TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

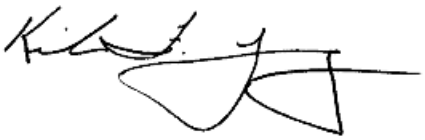
Job Number: 200-10545-1

SDG Number: WC03

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
4/28/2012 7:01 AM

Kirk F Young
Project Manager I
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04/28/2012

cc: Mr. Joe Houser
Mr. Don Reed
Mr. Ryan Shatt

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CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: LPRSA - Phase I Removal Action

Report Number: WC03 (200-10545-1)

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.

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.

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: 200-10545-1
Sdg Number: WC03

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Low/Medium Volatiles	TAL BUR	SOM01.2 SOM01.2/VOA	
Volatile sample preservation, Solid, Lab MEOH Preserved	TAL BUR		SOM01.2 SOM01.2/VOA_PR
SOM VOA Percent Moisture Determination	TAL BUR	EPA Moisture	
Matrix Water			
Trace Water	TAL BUR	SOM01.2 SOM01.2/VOA_Tr	
Volatile sample preservation, Field Preserved Water	TAL BUR		SOM01.2 SOM01.2/VOA_PR

Lab References:

TAL BUR = TestAmerica Burlington

Method References:

EPA = US Environmental Protection Agency

SOM01.2 = U.S. Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Method	Analyst	Analyst ID
SOM01.2 SOM01.2/VOA	Phillips, Mark T	MTP
SOM01.2 SOM01.2/VOA_Tr	Phillips, Mark T	MTP
EPA Moisture	Nelson, Andrea J	AJN

SAMPLE SUMMARY

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-10545-1	PRR1WCCS-04	Solid	04/26/2012 1135	04/26/2012 2125
200-10545-2	TB04262012	Water	04/26/2012 0000	04/26/2012 2125

SAMPLE RESULTS

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **PRR1WCCS-04**

Lab Sample ID: 200-10545-1
Client Matrix: Solid
% Moisture: 31.9

Date Sampled: 04/26/2012 1135
Date Received: 04/26/2012 2125

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-37725	Instrument ID:	N.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	200-37659	Lab File ID:	nfvc07.d
Dilution:	10			Initial Weight/Volume:	448.8 g
Analysis Date:	04/27/2012 1346			Final Weight/Volume:	450 mL
Prep Date:	04/27/2012 0829				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Dichlorodifluoromethane		4900	U	4900
Chloromethane		660	J	4900
Vinyl chloride		4900	U	4900
Bromomethane		4900	U	4900
Chloroethane		4900	U	4900
Trichlorofluoromethane		4900	U	4900
1,1-Dichloroethene		4900	U	4900
1,1,2-Trichloro-1,2,2-trifluoroethane		4900	U	4900
Acetone		9700	U	9700
Carbon disulfide		390	J B	4900
Methyl acetate		71000		4900
Methylene chloride		400	J	4900
trans-1,2-Dichloroethene		4900	U	4900
Methyl tert-butyl ether		4900	U	4900
1,1-Dichloroethane		4900	U	4900
cis-1,2-Dichloroethene		4900	U	4900
2-Butanone		9700	U	9700
Bromochloromethane		4900	U	4900
Chloroform		270000	E	4900
1,1,1-Trichloroethane		4900	U	4900
Cyclohexane		4900	U	4900
Carbon tetrachloride		4900	U	4900
Benzene		4900	U	4900
1,2-Dichloroethane		4900	U	4900
1,4-Dioxane		97000	U	97000
Trichloroethene		630	J	4900
Methylcyclohexane		4900	U	4900
1,2-Dichloropropane		4900	U	4900
Bromodichloromethane		4900	U	4900
cis-1,3-Dichloropropene		4900	U	4900
4-Methyl-2-pentanone		9700	U	9700
Toluene		840	J	4900
trans-1,3-Dichloropropene		4900	U	4900
1,1,2-Trichloroethane		4900	U	4900
Tetrachloroethene		2600	J B	4900
2-Hexanone		9700	U	9700
Dibromochloromethane		4900	U	4900
1,2-Dibromoethane		4900	U	4900
Chlorobenzene		150000		4900
Ethylbenzene		170	J	4900
o-Xylene		320	J	4900
m,p-Xylene		540	J	4900
Styrene		4900	U	4900
Bromoform		4900	U	4900
Isopropylbenzene		4900	U	4900
1,1,2,2-Tetrachloroethane		4900	U	4900

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **PRR1WCCS-04**

Lab Sample ID: 200-10545-1
Client Matrix: Solid
% Moisture: 31.9

Date Sampled: 04/26/2012 1135
Date Received: 04/26/2012 2125

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-37725	Instrument ID:	N.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	200-37659	Lab File ID:	nfvc07.d
Dilution:	10			Initial Weight/Volume:	448.8 g
Analysis Date:	04/27/2012 1346			Final Weight/Volume:	450 mL
Prep Date:	04/27/2012 0829				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
1,3-Dichlorobenzene		1700	J	4900
1,4-Dichlorobenzene		82000		4900
1,2-Dichlorobenzene		42000		4900
1,2-Dibromo-3-chloropropane		4900	U	4900
1,2,4-Trichlorobenzene		130000	B	4900
1,2,3-Trichlorobenzene		18000	B	4900

