/2011 1114		Final Weight/Volume: 5 mL
Prep Date: 07/09/2011 1411		

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Vinyl chloride		7.0	U	7.0
1,1-Dichloroethene		7.0	U	7.0
Methylene chloride		7.0	U	7.0
2-Butanone		14	U	14
Chloroform		7.0	U	7.0
Carbon tetrachloride		7.0	U	7.0
Benzene		7.0	U	7.0
1,2-Dichloroethane		7.0	U	7.0
Trichloroethene		7.0	U	7.0
Toluene		7.0	U	7.0
Tetrachloroethene		7.0	U	7.0
Chlorobenzene		7.0	U	7.0
Ethylbenzene		7.0	U	7.0
1,3-Dichlorobenzene		7.0	U	7.0
1,4-Dichlorobenzene		7.0	U	7.0
1,2-Dichlorobenzene		7.0	U	7.0
1,2,4-Trichlorobenzene		0.49	J B	7.0
1,2,3-Trichlorobenzene		0.50	J B	7.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	87		68 - 122
Chloroethane-d5	93		61 - 130
1,1-Dichloroethene-d2	73		45 - 132
2-Butanone-d5	80		20 - 182
Chloroform-d	91		72 - 123
1,2-Dichloroethane-d4	86		79 - 122
Benzene-d6	104		80 - 121
1,2-Dichloropropane-d6	90		74 - 124
Toluene-d8	102		78 - 121
trans-1,3-Dichloropropene-d4	98		72 - 130
2-Hexanone-d5	89		17 - 184
1,4-Dioxane-d8	94		50 - 150
1,1,2,2-Tetrachloroethane-d2	92		56 - 161
1,2-Dichlorobenzene-d4	101		70 - 131

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: TB07082011-01

Lab Sample ID: 200-5934-2TB

Date Sampled: 07/08/2011 0000

Client Matrix: Water

Date Received: 07/09/2011 0940

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-21394	Instrument ID:	M.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	N/A	Lab File ID:	mhda09.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	07/12/2011 1254			Final Weight/Volume:	5 mL
Prep Date:	07/12/2011 1254				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	5.0	U	5.0
1,1-Dichloroethene	5.0	U	5.0
Methylene chloride	5.0	U	5.0
2-Butanone	10	U	10
Chloroform	5.0	U	5.0
Carbon tetrachloride	5.0	U	5.0
Benzene	5.0	U	5.0
1,2-Dichloroethane	5.0	U	5.0
Trichloroethene	5.0	U	5.0
Toluene	5.0	U	5.0
Tetrachloroethene	5.0	U	5.0
Chlorobenzene	5.0	U	5.0
Ethylbenzene	5.0	U	5.0
1,3-Dichlorobenzene	5.0	U	5.0
1,4-Dichlorobenzene	5.0	U	5.0
1,2-Dichlorobenzene	5.0	U	5.0
1,2,4-Trichlorobenzene	0.21	J B	5.0
1,2,3-Trichlorobenzene	0.11	J B	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	98		65 - 131
Chloroethane-d5	97		71 - 131
1,1-Dichloroethene-d2	80		55 - 104
2-Butanone-d5	100		49 - 155
Chloroform-d	103		78 - 121
1,2-Dichloroethane-d4	105		78 - 129
Benzene-d6	103		77 - 124
1,2-Dichloropropane-d6	96		79 - 124
Toluene-d8	105		77 - 121
trans-1,3-Dichloropropene-d4	108		73 - 121
2-Hexanone-d5	107		28 - 135
1,4-Dioxane-d8	107		50 - 150
1,1,2,2-Tetrachloroethane-d2	108		73 - 125
1,2-Dichlorobenzene-d4	108		80 - 131

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: VHBLKLS

Lab Sample ID: 200-5934-4STOBLK

Date Sampled: 07/09/2011 1145

Client Matrix: Solid

Date Received: 07/09/2011 0940

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-21426	Instrument ID:	N.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	200-21159	Lab File ID:	neqa09.d
Dilution:	1.0			Initial Weight/Volume:	5 g
Analysis Date:	07/12/2011 1442			Final Weight/Volume:	5 mL
Prep Date:	07/09/2011 1411				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Vinyl chloride		5.0	U	5.0
1,1-Dichloroethene		5.0	U	5.0
Methylene chloride		5.0	U	5.0
2-Butanone		10	U	10
Chloroform		5.0	U	5.0
Carbon tetrachloride		5.0	U	5.0
Benzene		5.0	U	5.0
1,2-Dichloroethane		5.0	U	5.0
Trichloroethene		5.0	U	5.0
Toluene		5.0	U	5.0
Tetrachloroethene		5.0	U	5.0
Chlorobenzene		5.0	U	5.0
Ethylbenzene		5.0	U	5.0
1,3-Dichlorobenzene		5.0	U	5.0
1,4-Dichlorobenzene		5.0	U	5.0
1,2-Dichlorobenzene		5.0	U	5.0
1,2,4-Trichlorobenzene		5.0	U	5.0
1,2,3-Trichlorobenzene		5.0	U	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	90		68 - 122
Chloroethane-d5	95		61 - 130
1,1-Dichloroethene-d2	75		45 - 132
2-Butanone-d5	85		20 - 182
Chloroform-d	93		72 - 123
1,2-Dichloroethane-d4	88		79 - 122
Benzene-d6	99		80 - 121
1,2-Dichloropropane-d6	90		74 - 124
Toluene-d8	99		78 - 121
trans-1,3-Dichloropropene-d4	95		72 - 130
2-Hexanone-d5	89		17 - 184
1,4-Dioxane-d8	94		50 - 150
1,1,2,2-Tetrachloroethane-d2	91		56 - 161
1,2-Dichlorobenzene-d4	98		70 - 131

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/SV Semivolatiles

Analysis Method: SOM01.2/SV	Analysis Batch: 200-22189	Instrument ID: P.i
Prep Method: SONC	Prep Batch: 200-21593	Lab File ID: phv13.d
Dilution: 1.0		Initial Weight/Volume: 29.43 g
Analysis Date: 07/22/2011 1623		Final Weight/Volume: 10000 uL
Prep Date: 07/15/2011 0906		Injection Volume: 2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Pyridine		180	U	180
Benzaldehyde		180	U	180
Phenol		180	U	180
Bis(2-chloroethyl)ether		180	U	180
2-Chlorophenol		180	U	180
2-Methylphenol		180	U	180
2,2'-Oxybis(1-chloropropane)		180	U	180
Acetophenone		8.2	J B	180
4-Methylphenol		180	U	180
N-Nitroso-di-n-propylamine		180	U	180
Hexachloroethane		180	U	180
Nitrobenzene		180	U	180
Isophorone		180	U	180
2-Nitrophenol		180	U	180
2,4-Dimethylphenol		180	U	180
Bis(2-chloroethoxy)methane		180	U	180
2,4-Dichlorophenol		180	U	180
Naphthalene		180	U	180
4-Chloroaniline		180	U	180
Hexachlorobutadiene		180	U	180
Caprolactam		180	U	180
4-Chloro-3-methylphenol		180	U	180
2-Methylnaphthalene		180	U	180
Hexachlorocyclopentadiene		180	U	180
2,4,6-Trichlorophenol		180	U	180
2,4,5-Trichlorophenol		180	U	180
1,1'-Biphenyl		180	U	180
2-Chloronaphthalene		180	U	180
2-Nitroaniline		340	U	340
Dimethylphthalate		180	U	180
2,6-Dinitrotoluene		180	U	180
Acenaphthylene		180	U	180
3-Nitroaniline		340	U	340
Acenaphthene		180	U	180
2,4-Dinitrophenol		340	U	340
4-Nitrophenol		340	U	340
Dibenzofuran		180	U	180
2,4-Dinitrotoluene		180	U	180
Diethylphthalate		180	U	180
Fluorene		180	U	180
4-Chlorophenyl-phenylether		180	U	180
4-Nitroaniline		340	U	340
4,6-Dinitro-2-methylphenol		340	U	340
N-Nitrosodiphenylamine		180	U	180
1,2,4,5-Tetrachlorobenzene		180	U	180
4-Bromophenyl-phenylether		180	U	180

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/SV Semivolatiles

Analysis Method: SOM01.2/SV	Analysis Batch: 200-22189	Instrument ID: P.i
Prep Method: SONC	Prep Batch: 200-21593	Lab File ID: phv13.d
Dilution: 1.0		Initial Weight/Volume: 29.43 g
Analysis Date: 07/22/2011 1623		Final Weight/Volume: 10000 uL
Prep Date: 07/15/2011 0906		Injection Volume: 2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Hexachlorobenzene		180	U	180
Atrazine		180	U	180
Pentachlorophenol		340	U	340
Phenanthrene		180	U	180
Anthracene		180	U	180
Carbazole		180	U	180
Di-n-butylphthalate		13	J B	180
Fluoranthene		180	U	180
Pyrene		180	U	180
Butylbenzylphthalate		6.1	J B	180
3,3'-Dichlorobenzidine		180	U	180
Benzo(a)anthracene		180	U	180
Chrysene		180	U	180
Bis(2-ethylhexyl)phthalate		8.0	J B	180
Di-n-octylphthalate		180	U	180
Benzo(b)fluoranthene		180	U	180
Benzo(k)fluoranthene		180	U	180
Benzo(a)pyrene		180	U	180
Indeno(1,2,3-cd)pyrene		180	U	180
Dibenzo(a,h)anthracene		180	U	180
Benzo(g,h,i)perylene		180	U	180
2,3,4,6-Tetrachlorophenol		180	U	180

Surrogate	%Rec	Qualifier	Acceptance Limits
Phenol-d5	67		17 - 103
Bis(2-chloroethyl)ether-d8	59		12 - 98
2-Chlorophenol-d4	68		13 - 101
4-Methylphenol-d8	68		8 - 100
Nitrobenzene-d5	65		16 - 103
2-Nitrophenol-d4	67		16 - 104
2,4-Dichlorophenol-d3	65		23 - 104
4-Chloroaniline-d4	55		1 - 145
Dimethylphthalate-d6	73		43 - 111
Acenaphthylene-d8	71		20 - 97
4-Nitrophenol-d4	64		16 - 166
Fluorene-d10	67		40 - 108
4,6-Dinitro-2-methylphenol-d2	48		1 - 121
Anthracene-d10	73		22 - 98
Pyrene-d10	80		51 - 120
Benzo(a)pyrene-d12	69		43 - 111

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/SV SIM Semivolatiles by SIM

Analysis Method: SOM01.2/SV SIM	Analysis Batch: 200-21980	Instrument ID: Z.i
Prep Method: SONC	Prep Batch: 200-21593	Lab File ID: zwsms03.d
Dilution: 1.0		Initial Weight/Volume: 29.43 g
Analysis Date: 07/20/2011 1730		Final Weight/Volume: 10000 uL
Prep Date: 07/15/2011 0906		Injection Volume: 2 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Naphthalene		0.44	J B	3.4
2-Methylnaphthalene		0.13	J B	3.4
Acenaphthylene		3.4	U	3.4
Acenaphthene		3.4	U	3.4
Fluorene		3.4	U	3.4
Hexachlorobenzene		3.4	U	3.4
Pentachlorophenol		7.0	U	7.0
Phenanthrene		3.4	U	3.4
Anthracene		3.4	U	3.4
Fluoranthene		3.4	U	3.4
Pyrene		1.2	J B	3.4
Benzo(a)anthracene		3.4	U	3.4
Chrysene		3.4	U	3.4
Benzo(b)fluoranthene		3.4	U	3.4
Benzo(k)fluoranthene		3.4	U	3.4
Benzo(a)pyrene		3.5	B	3.4
Indeno(1,2,3-cd)pyrene		3.4	U	3.4
Dibenz(a,h)anthracene		3.4	U	3.4
Benzo(g,h,i)perylene		3.4	U	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Fluoranthene-d10	57		50 - 150
2-Methylnaphthalene-d10	69		50 - 150

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/PCB Aroclors

Analysis Method: SOM01.2/PCB Analysis Batch: 200-22010 Instrument ID: 5253.i
Prep Method: SONC Prep Batch: 200-21309 Initial Weight/Volume: 29.99 g
Dilution: 1.0 Final Weight/Volume: 10000 uL
Analysis Date: 07/21/2011 1143 Injection Volume: 1 uL
Prep Date: 07/12/2011 0820 Result Type: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Aroclor-1016		34	U	34
Aroclor-1221		34	U	34
Aroclor-1232		34	U	34
Aroclor-1242		34	U	34
Aroclor-1248		34	U	34
Aroclor-1254		34	U	34
Aroclor-1260		34	U	34
Aroclor-1262		34	U	34
Aroclor-1268		34	U	34

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	80		30 - 150
Decachlorobiphenyl	83		30 - 150

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/PCB Aroclors

Analysis Method: SOM01.2/PCB

Analysis Batch: 200-22010

Instrument ID: 5253.i

Prep Method: SONC

Prep Batch: 200-21309

Initial Weight/Volume: 29.99 g

Dilution: 1.0

Final Weight/Volume: 10000 uL

Analysis Date: 07/21/2011 1143

Injection Volume: 1 uL

Prep Date: 07/12/2011 0820

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	85		30 - 150
Decachlorobiphenyl	83		30 - 150

Preliminary Data

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/Pest Pesticides

Analysis Method: SOM01.2/Pest	Analysis Batch: 200-22096	Instrument ID: 5005.i
Prep Method: SONC	Prep Batch: 200-21768	Initial Weight/Volume: 30.00 g
Dilution: 1.0		Final Weight/Volume: 10000 uL
Analysis Date: 07/21/2011 2237		Injection Volume: 1 uL
Prep Date: 07/19/2011 0753		Result Type: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
alpha-BHC		1.7	U	1.7
beta-BHC		0.15	J P B	1.7
delta-BHC		1.7	U	1.7
gamma-BHC (Lindane)		1.7	U	1.7
Heptachlor		1.7	U	1.7
Aldrin		1.7	U	1.7
Heptachlor epoxide		1.7	U	1.7
Endosulfan I		1.7	U	1.7
Dieldrin		3.4	U	3.4
4,4'-DDE		3.4	U	3.4
Endrin		3.4	U	3.4
Endosulfan II		3.4	U	3.4
4,4'-DDD		3.4	U	3.4
Endosulfan sulfate		3.4	U	3.4
4,4'-DDT		3.4	U	3.4
Methoxychlor		17	U	17
Endrin ketone		3.4	U	3.4
Endrin aldehyde		3.4	U	3.4
alpha-Chlordane		1.7	U	1.7
gamma-Chlordane		1.7	U	1.7
Toxaphene		170	U	170
<hr/>				
Surrogate		%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene		73		30 - 150
Decachlorobiphenyl		73		30 - 150

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/Pest Pesticides

Analysis Method: SOM01.2/Pest

Analysis Batch: 200-22096

Instrument ID: 5005.i

Prep Method: SONC

Prep Batch: 200-21768

Initial Weight/Volume: 30.00 g

Dilution: 1.0

Final Weight/Volume: 10000 uL

Analysis Date: 07/21/2011 2237

Injection Volume: 1 uL

Prep Date: 07/19/2011 0753

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	74		30 - 150
Decachlorobiphenyl	86		30 - 150

Preliminary Data

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/Pest Pesticides

Analysis Method:	SOM01.2/Pest	Analysis Batch:	200-22247	Instrument ID:	0911.i
Prep Method:	SONC	Prep Batch:	200-21768	Initial Weight/Volume:	30.00 g
Dilution:	1.0			Final Weight/Volume:	10000 uL
Analysis Date:	07/22/2011 1539			Injection Volume:	1 uL
Prep Date:	07/19/2011 0753			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
2,4'-DDE		3.4	U	3.4
2,4'-DDT		3.4	U	3.4
2,4'-DDD		3.4	U	3.4

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	73		30 - 150
Decachlorobiphenyl	80		30 - 150

Preliminary Data

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

SOM01.2/Pest Pesticides

Analysis Method: SOM01.2/Pest

Analysis Batch: 200-22247

Instrument ID: 0911.i

Prep Method: SONC

Prep Batch: 200-21768

Initial Weight/Volume: 30.00 g

Dilution: 1.0

Final Weight/Volume: 10000 uL

Analysis Date: 07/22/2011 1539

Injection Volume: 1 uL

Prep Date: 07/19/2011 0753

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	77		30 - 150
Decachlorobiphenyl	84		30 - 150

Preliminary Data

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

ISM01.2/HG ISM01.2 Mercury

Analysis Method: ISM01.2/HG	Analysis Batch: 200-21561	Instrument ID: MEPCV3 II
Prep Method: 7471B	Prep Batch: 200-21476	Lab File ID: 071411BB.PRN
Dilution: 1.0		Initial Weight/Volume: 0.52 g
Analysis Date: 07/14/2011 1459		Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1430		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDLE	RL
Mercury		0.098	U	0.0033	0.098

ISM01.2/ICP ISM01.2 Metals (ICP)

Analysis Method: ISM01.2/ICP	Analysis Batch: 200-21788	Instrument ID: METICP7
Prep Method: 3050B	Prep Batch: 200-21442	Lab File ID: 071811-03.ttx
Dilution: 1.0		Initial Weight/Volume: 1.42 g
Analysis Date: 07/19/2011 0505		Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		432	E *	4.6	14.4
Antimony		4.3	U N	0.24	4.3
Barium		3.3	J	0.64	14.4
Beryllium		0.11	J	0.020	0.36
Cadmium		0.075	J	0.024	0.36
Chromium		3.2	E	0.033	0.72
Cobalt		2.2	J	0.055	3.6
Copper		5.2	E	0.070	1.8
Lead		6.6	*	0.19	0.72
Nickel		4.9		0.16	2.9
Potassium		334	J	13.7	359
Selenium		2.5	U	0.20	2.5
Silver		0.72	U	0.11	0.72
Sodium		109	J	4.3	359
Vanadium		5.5		0.086	3.6
Zinc		2.6	J	0.61	4.3

Analysis Method: ISM01.2/ICP	Analysis Batch: 200-21924	Instrument ID: METICP7
Prep Method: 3050B	Prep Batch: 200-21442	Lab File ID: 071911-03.ttx
Dilution: 1.0		Initial Weight/Volume: 1.42 g
Analysis Date: 07/20/2011 0705		Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Arsenic		1.4	*	0.19	0.72
Iron		3310	*	1.0	7.2
Thallium		1.8	U	0.093	1.8

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

ISM01.2/ICP ISM01.2 Metals (ICP)

Analysis Method: ISM01.2/ICP Analysis Batch: 200-21924 Instrument ID: METICP7
Prep Method: 3050B Prep Batch: 200-21442 Lab File ID: 071911-03.ttx
Dilution: 10 Run Type: DL Initial Weight/Volume: 1.42 g
Analysis Date: 07/20/2011 0837 Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Manganese		170	D *	0.17	10.8

Analysis Method: ISM01.2/ICP Analysis Batch: 200-21924 Instrument ID: METICP7
Prep Method: 3050B Prep Batch: 200-21442 Lab File ID: 071911-03.ttx
Dilution: 100 Run Type: DL2 Initial Weight/Volume: 1.42 g
Analysis Date: 07/20/2011 0858 Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Calcium		192000	D	568	35900
Magnesium		110000	D	481	35900

Preliminary Data

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
GC/MS Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	B	The analyte was found in an associated blank, as well as in the sample.
GC Semi VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	P	The % Difference between columns is greater than 25%.
	B	The analyte was found in an associated blank, as well as in the sample.
Metals		
	*	Duplicate analysis not within control limits.
	U	Indicates analyzed for but not detected.
	J	Sample result is greater than the MDL but below the CRDL
	D	Sample was analyzed at a higher dilution factor.
	N	Spiked sample recovery is not within control limits.
	E	The reported value is estimated because of the presence of interference based on serial dilution analysis.

QUALITY CONTROL RESULTS

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 200-21159					
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/VOA_P	
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/VOA_P	
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/VOA_P	
200-5934-4STOBLK	VHBLKLS	T	Solid	SOM01.2/VOA_P	
Analysis Batch:200-21394					
MB 200-21394/4	Method Blank	T	Water	SOM01.2/VOA	
200-5934-2TB	TB07082011-01	T	Water	SOM01.2/VOA	
Analysis Batch:200-21426					
MB 200-21426/4	Method Blank	T	Solid	SOM01.2/VOA	
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/VOA	200-21159
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/VOA	200-21159
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/VOA	200-21159
200-5934-4STOBLK	VHBLKLS	T	Solid	SOM01.2/VOA	200-21159
Report Basis					
T = Total					
GC/MS Semi VOA					
Prep Batch: 200-21593					
MB 200-21593/1-B	Method Blank	T	Solid	SONC	
200-5934-1	PRR1SOLSP-01	T	Solid	SONC	
200-5934-1MS	Matrix Spike	T	Solid	SONC	
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SONC	
Analysis Batch:200-21980					
MB 200-21593/1-B	Method Blank	T	Solid	SOM01.2/SV SIM	200-21593
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/SV SIM	200-21593
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/SV SIM	200-21593
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/SV SIM	200-21593
Analysis Batch:200-22189					
MB 200-21593/1-B	Method Blank	T	Solid	SOM01.2/SV	200-21593
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/SV	200-21593
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/SV	200-21593
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/SV	200-21593

Report Basis

T = Total

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 200-21309					
LCS 200-21309/2-C	Lab Control Sample	T	Solid	SONC	
MB 200-21309/1-C	Method Blank	T	Solid	SONC	
200-5934-1	PRR1SOLSP-01	T	Solid	SONC	
200-5934-1MS	Matrix Spike	T	Solid	SONC	
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SONC	
Prep Batch: 200-21768					
LCS 200-21768/2-E	Lab Control Sample	T	Solid	SONC	
LCS 200-21768/3-E	Lab Control Sample	T	Solid	SONC	
MB 200-21768/1-E	Method Blank	T	Solid	SONC	
200-5934-1	PRR1SOLSP-01	T	Solid	SONC	
200-5934-1MS	Matrix Spike	T	Solid	SONC	
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SONC	
Analysis Batch:200-22010					
LCS 200-21309/2-C	Lab Control Sample	T	Solid	SOM01.2/PCB	200-21309
MB 200-21309/1-C	Method Blank	T	Solid	SOM01.2/PCB	200-21309
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/PCB	200-21309
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/PCB	200-21309
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/PCB	200-21309
Analysis Batch:200-22096					
LCS 200-21768/2-E	Lab Control Sample	T	Solid	SOM01.2/Pest	200-21768
MB 200-21768/1-E	Method Blank	T	Solid	SOM01.2/Pest	200-21768
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/Pest	200-21768
200-5934-1MS	Matrix Spike	T	Solid	SOM01.2/Pest	200-21768
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	SOM01.2/Pest	200-21768
Analysis Batch:200-22247					
LCS 200-21768/3-E	Lab Control Sample	T	Solid	SOM01.2/Pest	200-21768
MB 200-21768/1-E	Method Blank	T	Solid	SOM01.2/Pest	200-21768
200-5934-1	PRR1SOLSP-01	T	Solid	SOM01.2/Pest	200-21768

Report Basis

T = Total

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 200-21442					
LCS 200-21442/2-A	Lab Control Sample	T	Solid	3050B	
MB 200-21442/1-A	Method Blank	T	Solid	3050B	
200-5934-1	PRR1SOLSP-01	T	Solid	3050B	
200-5934-1DL	PRR1SOLSP-01	T	Solid	3050B	
200-5934-1DL2	PRR1SOLSP-01	T	Solid	3050B	
200-5934-1DU	Duplicate	T	Solid	3050B	
200-5934-1DUDL	Duplicate	T	Solid	3050B	
200-5934-1DUDL2	Duplicate	T	Solid	3050B	
200-5934-1MS	Matrix Spike	T	Solid	3050B	
200-5934-1MSDL	Matrix Spike	T	Solid	3050B	
200-5934-1MSDL2	Matrix Spike	T	Solid	3050B	
Prep Batch: 200-21476					
MB 200-21476/11-A	Method Blank	T	Solid	7471B	
200-5934-1	PRR1SOLSP-01	T	Solid	7471B	
200-5934-1DU	Duplicate	T	Solid	7471B	
200-5934-1MS	Matrix Spike	T	Solid	7471B	
Analysis Batch:200-21561					
MB 200-21476/11-A	Method Blank	T	Solid	ISM01.2/HG	200-21476
200-5934-1	PRR1SOLSP-01	T	Solid	ISM01.2/HG	200-21476
200-5934-1DU	Duplicate	T	Solid	ISM01.2/HG	200-21476
200-5934-1MS	Matrix Spike	T	Solid	ISM01.2/HG	200-21476
Analysis Batch:200-21788					
LCS 200-21442/2-A	Lab Control Sample	T	Solid	ISM01.2/ICP	200-21442
MB 200-21442/1-A	Method Blank	T	Solid	ISM01.2/ICP	200-21442
200-5934-1	PRR1SOLSP-01	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DU	Duplicate	T	Solid	ISM01.2/ICP	200-21442
200-5934-1MS	Matrix Spike	T	Solid	ISM01.2/ICP	200-21442
Analysis Batch:200-21924					
LCS 200-21442/2-A	Lab Control Sample	T	Solid	ISM01.2/ICP	200-21442
MB 200-21442/1-A	Method Blank	T	Solid	ISM01.2/ICP	200-21442
200-5934-1	PRR1SOLSP-01	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DL	PRR1SOLSP-01	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DL2	PRR1SOLSP-01	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DU	Duplicate	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DUDL	Duplicate	T	Solid	ISM01.2/ICP	200-21442
200-5934-1DUDL2	Duplicate	T	Solid	ISM01.2/ICP	200-21442
200-5934-1MS	Matrix Spike	T	Solid	ISM01.2/ICP	200-21442
200-5934-1MSDL	Matrix Spike	T	Solid	ISM01.2/ICP	200-21442
200-5934-1MSDL2	Matrix Spike	T	Solid	ISM01.2/ICP	200-21442

TestAmerica Burlington

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

QC Association Summary

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Report Basis</u>	<u>Client Matrix</u>	<u>Method</u>	<u>Prep Batch</u>
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Report Basis

T = Total

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/VOA Low/Medium Volatiles

Client Matrix: Solid

Lab Sample ID	Client Sample ID	VCL %Rec	CLA %Rec	DCE %Rec	BUT %Rec	CLF %Rec	DCA %Rec	BEN %Rec	DPA %Rec
200-5934-1	PRR1SOLSP-01	87	93	73	80	91	86	104	90
200-5934-4	VHBLKLS	90	95	75	85	93	88	99	90
MB 200-21426/4		90	98	75	97	95	91	104	91
200-5934-1 MS	PRR1SOLSP-01 MS	86	92	95	92	90	86	102	93
200-5934-1 MSD	PRR1SOLSP-01 MSD	77	82	83	85	81	77*	104	92

Preliminary Data

Surrogate	Acceptance Limits
VCL = Vinyl chloride-d3	68-122
CLA = Chloroethane-d5	61-130
DCE = 1,1-Dichloroethene-d2	45-132
BUT = 2-Butanone-d5	20-182
CLF = Chloroform-d	72-123
DCA = 1,2-Dichloroethane-d4	79-122
BEN = Benzene-d6	80-121
DPA = 1,2-Dichloropropane-d6	74-124

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/VOA Low/Medium Volatiles

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TOL %Rec	TDP %Rec	HEX %Rec	DXE %Rec	TCA %Rec	DCZ %Rec
200-5934-1	PRR1SOLSP-01	102	98	89	94	92	101
200-5934-4	VHBLKLS	99	95	89	94	91	98
MB 200-21426/4		104	102	102	93	101	102
200-5934-1 MS	PRR1SOLSP-01 MS	100	94	101	93	98	101
200-5934-1 MSD	PRR1SOLSP-01 MSD	102	95	107	86	103	106

Preliminary Data

Surrogate	Acceptance Limits
TOL = Toluene-d8	78-121
TDP = trans-1,3-Dichloropropene-d4	72-130
HEX = 2-Hexanone-d5	17-184
DXE = 1,4-Dioxane-d8	50-150
TCA = 1,1,2,2-Tetrachloroethane-d2	56-161
DCZ = 1,2-Dichlorobenzene-d4	70-131

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/VOA Low/Medium Volatiles

Client Matrix: Water

Lab Sample ID	Client Sample ID	VCL %Rec	CLA %Rec	DCE %Rec	BUT %Rec	CLF %Rec	DCA %Rec	BEN %Rec	DPA %Rec
200-5934-2	TB07082011-01	98	97	80	100	103	105	103	96
MB 200-21394/4		96	101	80	102	103	103	104	97

Preliminary Data

Surrogate	Acceptance Limits
VCL = Vinyl chloride-d3	65-131
CLA = Chloroethane-d5	71-131
DCE = 1,1-Dichloroethene-d2	55-104
BUT = 2-Butanone-d5	49-155
CLF = Chloroform-d	78-121
DCA = 1,2-Dichloroethane-d4	78-129
BEN = Benzene-d6	77-124
DPA = 1,2-Dichloropropane-d6	79-124

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/VOA Low/Medium Volatiles

Client Matrix: Water

Lab Sample ID	Client Sample ID	TOL %Rec	TDP %Rec	HEX %Rec	DXE %Rec	TCA %Rec	DCZ %Rec
200-5934-2	TB07082011-01	105	108	107	107	108	108
MB 200-21394/4		102	104	105	100	106	108

Preliminary Data

Surrogate	Acceptance Limits
TOL = Toluene-d8	77-121
TDP = trans-1,3-Dichloropropene-d4	73-121
HEX = 2-Hexanone-d5	28-135
DXE = 1,4-Dioxane-d8	50-150
TCA = 1,1,2,2-Tetrachloroethane-d2	73-125
DCZ = 1,2-Dichlorobenzene-d4	80-131

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/SV Semivolatiles

Client Matrix: Solid

Lab Sample ID	Client Sample ID	PHL %Rec	BCE %Rec	2CP %Rec	4MP %Rec	NBZ %Rec	2NP %Rec	DCP %Rec	4CA %Rec
200-5934-1	PRR1SOLSP-01	67	59	68	68	65	67	65	55
MB 200-21593/1-B		75	67	79	78	72	73	72	58
200-5934-1 MS	PRR1SOLSP-01 MS	69	63	71	71	67	67	64	51
200-5934-1 MSD	PRR1SOLSP-01 MSD	76	71	78	77	72	74	71	53

Preliminary Data

Surrogate	Acceptance Limits
PHL = Phenol-d5	17-103
BCE = Bis(2-chloroethyl)ether-d8	12-98
2CP = 2-Chlorophenol-d4	13-101
4MP = 4-Methylphenol-d8	8-100
NBZ = Nitrobenzene-d5	16-103
2NP = 2-Nitrophenol-d4	16-104
DCP = 2,4-Dichlorophenol-d3	23-104
4CA = 4-Chloroaniline-d4	1-145

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/SV Semivolatiles

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DMP %Rec	ACY %Rec	4NP %Rec	FLR %Rec	NMP %Rec	ANC %Rec	PYR %Rec	BAP %Rec
200-5934-1	PRR1SOLSP-01	73	71	64	67	48	73	80	69
MB 200-21593/1-B		79	80	70	73	57	75	80	70
200-5934-1 MS	PRR1SOLSP-01 MS	72	73	63	67	53	75	78	68
200-5934-1 MSD	PRR1SOLSP-01 MSD	77	79	72	72	61	79	84	76

Preliminary Data

Surrogate	Acceptance Limits
DMP = Dimethylphthalate-d6	43-111
ACY = Acenaphthylene-d8	20-97
4NP = 4-Nitrophenol-d4	16-166
FLR = Fluorene-d10	40-108
NMP = 4,6-Dinitro-2-methylphenol-d2	1-121
ANC = Anthracene-d10	22-98
PYR = Pyrene-d10	51-120
BAP = Benzo(a)pyrene-d12	43-111

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/SV SIM Semivolatiles by SIM

Client Matrix: Solid

Lab Sample ID	Client Sample ID	FLN %Rec	2MN %Rec
200-5934-1	PRR1SOLSP-01	57	69
MB 200-21593/1-B		66	75
200-5934-1 MS	PRR1SOLSP-01 MS	68	79
200-5934-1 MSD	PRR1SOLSP-01 MSD	65	80

Preliminary Data

Surrogate	Acceptance Limits
FLN = Fluoranthene-d10	50-150
2MN = 2-Methylnaphthalene-d10	50-150

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/PCB Aroclors

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
200-5934-1	PRR1SOLSP-01	85	80	83	83
MB 200-21309/1-C		80	73	84	86
LCS 200-21309/2-C		88	79	86	84
200-5934-1 MS	PRR1SOLSP-01 MS	88	81	87	85
200-5934-1 MSD	PRR1SOLSP-01 MSD	88	78	96	95

Preliminary Data

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = Decachlorobiphenyl	30-150

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Surrogate Recovery Report

SOM01.2/Pest Pesticides

Client Matrix: Solid

Lab Sample ID	Client Sample ID	TCX1 %Rec	TCX2 %Rec	DCB1 %Rec	DCB2 %Rec
200-5934-1	PRR1SOLSP-01	73	77	80	84
200-5934-1	PRR1SOLSP-01	73	74	73	86
MB 200-21768/1-E		74	78	78	80
MB 200-21768/1-E		69	69	80	86
LCS 200-21768/2-E		79	80	93	108
LCS 200-21768/3-E		71	74	79	82
200-5934-1 MS	PRR1SOLSP-01 MS	63	65	73	77
200-5934-1 MSD	PRR1SOLSP-01 MSD	69	70	74	79

Preliminary Data

Surrogate	Acceptance Limits
TCX = Tetrachloro-m-xylene	30-150
DCB = Decachlorobiphenyl	30-150

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21159**

**Method: SOM01.2/VOA
Preparation: SOM01.2/VOA_PR**

MS Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/12/2011 1142
Prep Date: 07/09/2011 1411
Leach Date: N/A

Analysis Batch: 200-21426
Prep Batch: 200-21159
Leach Batch: N/A

Instrument ID: N.i
Lab File ID: neqa06.d
Initial Weight/Volume: 4.2 g
Final Weight/Volume: 5 mL
10 mL

MSD Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/12/2011 1210
Prep Date: 07/09/2011 1411
Leach Date: N/A

Analysis Batch: 200-21426
Prep Batch: 200-21159
Leach Batch: N/A

Instrument ID: N.i
Lab File ID: neqa07.d
Initial Weight/Volume: 4.45 g
Final Weight/Volume: 5 mL
10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1-Dichloroethene	100	82	59 - 172	19	22		
Benzene	104	99	66 - 142	4	21		
Trichloroethene	106	94	62 - 137	12	24		
Toluene	106	99	59 - 139	7	21		
Chlorobenzene	103	96	60 - 133	7	21		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Vinyl chloride-d3	86	77	68 - 122
Chloroethane-d5	92	82	61 - 130
1,1-Dichloroethene-d2	95	83	45 - 132
2-Butanone-d5	92	85	20 - 182
Chloroform-d	90	81	72 - 123
1,2-Dichloroethane-d4	86	77	* 79 - 122
Benzene-d6	102	104	80 - 121
1,2-Dichloropropane-d6	93	92	74 - 124
Toluene-d8	100	102	78 - 121
trans-1,3-Dichloropropene-d4	94	95	72 - 130
2-Hexanone-d5	101	107	17 - 184
1,4-Dioxane-d8	93	86	50 - 150
1,1,2,2-Tetrachloroethane-d2	98	103	56 - 161
1,2-Dichlorobenzene-d4	101	106	70 - 131

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Method Blank - Batch: 200-21394

**Method: SOM01.2/VOA
Preparation: SOM01.2/VOA_PR**

Lab Sample ID: MB 200-21394/4
 Client Matrix: Water
 Dilution: 1.0
 Analysis Date: 07/12/2011 0907
 Prep Date: 07/12/2011 0907
 Leach Date: N/A

Analysis Batch: 200-21394
 Prep Batch: N/A
 Leach Batch: N/A
 Units: ug/L

Instrument ID: M.i
 Lab File ID: mhda04.d
 Initial Weight/Volume: 5 mL
 Final Weight/Volume: 5 mL

Analyte	Result	Qual	RL
Vinyl chloride	5.0	U	5.0
1,1-Dichloroethene	5.0	U	5.0
Methylene chloride	0.14	J	5.0
2-Butanone	10	U	10
Chloroform	5.0	U	5.0
Carbon tetrachloride	5.0	U	5.0
Benzene	5.0	U	5.0
1,2-Dichloroethane	5.0	U	5.0
Trichloroethene	0.25	J	5.0
Toluene	0.089	J	5.0
Tetrachloroethene	5.0	U	5.0
Chlorobenzene	5.0	U	5.0
Ethylbenzene	0.11	J	5.0
1,3-Dichlorobenzene	0.34	J	5.0
1,4-Dichlorobenzene	5.0	U	5.0
1,2-Dichlorobenzene	5.0	U	5.0
1,2,4-Trichlorobenzene	0.75	J	5.0
1,2,3-Trichlorobenzene	0.72	J	5.0

Surrogate	% Rec	Acceptance Limits
Vinyl chloride-d3	96	65 - 131
Chloroethane-d5	101	71 - 131
1,1-Dichloroethene-d2	80	55 - 104
2-Butanone-d5	102	49 - 155
Chloroform-d	103	78 - 121
1,2-Dichloroethane-d4	103	78 - 129
Benzene-d6	104	77 - 124
1,2-Dichloropropane-d6	97	79 - 124
Toluene-d8	102	77 - 121
trans-1,3-Dichloropropene-d4	104	73 - 121
2-Hexanone-d5	105	28 - 135
1,4-Dioxane-d8	100	50 - 150
1,1,2,2-Tetrachloroethane-d2	106	73 - 125
1,2-Dichlorobenzene-d4	108	80 - 131

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21426

Method: SOM01.2/VOA
Preparation: N/A

Lab Sample ID: MB 200-21426/4
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/12/2011 0913
Prep Date: N/A
Leach Date: N/A

Analysis Batch: 200-21426
Prep Batch: N/A
Leach Batch: N/A
Units: ug/Kg

Instrument ID: N.i
Lab File ID: neqa04.d
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Vinyl chloride	5.0	U	5.0
1,1-Dichloroethene	5.0	U	5.0
Methylene chloride	5.0	U	5.0
2-Butanone	10	U	10
Chloroform	5.0	U	5.0
Carbon tetrachloride	5.0	U	5.0
Benzene	5.0	U	5.0
1,2-Dichloroethane	5.0	U	5.0
Trichloroethene	5.0	U	5.0
Toluene	5.0	U	5.0
Tetrachloroethene	5.0	U	5.0
Chlorobenzene	5.0	U	5.0
Ethylbenzene	5.0	U	5.0
1,3-Dichlorobenzene	5.0	U	5.0
1,4-Dichlorobenzene	5.0	U	5.0
1,2-Dichlorobenzene	5.0	U	5.0
1,2,4-Trichlorobenzene	0.33	J	5.0
1,2,3-Trichlorobenzene	0.37	J	5.0

Surrogate	% Rec	Acceptance Limits
Vinyl chloride-d3	90	68 - 122
Chloroethane-d5	98	61 - 130
1,1-Dichloroethene-d2	75	45 - 132
2-Butanone-d5	97	20 - 182
Chloroform-d	95	72 - 123
1,2-Dichloroethane-d4	91	79 - 122
Benzene-d6	104	80 - 121
1,2-Dichloropropane-d6	91	74 - 124
Toluene-d8	104	78 - 121
trans-1,3-Dichloropropene-d4	102	72 - 130
2-Hexanone-d5	102	17 - 184
1,4-Dioxane-d8	93	50 - 150
1,1,2,2-Tetrachloroethane-d2	101	56 - 161
1,2-Dichlorobenzene-d4	102	70 - 131

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

Method Blank - Batch: 200-21593

Method: SOM01.2/SV

Preparation: SONC

Lab Sample ID: MB 200-21593/1-B
 Client Matrix: Solid
 Dilution: 1.0
 Analysis Date: 07/22/2011 1540
 Prep Date: 07/15/2011 0906
 Leach Date: N/A

Analysis Batch: 200-22189
 Prep Batch: 200-21593
 Leach Batch: N/A
 Units: ug/Kg

Instrument ID: P.i
 Lab File ID: phv12.d
 Initial Weight/Volume: 30.02 g
 Final Weight/Volume: 10000 uL
 Injection Volume: 2 uL

Analyte	Result	Qual	RL
Pyridine	170	U	170
Benzaldehyde	170	U	170
Phenol	170	U	170
Bis(2-chloroethyl)ether	170	U	170
2-Chlorophenol	170	U	170
2-Methylphenol	170	U	170
2,2'-Oxybis(1-chloropropane)	170	U	170
Acetophenone	8.8	J	170
4-Methylphenol	170	U	170
N-Nitroso-di-n-propylamine	170	U	170
Hexachloroethane	170	U	170
Nitrobenzene	170	U	170
Isophorone	170	U	170
2-Nitrophenol	170	U	170
2,4-Dimethylphenol	170	U	170
Bis(2-chloroethoxy)methane	170	U	170
2,4-Dichlorophenol	170	U	170
Naphthalene	170	U	170
4-Chloroaniline	170	U	170
Hexachlorobutadiene	170	U	170
Caprolactam	170	U	170
4-Chloro-3-methylphenol	170	U	170
2-Methylnaphthalene	170	U	170
Hexachlorocyclopentadiene	170	U	170
2,4,6-Trichlorophenol	170	U	170
2,4,5-Trichlorophenol	170	U	170
1,1'-Biphenyl	170	U	170
2-Chloronaphthalene	170	U	170
2-Nitroaniline	330	U	330
Dimethylphthalate	170	U	170
2,6-Dinitrotoluene	170	U	170
Acenaphthylene	170	U	170
3-Nitroaniline	330	U	330
Acenaphthene	170	U	170
2,4-Dinitrophenol	330	U	330
4-Nitrophenol	330	U	330
Dibenzofuran	170	U	170
2,4-Dinitrotoluene	170	U	170
Diethylphthalate	170	U	170
Fluorene	170	U	170
4-Chlorophenyl-phenylether	170	U	170
4-Nitroaniline	330	U	330
4,6-Dinitro-2-methylphenol	330	U	330
N-Nitrosodiphenylamine	170	U	170
1,2,4,5-Tetrachlorobenzene	170	U	170

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21593

**Method: SOM01.2/SV
Preparation: SONC**

Lab Sample ID: MB 200-21593/1-B
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/22/2011 1540
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-22189
Prep Batch: 200-21593
Leach Batch: N/A
Units: ug/Kg

Instrument ID: P.i
Lab File ID: phv12.d
Initial Weight/Volume: 30.02 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

Analyte	Result	Qual	RL
4-Bromophenyl-phenylether	170	U	170
Hexachlorobenzene	170	U	170
Atrazine	170	U	170
Pentachlorophenol	330	U	330
Phenanthrene	170	U	170
Anthracene	170	U	170
Carbazole	170	U	170
Di-n-butylphthalate	11	J	170
Fluoranthene	170	U	170
Pyrene	170	U	170
Butylbenzylphthalate	8.4	J	170
3,3'-Dichlorobenzidine	170	U	170
Benzo(a)anthracene	170	U	170
Chrysene	170	U	170
Bis(2-ethylhexyl)phthalate	11	J	170
Di-n-octylphthalate	170	U	170
Benzo(b)fluoranthene	170	U	170
Benzo(k)fluoranthene	170	U	170
Benzo(a)pyrene	170	U	170
Indeno(1,2,3-cd)pyrene	170	U	170
Dibenzo(a,h)anthracene	170	U	170
Benzo(g,h,i)perylene	170	U	170
2,3,4,6-Tetrachlorophenol	170	U	170

Surrogate	% Rec	Acceptance Limits
Phenol-d5	75	17 - 103
Bis(2-chloroethyl)ether-d8	67	12 - 98
2-Chlorophenol-d4	79	13 - 101
4-Methylphenol-d8	78	8 - 100
Nitrobenzene-d5	72	16 - 103
2-Nitrophenol-d4	73	16 - 104
2,4-Dichlorophenol-d3	72	23 - 104
4-Chloroaniline-d4	58	1 - 145
Dimethylphthalate-d6	79	43 - 111
Acenaphthylene-d8	80	20 - 97
4-Nitrophenol-d4	70	16 - 166
Fluorene-d10	73	40 - 108
4,6-Dinitro-2-methylphenol-d2	57	1 - 121
Anthracene-d10	75	22 - 98
Pyrene-d10	80	51 - 120
Benzo(a)pyrene-d12	70	43 - 111

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21593**

**Method: SOM01.2/SV
Preparation: SONC**

MS Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/22/2011 1707
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-22189
Prep Batch: 200-21593
Leach Batch: N/A

Instrument ID: P.i
Lab File ID: phv14.d
Initial Weight/Volume: 30.27 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

MSD Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/22/2011 1750
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-22189
Prep Batch: 200-21593
Leach Batch: N/A

Instrument ID: P.i
Lab File ID: phv15.d
Initial Weight/Volume: 30.51 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Phenol	68	78	26 - 90	14	35		
2-Chlorophenol	70	81	25 - 102	15	50		
N-Nitroso-di-n-propylamine	68	75	41 - 126	10	38		
4-Chloro-3-methylphenol	66	78	26 - 103	17	33		
Acenaphthene	68	78	31 - 137	13	19		
4-Nitrophenol	62	72	11 - 114	16	50		
2,4-Dinitrotoluene	62	73	28 - 89	16	47		
Pentachlorophenol	57	69	17 - 109	20	47		
Pyrene	72	84	35 - 142	15	36		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Phenol-d5	69	76	17 - 103
Bis(2-chloroethyl)ether-d8	63	71	12 - 98
2-Chlorophenol-d4	71	78	13 - 101
4-Methylphenol-d8	71	77	8 - 100
Nitrobenzene-d5	67	72	16 - 103
2-Nitrophenol-d4	67	74	16 - 104
2,4-Dichlorophenol-d3	64	71	23 - 104
4-Chloroaniline-d4	51	53	1 - 145
Dimethylphthalate-d6	72	77	43 - 111
Acenaphthylene-d8	73	79	20 - 97
4-Nitrophenol-d4	63	72	16 - 166
Fluorene-d10	67	72	40 - 108
4,6-Dinitro-2-methylphenol-d2	53	61	1 - 121
Anthracene-d10	75	79	22 - 98
Pyrene-d10	78	84	51 - 120
Benzo(a)pyrene-d12	68	76	43 - 111

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21593

**Method: SOM01.2/SV SIM
Preparation: SONC**

Lab Sample ID: MB 200-21593/1-B
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/20/2011 1640
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-21980
Prep Batch: 200-21593
Leach Batch: N/A
Units: ug/Kg

Instrument ID: Z.i
Lab File ID: zwsms02.d
Initial Weight/Volume: 30.02 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

Analyte	Result	Qual	RL
Naphthalene	0.38	J	3.3
2-Methylnaphthalene	0.12	J	3.3
Acenaphthylene	3.3	U	3.3
Acenaphthene	3.3	U	3.3
Fluorene	3.3	U	3.3
Hexachlorobenzene	3.3	U	3.3
Pentachlorophenol	6.7	U	6.7
Phenanthrene	3.3	U	3.3
Anthracene	3.3	U	3.3
Fluoranthene	3.3	U	3.3
Pyrene	0.98	J	3.3
Benzo(a)anthracene	3.3	U	3.3
Chrysene	3.3	U	3.3
Benzo(b)fluoranthene	3.3	U	3.3
Benzo(k)fluoranthene	3.3	U	3.3
Benzo(a)pyrene	4.0	U	3.3
Indeno(1,2,3-cd)pyrene	3.3	U	3.3
Dibenz(a,h)anthracene	3.3	U	3.3
Benzo(g,h,i)perylene	3.3	U	3.3
Surrogate	% Rec	Acceptance Limits	
Fluoranthene-d10	66	50 - 150	
2-Methylnaphthalene-d10	75	50 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21593**

**Method: SOM01.2/SV SIM
Preparation: SONC**

MS Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/20/2011 1820
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-21980
Prep Batch: 200-21593
Leach Batch: N/A

Instrument ID: Z.i
Lab File ID: zwsms04.d
Initial Weight/Volume: 29.87 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

MSD Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/20/2011 1910
Prep Date: 07/15/2011 0906
Leach Date: N/A

Analysis Batch: 200-21980
Prep Batch: 200-21593
Leach Batch: N/A

Instrument ID: Z.i
Lab File ID: zwsms05.d
Initial Weight/Volume: 29.95 g
Final Weight/Volume: 10000 uL
Injection Volume: 2 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Acenaphthene	64	67	31 - 137	4	19		
Pentachlorophenol	82	88	17 - 109	7	47		
Pyrene	92	118	35 - 142	25	36	B	B
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Fluoranthene-d10	68		65	50 - 150			
2-Methylnaphthalene-d10	79		80	50 - 150			

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21309

**Method: SOM01.2/PCB
Preparation: SONC**

Lab Sample ID: MB 200-21309/1-C
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 1055
Prep Date: 07/12/2011 0820
Leach Date: N/A

Analysis Batch: 200-22010
Prep Batch: 200-21309
Leach Batch: N/A
Units: ug/Kg

Instrument ID: 5253.i
Lab File ID: 21jul111053-r011.d
Initial Weight/Volume: 30.39 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
Aroclor-1016	33	U	33
Aroclor-1221	33	U	33
Aroclor-1232	33	U	33
Aroclor-1242	33	U	33
Aroclor-1248	33	U	33
Aroclor-1254	33	U	33
Aroclor-1260	33	U	33
Aroclor-1262	33	U	33
Aroclor-1268	33	U	33

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	73	30 - 150
Decachlorobiphenyl	84	30 - 150
Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	80	30 - 150
Decachlorobiphenyl	86	30 - 150

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Lab Control Sample - Batch: 200-21309

Method: SOM01.2/PCB
Preparation: SONC

Lab Sample ID: LCS 200-21309/2-C	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r021.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.10 g
Analysis Date: 07/21/2011 1119	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	33.2	31	94	50 - 150	J
Aroclor-1260	33.2	34	102	50 - 150	
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		79		30 - 150	
Decachlorobiphenyl		84		30 - 150	

Lab Control Sample - Batch: 200-21309

Method: SOM01.2/PCB
Preparation: SONC

Lab Sample ID: LCS 200-21309/2-C	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r021.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.10 g
Analysis Date: 07/21/2011 1119	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor-1016	33.2	32	96	50 - 150	J
Aroclor-1260	33.2	36	109	50 - 150	
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		88		30 - 150	
Decachlorobiphenyl		86		30 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21309**

**Method: SOM01.2/PCB
Preparation: SONC**

MS Lab Sample ID: 200-5934-1	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r041.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.05 g
Analysis Date: 07/21/2011 1207		Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

MSD Lab Sample ID: 200-5934-1	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r051.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.19 g
Analysis Date: 07/21/2011 1231		Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor-1016	80	82	29 - 135	2	15		
Aroclor-1260	94	95	29 - 135	1	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Tetrachloro-m-xylene	81		78	30 - 150			
Decachlorobiphenyl	85		95	30 - 150			

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21309**

**Method: SOM01.2/PCB
Preparation: SONC**

MS Lab Sample ID: 200-5934-1	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r041.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.05 g
Analysis Date: 07/21/2011 1207		Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

MSD Lab Sample ID: 200-5934-1	Analysis Batch: 200-22010	Instrument ID: 5253.i
Client Matrix: Solid	Prep Batch: 200-21309	Lab File ID: 21jul111053-r051.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.19 g
Analysis Date: 07/21/2011 1231		Final Weight/Volume: 10000 uL
Prep Date: 07/12/2011 0820		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor-1016	84	86	29 - 135	2	15		
Aroclor-1260	97	99	29 - 135	1	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Tetrachloro-m-xylene	88		88	30 - 150			
Decachlorobiphenyl	87		96	30 - 150			

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: MB 200-21768/1-E
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 2145
Prep Date: 07/19/2011 0753
Leach Date: N/A

Analysis Batch: 200-22096
Prep Batch: 200-21768
Leach Batch: N/A
Units: ug/Kg

Instrument ID: 5005.i
Lab File ID: 21jul111245-r041.d
Initial Weight/Volume: 30.12 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
alpha-BHC	1.7	U	1.7
beta-BHC	0.11	J	1.7
delta-BHC	1.7	U	1.7
gamma-BHC (Lindane)	1.7	U	1.7
Heptachlor	1.7	U	1.7
Aldrin	1.7	U	1.7
Heptachlor epoxide	1.7	U	1.7
Endosulfan I	1.7	U	1.7
Dieldrin	3.3	U	3.3
4,4'-DDE	3.3	U	3.3
Endrin	3.3	U	3.3
Endosulfan II	3.3	U	3.3
4,4'-DDD	3.3	U	3.3
Endosulfan sulfate	3.3	U	3.3
4,4'-DDT	3.3	U	3.3
Methoxychlor	17	U	17
Endrin ketone	3.3	U	3.3
Endrin aldehyde	3.3	U	3.3
alpha-Chlordane	1.7	U	1.7
gamma-Chlordane	1.7	U	1.7
Toxaphene	170	U	170

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	69	30 - 150
Decachlorobiphenyl	80	30 - 150

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	69	30 - 150
Decachlorobiphenyl	86	30 - 150

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: MB 200-21768/1-E
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/22/2011 1438
Prep Date: 07/19/2011 0753
Leach Date: N/A

Analysis Batch: 200-22247
Prep Batch: 200-21768
Leach Batch: N/A
Units: ug/Kg

Instrument ID: 0911.i
Lab File ID: 22jul110858-r011.d
Initial Weight/Volume: 30.12 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
2,4'-DDE	3.3	U	3.3
2,4'-DDT	3.3	U	3.3
2,4'-DDD	3.3	U	3.3
Surrogate	% Rec	Acceptance Limits	
Tetrachloro-m-xylene	74	30 - 150	
Decachlorobiphenyl	78	30 - 150	
Surrogate	% Rec	Acceptance Limits	
Tetrachloro-m-xylene	78	30 - 150	
Decachlorobiphenyl	80	30 - 150	

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Lab Control Sample - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: LCS 200-21768/2-E	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r051.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.16 g
Analysis Date: 07/21/2011 2211	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
gamma-BHC (Lindane)	1.66	1.3	81	50 - 120	J
Heptachlor epoxide	1.66	1.6	97	50 - 150	J
Dieldrin	3.32	3.1	94	30 - 130	J
4,4'-DDE	3.32	3.1	92	50 - 150	J
Endrin	3.32	3.2	95	50 - 120	J
Endosulfan sulfate	3.32	3.2	98	50 - 120	J
gamma-Chlordane	1.66	1.6	97	30 - 130	J
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Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		79		30 - 150	
Decachlorobiphenyl		93		30 - 150	

Lab Control Sample - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: LCS 200-21768/2-E	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r051.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.16 g
Analysis Date: 07/21/2011 2211	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
gamma-BHC (Lindane)	1.66	1.4	85	50 - 120	J
Heptachlor epoxide	1.66	1.7	101	50 - 150	J
Dieldrin	3.32	3.2	96	30 - 130	J
4,4'-DDE	3.32	3.1	93	50 - 150	J
Endrin	3.32	3.2	97	50 - 120	J
Endosulfan sulfate	3.32	3.4	103	50 - 120	J
gamma-Chlordane	1.66	1.7	101	30 - 130	J
<hr/>					
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		80		30 - 150	
Decachlorobiphenyl		108		30 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Lab Control Sample - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: LCS 200-21768/3-E	Analysis Batch: 200-22247	Instrument ID: 0911.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 22jul110858-r021.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.00 g
Analysis Date: 07/22/2011 1509	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4'-DDE	3.33	2.6	77	50 - 150	J
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		71		30 - 150	
Decachlorobiphenyl		79		30 - 150	

Lab Control Sample - Batch: 200-21768

**Method: SOM01.2/Pest
Preparation: SONC**

Lab Sample ID: LCS 200-21768/3-E	Analysis Batch: 200-22247	Instrument ID: 0911.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 22jul110858-r021.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 30.00 g
Analysis Date: 07/22/2011 1509	Units: ug/Kg	Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4'-DDE	3.33	3.0	89	50 - 150	J
Surrogate		% Rec		Acceptance Limits	
Tetrachloro-m-xylene		74		30 - 150	
Decachlorobiphenyl		82		30 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21768**

**Method: SOM01.2/Pest
Preparation: SONC**

MS Lab Sample ID: 200-5934-1	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r081.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 29.95 g
Analysis Date: 07/21/2011 2328		Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

MSD Lab Sample ID: 200-5934-1	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r071.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 29.99 g
Analysis Date: 07/21/2011 2303		Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
gamma-BHC (Lindane)	66	70	46 - 127	6	50		
Heptachlor	66	72	35 - 130	9	31		
Aldrin	69	73	34 - 132	6	43		
Dieldrin	76	79	31 - 134	3	38		
Endrin	78	80	42 - 139	2	45		
4,4'-DDT	74	77	23 - 134	4	50		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Tetrachloro-m-xylene		63	69			30 - 150	
Decachlorobiphenyl		73	74			30 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21768**

**Method: SOM01.2/Pest
Preparation: SONC**

MS Lab Sample ID: 200-5934-1	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r081.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 29.95 g
Analysis Date: 07/21/2011 2328		Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

MSD Lab Sample ID: 200-5934-1	Analysis Batch: 200-22096	Instrument ID: 5005.i
Client Matrix: Solid	Prep Batch: 200-21768	Lab File ID: 21jul111245-r071.d
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 29.99 g
Analysis Date: 07/21/2011 2303		Final Weight/Volume: 10000 uL
Prep Date: 07/19/2011 0753		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
gamma-BHC (Lindane)	66	70	46 - 127	7	50		
Heptachlor	68	74	35 - 130	9	31		
Aldrin	71	75	34 - 132	7	43		
Dieldrin	77	81	31 - 134	5	38		
Endrin	80	82	42 - 139	2	45		
4,4'-DDT	78	82	23 - 134	5	50		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
Tetrachloro-m-xylene		65	70			30 - 150	
Decachlorobiphenyl		77	79			30 - 150	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21476

**Method: ISM01.2/HG
Preparation: 7471B**

Lab Sample ID: MB 200-21476/11-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/14/2011 1428
Prep Date: 07/13/2011 1430
Leach Date: N/A

Analysis Batch: 200-21561
Prep Batch: 200-21476
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MEPCV3 II
Lab File ID: 071411BB.PRN
Initial Weight/Volume: 0.50 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDLE	RL
Mercury	0.0034	J	0.0034	0.10

Matrix Spike - Batch: 200-21476

**Method: ISM01.2/HG
Preparation: 7471B**

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/14/2011 1503
Prep Date: 07/13/2011 1430
Leach Date: N/A

Analysis Batch: 200-21561
Prep Batch: 200-21476
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MEPCV3 II
Lab File ID: 071411BB.PRN
Initial Weight/Volume: 0.52 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.098 U	0.981	1.0	106	75 - 125	

Duplicate - Batch: 200-21476

**Method: ISM01.2/HG
Preparation: 7471B**

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/14/2011 1501
Prep Date: 07/13/2011 1430
Leach Date: N/A

Analysis Batch: 200-21561
Prep Batch: 200-21476
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MEPCV3 II
Lab File ID: 071411BB.PRN
Initial Weight/Volume: 0.59 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.098 U	0.086			U

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Method Blank - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: MB 200-21442/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/19/2011 0324
Prep Date: 07/13/2011 1132
Leach Date: N/A

Analysis Batch: 200-21788
Prep Batch: 200-21442
Leach Batch: N/A
Units: mg/Kg

Instrument ID: METICP7
Lab File ID: 071811-03.ttx
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	20.0	U	6.4	20.0
Antimony	6.0	U	0.34	6.0
Barium	20.0	U	0.89	20.0
Beryllium	0.50	U	0.028	0.50
Cadmium	0.50	U	0.033	0.50
Calcium	500	U	7.9	500
Chromium	1.0	U	0.046	1.0
Cobalt	5.0	U	0.077	5.0
Copper	2.5	U	0.097	2.5
Lead	1.0	U	0.26	1.0
Magnesium	500	U	6.7	500
Potassium	500	U	19.0	500
Nickel	4.0	U	0.22	4.0
Selenium	3.5	U	0.28	3.5
Silver	1.0	U	0.15	1.0
Sodium	-12	J	6.0	500
Vanadium	5.0	U	0.12	5.0
Zinc	6.0	U	0.85	6.0

Method Blank - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: MB 200-21442/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/20/2011 0523
Prep Date: 07/13/2011 1132
Leach Date: N/A

Analysis Batch: 200-21924
Prep Batch: 200-21442
Leach Batch: N/A
Units: mg/Kg

Instrument ID: METICP7
Lab File ID: 071911-03.ttx
Initial Weight/Volume: 1.00 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Arsenic	1.0	U	0.27	1.0
Iron	2.6	J	1.4	10.0
Manganese	1.5	U	0.024	1.5
Thallium	-0.23	J	0.13	2.5

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Lab Control Sample - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: LCS 200-21442/2-A	Analysis Batch: 200-21788	Instrument ID: METICP7
Client Matrix: Solid	Prep Batch: 200-21442	Lab File ID: 071811-03.ttx
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.00 g
Analysis Date: 07/19/2011 0329	Units: mg/Kg	Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	40.0	46.1	115	70 - 130	
Antimony	12.0	12.3	102	70 - 130	
Barium	40.0	43.6	109	70 - 130	
Beryllium	1.00	1.1	109	70 - 130	
Cadmium	1.00	1.1	109	70 - 130	
Calcium	1000	1090	109	70 - 130	
Chromium	2.00	2.3	115	70 - 130	
Cobalt	10.0	10.9	109	70 - 130	
Copper	5.00	5.3	106	70 - 130	
Lead	2.00	2.3	113	70 - 130	
Magnesium	1000	1100	110	70 - 130	
Potassium	1000	1070	107	70 - 130	
Nickel	8.00	8.6	108	70 - 130	
Selenium	7.00	6.7	96	70 - 130	
Silver	2.00	2.1	103	70 - 130	
Sodium	1000	1070	107	70 - 130	
Vanadium	10.0	10.7	107	70 - 130	
Zinc	12.0	12.3	103	70 - 130	

Lab Control Sample - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: LCS 200-21442/2-A	Analysis Batch: 200-21924	Instrument ID: METICP7
Client Matrix: Solid	Prep Batch: 200-21442	Lab File ID: 071911-03.ttx
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.00 g
Analysis Date: 07/20/2011 0529	Units: mg/Kg	Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	2.00	2.0	99	70 - 130	
Iron	20.0	26.1	131	70 - 130	
Manganese	3.00	3.3	111	70 - 130	
Thallium	5.00	5.1	101	70 - 130	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Matrix Spike - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21788	Instrument ID: METICP7
Client Matrix: Solid	Prep Batch: 200-21442	Lab File ID: 071811-03.ttx
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.31 g
Analysis Date: 07/19/2011 0538	Units: mg/Kg	Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		
Leach Date: N/A		

Analyte	Sample	Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	4.3	U	15.6	11.2	72	75 - 125	N
Barium	3.3	J	312	271	86	75 - 125	
Beryllium	0.11	J	7.79	6.9	87	75 - 125	
Cadmium	0.075	J	7.79	7.3	92	75 - 125	
Chromium	3.2		31.2	31.2	90	75 - 125	
Cobalt	2.2	J	77.9	68.7	85	75 - 125	
Copper	5.2		38.9	41.2	92	75 - 125	
Lead	6.6		3.12	9.0	77	75 - 125	
Nickel	4.9		77.9	70.8	85	75 - 125	
Selenium	2.5	U	7.79	6.4	82	75 - 125	
Silver	0.72	U	7.79	7.6	97	75 - 125	
Vanadium	5.5		77.9	77.5	92	75 - 125	
Zinc	2.6	J	77.9	72.0	89	75 - 125	

Matrix Spike - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21924	Instrument ID: METICP7
Client Matrix: Solid	Prep Batch: 200-21442	Lab File ID: 071911-03.ttx
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1.31 g
Analysis Date: 07/20/2011 0737	Units: mg/Kg	Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132		
Leach Date: N/A		

Analyte	Sample	Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.4		6.23	8.8	118	75 - 125	
Thallium	1.8	U	7.79	8.8	113	75 - 125	

Matrix Spike - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1DL2	Analysis Batch: 200-21924	Instrument ID: METICP7
Client Matrix: Solid	Prep Batch: 200-21442	Lab File ID: 071911-03.ttx
Dilution: 10	Leach Batch: N/A	Initial Weight/Volume: 1.31 g
Analysis Date: 07/20/2011 0853	Units: mg/Kg	Final Weight/Volume: 100 mL
Prep Date: 07/13/2011 1132	Run Type: DL2	
Leach Date: N/A		

Analyte	Sample	Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
---------	--------	-------------	--------------	--------	--------	-------	------

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Matrix Spike - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1DL2
Client Matrix: Solid
Dilution: 10
Analysis Date: 07/20/2011 0853
Prep Date: 07/13/2011 1132
Leach Date: N/A

Analysis Batch: 200-21924
Prep Batch: 200-21442
Leach Batch: N/A
Units: mg/Kg
Run Type: DL2

Instrument ID: METICP7
Lab File ID: 071911-03.ttx
Initial Weight/Volume: 1.31 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	170	77.9	259	115	75 - 125	

Preliminary Data

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Duplicate - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/19/2011 0532
Prep Date: 07/13/2011 1132
Leach Date: N/A

Analysis Batch: 200-21788
Prep Batch: 200-21442
Leach Batch: N/A
Units: mg/Kg

Instrument ID: METICP7
Lab File ID: 071811-03.ttx
Initial Weight/Volume: 1.38 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	432	546	23		*
Antimony	4.3 U	4.4			U
Barium	3.3 J	3.3	0	14.4	J
Beryllium	0.11 J	0.12	10	0.36	J
Cadmium	0.075 J	0.083	10	0.36	J
Chromium	3.2	3.8	19	0.72	
Cobalt	2.2 J	2.3	5	3.6	J
Copper	5.2	4.8	8	1.8	
Lead	6.6	4.5	38		*
Nickel	4.9	5.3	8	2.9	
Potassium	334 J	387	15	359	
Selenium	2.5 U	2.6			U
Silver	0.72 U	0.74			U
Sodium	109 J	110	1	359	J
Vanadium	5.5	6.4	15	3.6	
Zinc	2.6 J	4.0	41	4.3	J

Duplicate - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/20/2011 0732
Prep Date: 07/13/2011 1132
Leach Date: N/A

Analysis Batch: 200-21924
Prep Batch: 200-21442
Leach Batch: N/A
Units: mg/Kg

Instrument ID: METICP7
Lab File ID: 071911-03.ttx
Initial Weight/Volume: 1.38 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Arsenic	1.4	2.3	45	0.72	*
Iron	3310	5410	48		*
Thallium	1.8 U	0.36	200	1.8	J

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1
Sdg Number: PRR1140

Duplicate - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID:	200-5934-1DL	Analysis Batch:	200-21924	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-21442	Lab File ID:	071911-03.ttx
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.38 g
Analysis Date:	07/20/2011 0848	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/13/2011 1132	Run Type:	DL		
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Manganese	170	316	60		*

Duplicate - Batch: 200-21442

Method: ISM01.2/ICP
Preparation: 3050B

Lab Sample ID:	200-5934-1DL2	Analysis Batch:	200-21924	Instrument ID:	METICP7
Client Matrix:	Solid	Prep Batch:	200-21442	Lab File ID:	071911-03.ttx
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	1.38 g
Analysis Date:	07/20/2011 0909	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	07/13/2011 1132	Run Type:	DL2		
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Calcium	192000	189000	1		
Magnesium	110000	111000	1	35900	

FedEx 146525 Rev. 02/09 RRDD 11

From: (609) 860-0590
Cranbury Staff
ARCADIS U.S., Inc.
8 South River Road

Origin ID: ZRPA



Cranbury, NJ 08512

Ship Date: 08JUL11
ActWgt: 25.0 LB
CAD: 4490047/INET3180

Delivery Address Bar Code



SHIP TO: (802) 660-1021

BILL SENDER

Kirk Young
Test America
30 COMMUNITY DR

SOUTH BURLINGTON, VT 05403

Ref # B0009966.0002.70004
Invoice #
PO #
Dept #

1 of 2

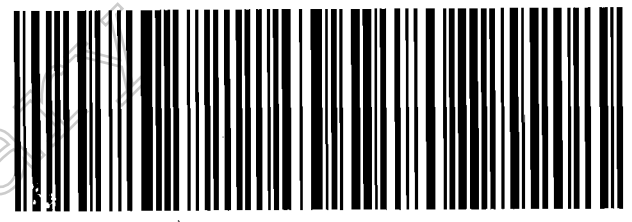
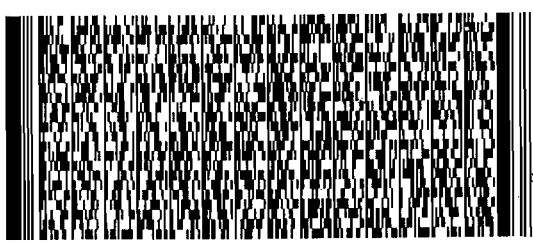
SATURDAY ### A4
PRIORITY OVERNIGHT

TRK# 7949 5409 5648
0201

MASTER

05403
VT-US
BTV

X0 BTVA



50FG2/F556/F5F4

2 of 2

SATURDAY ### A4
PRIORITY OVERNIGHT

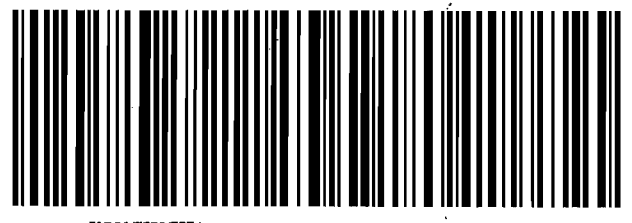
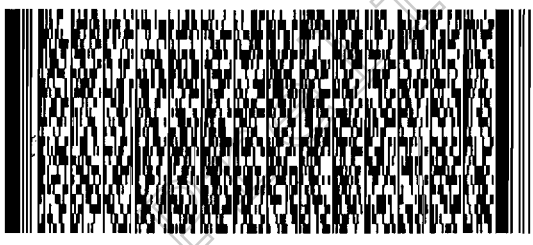
MPS# 7949 5409 5615
0263

Mstr# 7949 5409 5648

0201

05403
VT-US
BTV

X0 BTVA



50FG2/F556/F5F4



Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 200-5934-1

SDG Number: PRR1140

Login Number: 5934

List Source: TestAmerica Burlington

List Number: 1

Creator: Marion, Greg T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
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	5.2, 5.1 °C, IR GUN ID 96/CF=0
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.	N/A	
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.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	Check done at department level if required.

ANALYTICAL REPORT

Job Number: 200-5934-2

SDG Number: PRR1140

Job Description: LPRSA - Phase I Removal Action

For:

ARCADIS U.S. Inc
2300 Eastlake Avenue, East
Suite 140
Seattle, WA 98102

Attention: Ms. Shannon Dunn



Approved for release.
Kirk F Young
Project Manager I
7/25/2011 5:10 PM

Kirk F Young
Project Manager I
kirk.young@testamericainc.com
07/25/2011

cc: Mr. Joe Houser
Mr. Don Reed

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403
Tel (802) 660-1990 Fax (802) 660-1919 www.testamericainc.com



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CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: LPRSA - Phase I Removal Action

Report Number: PRR1140 (200-5934-2)

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met. Calibration and calibration verification were assessed on an analyte specific basis. Initial calibration and continuing calibration criteria may not have been met in all instances.

Calculations were performed before rounding to avoid round-off errors in calculated results.

Method 9045C is normally performed in the field and has a method-defined holding time of 15 minutes. All holding times were met and proper preservation noted for the other methods of analysis.

Manual integration was employed in deriving certain of the analytical results.

For the Method 8151A analysis, positive instrument responses in the analysis of samples and quality controls were evaluated to the established method detection limit (MDL).

This is an abbreviated report. A more formal report will be issued in a CLP-like format, with supportive documentation and further narrative discussion.

METHOD SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Herbicides (GC)	TAL BUR	SW846 8151A	
Extraction (Herbicides)	TAL BUR		SW846 8151A
pH	TAL BUR	SW846 9045C	
Percent Moisture	TAL BUR	EPA Moisture	
SOM VOA Percent Moisture Determination	TAL BUR	EPA Moisture	
Grain Size	TAL BUR	ASTM D422	

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

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

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Method	Analyst	Analyst ID
SW846 8151A	Bailey, Jacob L	JLB
SW846 9045C	Nelson, Andrea J	AJN
EPA Moisture	Nelson, Andrea J	AJN
ASTM D422	Flax, Scott A	SAF

SAMPLE SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-5934-1	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1MS	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1MSD	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940
200-5934-1DU	PRR1SOLSP-01	Solid	07/08/2011 1100	07/09/2011 0940

SAMPLE RESULTS

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

8151A Herbicides (GC)

Analysis Method: 8151A

Analysis Batch: 200-22017

Instrument ID: 0911.i

Prep Method: 8151A

Prep Batch: 200-21664

Initial Weight/Volume: 50.02 g

Dilution: 1.0

Final Weight/Volume: 10000 uL

Analysis Date: 07/21/2011 1206

Injection Volume: 1 uL

Prep Date: 07/16/2011 1121

Result Type: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
2,4-D		39	U	5.7	39
2,4-DB		19	U	7.4	19
2,4,5-T		9.7	U	1.5	9.7
Silvex (2,4,5-TP)		3.9	U	0.46	3.9

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4-Dichlorophenylacetic acid	86		25 - 195

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

% Moisture: 2.0

Date Received: 07/09/2011 0940

8151A Herbicides (GC)

Analysis Method: 8151A

Analysis Batch: 200-22017

Instrument ID: 0911.i

Prep Method: 8151A

Prep Batch: 200-21664

Initial Weight/Volume: 50.02 g

Dilution: 1.0

Final Weight/Volume: 10000 uL

Analysis Date: 07/21/2011 1206

Injection Volume: 1 uL

Prep Date: 07/16/2011 1121

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4-Dichlorophenylacetic acid	86		25 - 195

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

General Chemistry

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

Date Received: 07/09/2011 0940

Analyte	Result	Qual	Units	Dil	Method
pH	9.25	HF	SU	1.0	9045C
	Analysis Batch: 200-21261	Analysis Date: 07/11/2011 1600			DryWt Corrected: N

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.0		%	0.25	0.25	1.0	Moisture
	Analysis Batch: 200-21238	Analysis Date: 07/11/2011 1303					DryWt Corrected: N
Percent Moisture	1.8		%	0.25	0.25	1.0	Moisture
	Analysis Batch: 200-21229	Analysis Date: 07/11/2011 1157					DryWt Corrected: N
Percent Solids	98.0		%	0.25	0.25	1.0	Moisture
	Analysis Batch: 200-21238	Analysis Date: 07/11/2011 1303					DryWt Corrected: N
Percent Solids	98.2		%	0.25	0.25	1.0	Moisture
	Analysis Batch: 200-21229	Analysis Date: 07/11/2011 1157					DryWt Corrected: N

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

Date Received: 07/09/2011 0940

D422 Grain Size

Analysis Method: D422	Analysis Batch: 200-21879	Instrument ID: D422_import
N/A	Prep Batch: N/A	Lab File ID: 200-5934-AA-1.txt
Dilution: 1.0		Initial Weight/Volume: 138.18 g
Analysis Date: 07/15/2011 1028		Final Weight/Volume:
Prep Date: N/A		

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		97.0			
Sieve Size #10 - Percent Finer		28.1			
Sieve Size #20 - Percent Finer		7.2			
Sieve Size #40 - Percent Finer		3.1			
Sieve Size #60 - Percent Finer		2.3			
Sieve Size #80 - Percent Finer		2.1			
Sieve Size #100 - Percent Finer		2.0			
Sieve Size #200 - Percent Finer		1.7			
Hydrometer Reading 1 - Percent Finer		1.5			
Hydrometer Reading 2 - Percent Finer		1.5			
Hydrometer Reading 3 - Percent Finer		1.5			
Hydrometer Reading 4 - Percent Finer		1.5			
Hydrometer Reading 5 - Percent Finer		1.5			
Hydrometer Reading 6 - Percent Finer		1.5			
Hydrometer Reading 7 - Percent Finer		0.9			

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

Date Received: 07/09/2011 0940

D422 Grain Size

Analysis Method:	D422	Analysis Batch:	200-21879	Instrument ID:	D422_import
	N/A	Prep Batch:	N/A	Lab File ID:	200-5934-AA-1.txt
Dilution:	1.0			Initial Weight/Volume:	138.18 g
Analysis Date:	07/15/2011 1028			Final Weight/Volume:	
Prep Date:	N/A				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		3.0			
Sand		95.4			
Coarse Sand		68.9			
Medium Sand		25.0			
Fine Sand		1.4			
Silt		0.1			
Clay		1.5			

Analytical Data

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Client Sample ID: PRR1SOLSP-01

Lab Sample ID: 200-5934-1

Date Sampled: 07/08/2011 1100

Client Matrix: Solid

Date Received: 07/09/2011 0940

D422 Grain Size

Analysis Method: D422

Analysis Batch: 200-21879

Instrument ID: D422_import

N/A

Prep Batch: N/A

Lab File ID: 200-5934-AA-1.txt

Dilution: 1.0

Initial Weight/Volume: 138.18 g

Analysis Date: 07/15/2011 1028

Final Weight/Volume:

Prep Date: N/A

Analyte	DryWt Corrected: N	Result (um)	Qualifier	NONE	NONE
Hydrometer Reading 1 - Particle Size		37.3			
Hydrometer Reading 2 - Particle Size		23.6			
Hydrometer Reading 3 - Particle Size		13.6			
Hydrometer Reading 4 - Particle Size		9.6			
Hydrometer Reading 5 - Particle Size		6.9			
Hydrometer Reading 6 - Particle Size		3.3			
Hydrometer Reading 7 - Particle Size		1.4			

Particle Size of Soils by ASTM D422

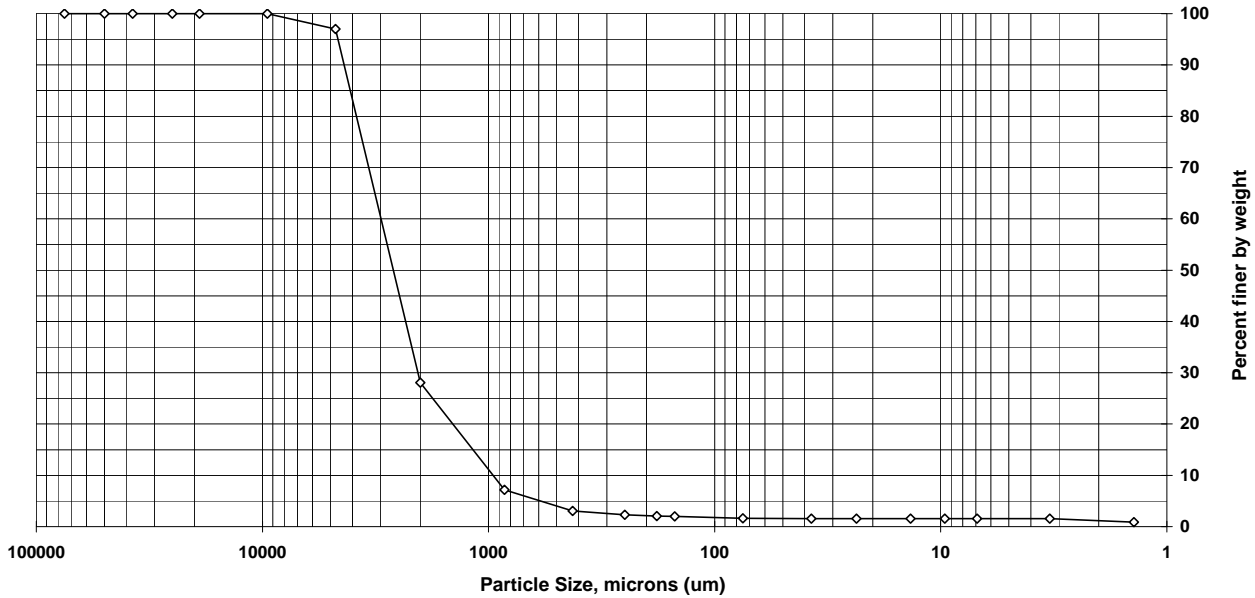
Sample ID: PRR1SOLSP-01
 Lab ID: 200-5934-AA-1

Percent Solids: 97.9%
 Specific Gravity: 2.650

Date Received: 07/09/11
 Start Date: 07/15/11
 End Date: 07/20/11

Shape (> #10): angular

Non-soil material: na
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.0	3.0
#10	2000	28.1	68.9
#20	850	7.2	20.9
#40	425	3.1	4.1
#60	250	2.3	0.8
#80	180	2.1	0.2
#100	150	2.0	0.1
#200	75	1.7	0.3
Hyd1	37.3	1.5	0.1
Hyd2	23.6	1.5	0.0
Hyd3	13.6	1.5	0.0
Hyd4	9.6	1.5	0.0
Hyd5	6.9	1.5	0.0
Hyd6	3.3	1.5	0.0
Hyd7	1.4	0.9	0.6

Soil Classification	Percent of sample
Gravel	3.0
Sand	95.4
Coarse Sand	68.9
Medium Sand	25.0
Fine Sand	1.4
Silt	0.1
Clay	1.5

Particle Size of Soils by ASTM D422

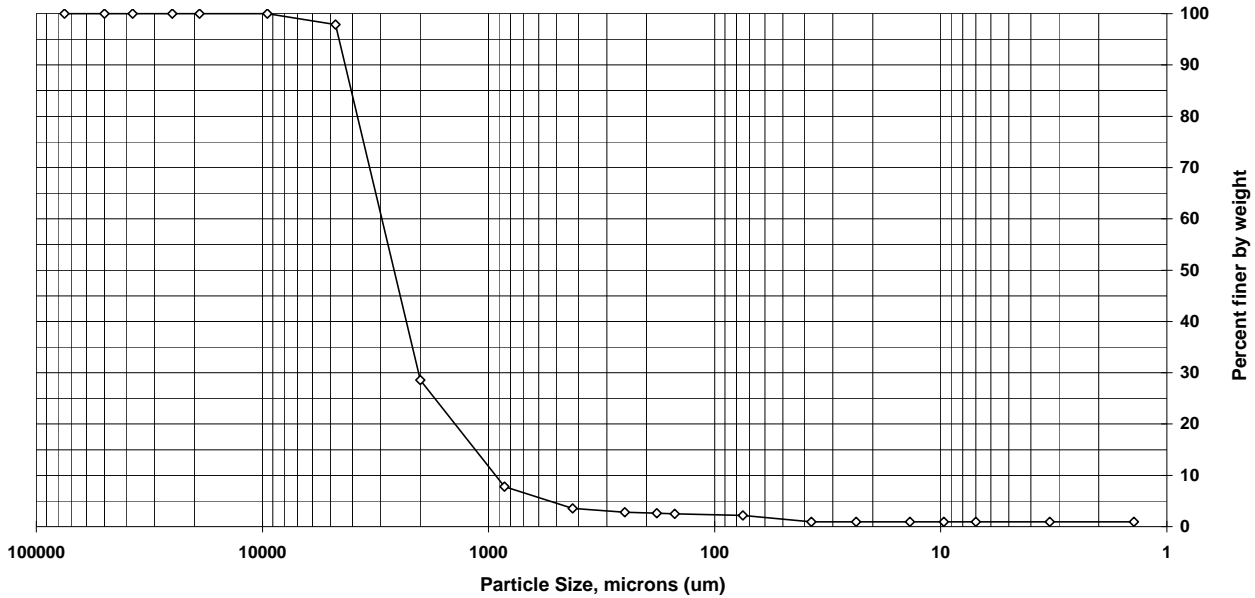
Sample ID: PRR1SOLSP-01
 Lab ID: 200-5934-AA-1DU

Percent Solids: 97.7%
 Specific Gravity: 2.650

Date Received: 07/09/11
 Start Date: 07/15/11
 End Date: 07/20/11

Shape (> #10): angular

Non-soil material: na
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	97.9	2.1
#10	2000	28.6	69.3
#20	850	7.8	20.8
#40	425	3.6	4.2
#60	250	2.8	0.8
#80	180	2.6	0.2
#100	150	2.5	0.1
#200	75	2.2	0.3
Hyd1	37.4	0.9	1.2
Hyd2	23.7	0.9	0.0
Hyd3	13.7	0.9	0.0
Hyd4	9.7	0.9	0.0
Hyd5	7	0.9	0.0
Hyd6	3.3	0.9	0.0
Hyd7	1.4	0.9	0.0

Soil Classification	Percent of sample
Gravel	2.1
Sand	95.7
Coarse Sand	69.3
Medium Sand	25.1
Fine Sand	1.4
Silt	1.2
Clay	0.9

TestAmerica Burlington

Sediment Grain Size - D422

Client	
Client Sample ID	PRR1SOLSP-01
Lab Sample ID	200-5934-AA-1

Date Received	07/09/11
Start Date	07/15/2011 10:28
End Date	07/20/2011 8:30

Dry Weight Determination

Tin Weight	1.00 g
Wet Sample + Tin	20.66 g
Dry Sample + Tin	20.24 g
% Moisture	2.14 %

Non-soil material:	na
Shape (> #10):	angular
Hardness (> #10):	hard

Date/Time in oven	07/15/2011 10:28
Date/Time out of oven	07/16/2011 10:11

Sample Weights

	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.81	185.99	138.18
Sample Weight (Oven Dried)			135

Hydrometer Data

Serial Number	741402
Calib. Date (mm/dd/yyyy)	12/21/2010
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0030
Hydrometer Cal Slope	-8.33333E-05
Hydrometer Cal Intercept	1.004916667
Default Soil Gravity	2.6500

Sample Split (oven dried)

	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			97.1
Sample <#10			37.9
% Passing #10			27.4

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample	% Finer	Classification	Sub Class
3 inch	75000			0.00 g	100.0	Gravel	
2 inch	50000			0.00 g	100.0	Gravel	
1.5 inch	37500			0.00 g	100.0	Gravel	
1 inch	25000			0.00 g	100.0	Gravel	
3/4 inch	19000			0.00 g	100.0	Gravel	
3/8 inch	9500			0.00 g	100.0	Gravel	
#4	4750	488.26	492.30	4.04 g	97.0	Gravel	
#10	2000	462.93	555.97	93.04 g	28.1	Sand	Coarse
#20	850	384.20	412.41	28.21 g	7.2	Sand	Medium
#40	425	353.97	359.54	5.57 g	3.1	Sand	Medium
#60	250	341.84	342.89	1.05 g	2.3	Sand	Fine
#80	180	330.73	331.02	0.29 g	2.1	Sand	Fine
#100	150	327.05	327.19	0.14 g	2.0	Sand	Fine
#200	75	312.72	313.16	0.44 g	1.7	Sand	Fine
				0.00 g	1.7		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	135
----------------------------	-----

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size		Classification	Sub Class
				(Micron)	% Finer		
2	2	1.0045	20.5	37.3	1.54	Silt	
5	5	1.0045	20.5	23.6	1.54	Silt	
15	15	1.0045	20.5	13.6	1.54	Silt	
30	30	1.0045	20.5	9.6	1.54	Silt	
60	59	1.0045	20.5	6.9	1.54	Silt	
250	256	1.0045	20.5	3.3	1.54	Clay	
1440	1440	1.0040	20.0	1.4	0.892	Clay	

TestAmerica Burlington

Sediment Grain Size - D422

Client
 Client Sample ID PRR1SOLSP-01
 Lab Sample ID 200-5934-AA-1DU

Date Received 07/09/11
 Start Date 07/15/2011 10:30
 End Date 07/20/2011 8:42

Dry Weight Determination

Tin Weight 1.03 g
 Wet Sample + Tin 18.00 g
 Dry Sample + Tin 17.61 g
 % Moisture 2.30 %

Non-soil material: na
 Shape (> #10): angular
 Hardness (> #10): hard

Date/Time in oven 07/15/2011 10:30
 Date/Time out of oven 07/16/2011 10:12

Sample Weights

	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.91	186.16	138.25
Sample Weight (Oven Dried)			135

Hydrometer Data

Serial Number 741402
 Calib. Date (mm/dd/yyyy) 12/21/2010
 Low Temp (C) 17.0
 Reading at Low Temp 1.0035
 High Temp (C) 23.0
 Reading at High Temp 1.0030
 Hydrometer Cal Slope -8.33333E-05
 Hydrometer Cal Intercept 1.004916667
 Default Soil Gravity 2.6500

Sample Split (oven dried)

	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			96.4
Sample <#10			38.6
% Passing #10			27.9

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample	% Finer	Classification	Sub Class
3 inch	75000			0.00 g	100.0	Gravel	
2 inch	50000			0.00 g	100.0	Gravel	
1.5 inch	37500			0.00 g	100.0	Gravel	
1 inch	25000			0.00 g	100.0	Gravel	
3/4 inch	19000			0.00 g	100.0	Gravel	
3/8 inch	9500			0.00 g	100.0	Gravel	
#4	4750	488.26	491.05	2.79 g	97.9	Gravel	
#10	2000	462.93	556.50	93.57 g	28.6	Sand	Coarse
#20	850	384.20	412.29	28.09 g	7.8	Sand	Medium
#40	425	353.97	359.69	5.72 g	3.6	Sand	Medium
#60	250	341.84	342.86	1.02 g	2.8	Sand	Fine
#80	180	330.73	331.00	0.27 g	2.6	Sand	Fine
#100	150	327.05	327.18	0.13 g	2.5	Sand	Fine
#200	75	312.72	313.16	0.44 g	2.2	Sand	Fine
				0.00 g	2.2		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g) 135

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size		Classification	Sub Class
				(Micron)	% Finer		
2	2	1.0040	20.5	37.4	0.942	Silt	
5	5	1.0040	20.5	23.7	0.942	Silt	
15	15	1.0040	20.5	13.7	0.942	Silt	
30	30	1.0040	20.5	9.7	0.942	Silt	
60	58	1.0040	20.5	7	0.942	Silt	
250	256	1.0040	20.5	3.3	0.942	Clay	
1440	1440	1.0040	20.5	1.4	0.942	Clay	

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Lab Section	Qualifier	Description
GC Semi VOA	U	Indicates the analyte was analyzed for but not detected.
General Chemistry	HF	Field parameter with a holding time of 15 minutes

QUALITY CONTROL RESULTS

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 200-21664					
LCS 200-21664/2-A	Lab Control Sample	T	Solid	8151A	
MB 200-21664/1-A	Method Blank	T	Solid	8151A	
200-5934-1	PRR1SOLSP-01	T	Solid	8151A	
200-5934-1MS	Matrix Spike	T	Solid	8151A	
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	8151A	
Analysis Batch:200-22017					
LCS 200-21664/2-A	Lab Control Sample	T	Solid	8151A	200-21664
MB 200-21664/1-A	Method Blank	T	Solid	8151A	200-21664
200-5934-1	PRR1SOLSP-01	T	Solid	8151A	200-21664
200-5934-1MS	Matrix Spike	T	Solid	8151A	200-21664
200-5934-1MSD	Matrix Spike Duplicate	T	Solid	8151A	200-21664
Report Basis					
T = Total					
General Chemistry					
Analysis Batch:200-21229					
200-5934-1	PRR1SOLSP-01	T	Solid	Moisture	
200-5934-1DU	Duplicate	T	Solid	Moisture	
Analysis Batch:200-21238					
200-5934-1	PRR1SOLSP-01	T	Solid	Moisture	
200-5934-1DU	Duplicate	T	Solid	Moisture	
Analysis Batch:200-21261					
200-5934-1	PRR1SOLSP-01	T	Solid	9045C	
200-5934-1DU	Duplicate	T	Solid	9045C	
Report Basis					
T = Total					
Geotechnical					
Analysis Batch:200-21879					
200-5934-1	PRR1SOLSP-01	T	Solid	D422	
200-5934-1DU	Duplicate	T	Solid	D422	
Report Basis					
T = Total					

TestAmerica Burlington

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

Sdg Number: PRR1140

Surrogate Recovery Report

8151A Herbicides (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCPA1 %Rec	DCPA2 %Rec
200-5934-1	PRR1SOLSP-01	86	86
MB 200-21664/1-A		92	113
LCS 200-21664/2-A		103	127
200-5934-1 MS	PRR1SOLSP-01 MS	100	96
200-5934-1 MSD	PRR1SOLSP-01 MSD	89	87

Surrogate

Acceptance Limits

DCPA = 2,4-Dichlorophenylacetic acid

25-195

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Method Blank - Batch: 200-21664

Lab Sample ID: MB 200-21664/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 1120
Prep Date: 07/16/2011 1121
Leach Date: N/A

Analysis Batch: 200-22017
Prep Batch: 200-21664
Leach Batch: N/A
Units: ug/Kg

**Method: 8151A
Preparation: 8151A**

Instrument ID: 0911.i
Lab File ID: 21jul111114-r011.d
Initial Weight/Volume: 49.89 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
2,4-D	38	U	5.6	38
2,4-DB	19	U	7.3	19
2,4,5-T	9.5	U	1.5	9.5
Silvex (2,4,5-TP)	3.8	U	0.45	3.8

Surrogate	% Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	113	25 - 195

Surrogate	% Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	92	25 - 195

Lab Control Sample - Batch: 200-21664

Lab Sample ID: LCS 200-21664/2-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 1143
Prep Date: 07/16/2011 1121
Leach Date: N/A

Analysis Batch: 200-22017
Prep Batch: 200-21664
Leach Batch: N/A
Units: ug/Kg

**Method: 8151A
Preparation: 8151A**

Instrument ID: 0911.i
Lab File ID: 21jul111114-r021.d
Initial Weight/Volume: 50.71 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
2,4-D	158	157	100	65 - 130	
2,4-DB	78.9	88.3	112	35 - 170	
2,4,5-T	39.5	40.6	103	60 - 140	
Silvex (2,4,5-TP)	15.8	15.9	101	65 - 130	

Surrogate	% Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	127	25 - 195

Surrogate	% Rec	Acceptance Limits
2,4-Dichlorophenylacetic acid	103	25 - 195

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 200-21664**

**Method: 8151A
Preparation: 8151A**

MS Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 1252
Prep Date: 07/16/2011 1121
Leach Date: N/A

Analysis Batch: 200-22017
Prep Batch: 200-21664
Leach Batch: N/A

Instrument ID: 0911.i
Lab File ID: 21jul111114-r051.d
Initial Weight/Volume: 50.46 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

MSD Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/21/2011 1229
Prep Date: 07/16/2011 1121
Leach Date: N/A

Analysis Batch: 200-22017
Prep Batch: 200-21664
Leach Batch: N/A

Instrument ID: 0911.i
Lab File ID: 21jul111114-r041.d
Initial Weight/Volume: 50.69 g
Final Weight/Volume: 10000 uL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
2,4-D	96	88	65 - 130	10	30		
2,4-DB	108	94	35 - 170	14	30		
2,4,5-T	100	91	60 - 140	9	30		
Silvex (2,4,5-TP)	99	89	65 - 130	11	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
2,4-Dichlorophenylacetic acid	100		89	25 - 195			
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
2,4-Dichlorophenylacetic acid	96		87	25 - 195			

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Duplicate - Batch: 200-21261

Method: 9045C
Preparation: N/A

Lab Sample ID:	200-5934-1	Analysis Batch:	200-21261	Instrument ID:	WCpHmeter
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	40 mL
Analysis Date:	07/11/2011 1600	Units:	SU	Final Weight/Volume:	40 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH	9.25	9.280	0.3	5	HF

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Duplicate - Batch: 200-21229

**Method: Moisture
Preparation: N/A**

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/11/2011 1157
Prep Date: N/A
Leach Date: N/A

Analysis Batch: 200-21229
Prep Batch: N/A
Leach Batch: N/A
Units: %

Instrument ID: No Equipment
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	1.8	1.8	4.00		
Percent Solids	98.2	98.2	0.0800		

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Duplicate - Batch: 200-21238

**Method: Moisture
Preparation: N/A**

Lab Sample ID: 200-5934-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 07/11/2011 1303
Prep Date: N/A
Leach Date: N/A

Analysis Batch: 200-21238
Prep Batch: N/A
Leach Batch: N/A
Units: %

Instrument ID: No Equipment
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	2.0	2.0	1	20	
Percent Solids	98.0	98.0	0.02	20	

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Duplicate - Batch: 200-21879

Method: D422
Preparation: N/A

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21879	Instrument ID: D422_import
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: 200-5934-AA-1DU.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 138.25 g
Analysis Date: 07/15/2011 1030	Units: %	Final Weight/Volume:
Prep Date: N/A		
Leach Date: N/A		

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Gravel	3.0	2.1			
Sand	95.4	95.7			
Coarse Sand	68.9	69.3			
Medium Sand	25.0	25.1			
Fine Sand	1.4	1.4			
Silt	0.1	1.2			
Clay	1.5	0.9			

Duplicate - Batch: 200-21879

Method: D422
Preparation: N/A

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21879	Instrument ID: D422_import
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: 200-5934-AA-1DU.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 138.25 g
Analysis Date: 07/15/2011 1030	Units: % Passing	Final Weight/Volume:
Prep Date: N/A		
Leach Date: N/A		

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sieve Size 3 inch - Percent Finer	100.0	100.0			
Sieve Size 2 inch - Percent Finer	100.0	100.0			
Sieve Size 1.5 inch - Percent Finer	100.0	100.0			
Sieve Size 1 inch - Percent Finer	100.0	100.0			
Sieve Size 0.75 inch - Percent Finer	100.0	100.0			
Sieve Size 0.375 inch - Percent Finer	100.0	100.0			
Sieve Size #4 - Percent Finer	97.0	97.9			
Sieve Size #10 - Percent Finer	28.1	28.6			
Sieve Size #20 - Percent Finer	7.2	7.8			
Sieve Size #40 - Percent Finer	3.1	3.6			
Sieve Size #60 - Percent Finer	2.3	2.8			
Sieve Size #80 - Percent Finer	2.1	2.6			
Sieve Size #100 - Percent Finer	2.0	2.5			
Sieve Size #200 - Percent Finer	1.7	2.2			
Hydrometer Reading 1 - Percent Finer	1.5	0.9			
Hydrometer Reading 2 - Percent Finer	1.5	0.9			
Hydrometer Reading 3 - Percent Finer	1.5	0.9			
Hydrometer Reading 4 - Percent Finer	1.5	0.9			
Hydrometer Reading 5 - Percent Finer	1.5	0.9			
Hydrometer Reading 6 - Percent Finer	1.5	0.9			
Hydrometer Reading 7 - Percent Finer	0.9	0.9			

Quality Control Results

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2
Sdg Number: PRR1140

Duplicate - Batch: 200-21879

Method: D422
Preparation: N/A

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21879	Instrument ID: D422_import
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: 200-5934-AA-1DU.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 138.25 g
Analysis Date: 07/15/2011 1030	Units: % Passing	Final Weight/Volume:
Prep Date: N/A		
Leach Date: N/A		

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
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Duplicate - Batch: 200-21879

Method: D422
Preparation: N/A

Lab Sample ID: 200-5934-1	Analysis Batch: 200-21879	Instrument ID: D422_import
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: 200-5934-AA-1DU.txt
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 138.25 g
Analysis Date: 07/15/2011 1030	Units: um	Final Weight/Volume:
Prep Date: N/A		
Leach Date: N/A		

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
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Hydrometer Reading 1 - Particle Size	37.3	37.4			
Hydrometer Reading 2 - Particle Size	23.6	23.7			
Hydrometer Reading 3 - Particle Size	13.6	13.7			
Hydrometer Reading 4 - Particle Size	9.6	9.7			
Hydrometer Reading 5 - Particle Size	6.9	7.0			
Hydrometer Reading 6 - Particle Size	3.3	3.3			
Hydrometer Reading 7 - Particle Size	1.4	1.4			

FedEx 148525 Rev. 02/09 RR00 11

From: (609) 860-0590
Cranbury Staff
ARCADIS U.S., Inc.
8 South River Road

Cranbury, NJ 08512

Origin ID: ZRPA



Ship Date: 08JUL11
ActWgt: 25.0 LB
CAD: 4490047/INET3180

Delivery Address Bar Code



Ref # B0009966.0002.70004
Invoice #
PO #
Dept #

SHIP TO: (802) 660-1021

BILL SENDER

Kirk Young
Test America
30 COMMUNITY DR

SOUTH BURLINGTON, VT 05403

1 of 2

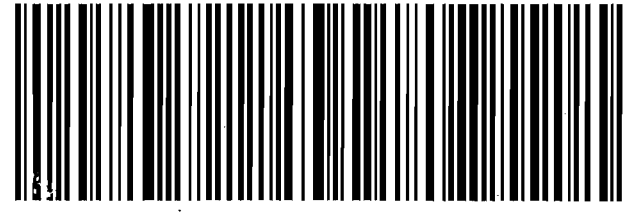
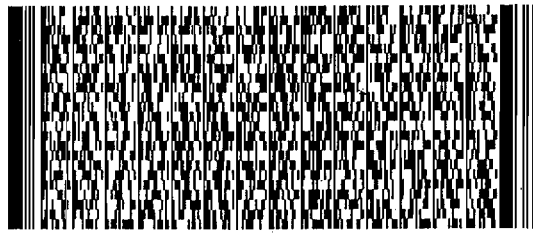
SATURDAY ### A4
PRIORITY OVERNIGHT

TRK# 7949 5409 5648
0201

MASTER

05403
VT-US
BTV

X0 BTVA



50FG2/F558/F5F4

2 of 2

SATURDAY ### A4
PRIORITY OVERNIGHT

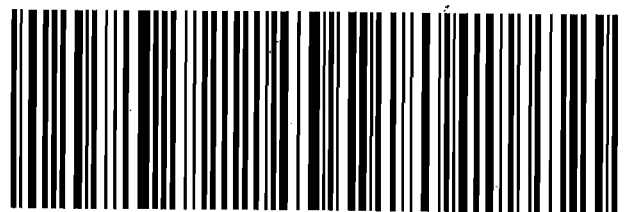
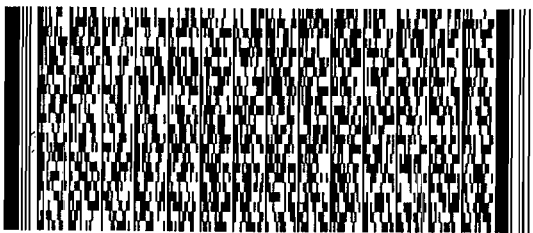
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Mstr# 7949 5409 5648

0201

05403
VT-US
BTV

X0 BTVA



50FG2/F558/F5F4

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Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 200-5934-2

SDG Number: PRR1140

Login Number: 5934

List Source: TestAmerica Burlington

List Number: 1

Creator: Marion, Greg T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
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	5.2, 5.1 °C, IR GUN ID 96/CF=0
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.	N/A	
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.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	Check done at department level if required.