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	101		68 - 122
Chloroethane-d5	141	*	61 - 130
1,1-Dichloroethene-d2	83		45 - 132
2-Butanone-d5	143		20 - 182
Chloroform-d	117		72 - 123
1,2-Dichloroethane-d4	94		79 - 122
Benzene-d6	105		80 - 121
1,2-Dichloropropane-d6	101		74 - 124
Toluene-d8	105		78 - 121
trans-1,3-Dichloropropene-d4	102		72 - 130
2-Hexanone-d5	145		17 - 184
1,4-Dioxane-d8	103		50 - 150
1,1,2,2-Tetrachloroethane-d2	105		56 - 161
1,2-Dichlorobenzene-d4	103		70 - 131

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **PRR1WCCS-04**

Lab Sample ID: 200-10545-1
Client Matrix: Solid

% Moisture: 31.9

Date Sampled: 04/26/2012 1135
Date Received: 04/26/2012 2125

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-37725	Instrument ID:	N.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	200-37659	Lab File ID:	nfvc06.d
Dilution:	25.1			Initial Weight/Volume:	448.8 g
Analysis Date:	04/27/2012 1318	Run Type:	DL	Final Weight/Volume:	450 mL
Prep Date:	04/27/2012 0829				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
Dichlorodifluoromethane		12000	U	12000
Chloromethane		1400	J D	12000
Vinyl chloride		12000	U	12000
Bromomethane		12000	U	12000
Chloroethane		12000	U	12000
Trichlorofluoromethane		12000	U	12000
1,1-Dichloroethene		12000	U	12000
1,1,2-Trichloro-1,2,2-trifluoroethane		12000	U	12000
Acetone		24000	U	24000
Carbon disulfide		1800	J D B	12000
Methyl acetate		73000	D	12000
Methylene chloride		1200	J D	12000
trans-1,2-Dichloroethene		870	J D	12000
Methyl tert-butyl ether		12000	U	12000
1,1-Dichloroethane		12000	U	12000
cis-1,2-Dichloroethene		12000	U	12000
2-Butanone		24000	U	24000
Bromochloromethane		12000	U	12000
Chloroform		250000	D	12000
1,1,1-Trichloroethane		12000	U	12000
Cyclohexane		12000	U	12000
Carbon tetrachloride		12000	U	12000
Benzene		12000	U	12000
1,2-Dichloroethane		12000	U	12000
1,4-Dioxane		240000	U	240000
Trichloroethene		1200	J D	12000
Methylcyclohexane		12000	U	12000
1,2-Dichloropropane		12000	U	12000
Bromodichloromethane		12000	U	12000
cis-1,3-Dichloropropene		12000	U	12000
4-Methyl-2-pentanone		24000	U	24000
Toluene		990	J D	12000
trans-1,3-Dichloropropene		12000	U	12000
1,1,2-Trichloroethane		12000	U	12000
Tetrachloroethene		2800	J D B	12000
2-Hexanone		24000	U	24000
Dibromochloromethane		12000	U	12000
1,2-Dibromoethane		12000	U	12000
Chlorobenzene		140000	D	12000
Ethylbenzene		350	J D	12000
o-Xylene		330	J D	12000
m,p-Xylene		690	J D	12000
Styrene		210	J D	12000
Bromoform		12000	U	12000
Isopropylbenzene		12000	U	12000
1,1,2,2-Tetrachloroethane		12000	U	12000

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **PRR1WCCS-04**

Lab Sample ID: 200-10545-1
Client Matrix: Solid
% Moisture: 31.9

Date Sampled: 04/26/2012 1135
Date Received: 04/26/2012 2125

SOM01.2/VOA Low/Medium Volatiles

Analysis Method:	SOM01.2/VOA	Analysis Batch:	200-37725	Instrument ID:	N.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	200-37659	Lab File ID:	nfvc06.d
Dilution:	25.1			Initial Weight/Volume:	448.8 g
Analysis Date:	04/27/2012 1318	Run Type:	DL	Final Weight/Volume:	450 mL
Prep Date:	04/27/2012 0829				

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	RL
1,3-Dichlorobenzene		2000	J D	12000
1,4-Dichlorobenzene		80000	D	12000
1,2-Dichlorobenzene		41000	D	12000
1,2-Dibromo-3-chloropropane		12000	U	12000
1,2,4-Trichlorobenzene		130000	D B	12000
1,2,3-Trichlorobenzene		19000	D B	12000

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	102		68 - 122
Chloroethane-d5	143	*	61 - 130
1,1-Dichloroethene-d2	85		45 - 132
2-Butanone-d5	141		20 - 182
Chloroform-d	107		72 - 123
1,2-Dichloroethane-d4	94		79 - 122
Benzene-d6	103		80 - 121
1,2-Dichloropropane-d6	98		74 - 124
Toluene-d8	103		78 - 121
trans-1,3-Dichloropropene-d4	102		72 - 130
2-Hexanone-d5	138		17 - 184
1,4-Dioxane-d8	122		50 - 150
1,1,2,2-Tetrachloroethane-d2	106		56 - 161
1,2-Dichlorobenzene-d4	104		70 - 131

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **TB04262012**

Lab Sample ID: 200-10545-2
Client Matrix: Water

Date Sampled: 04/26/2012 0000
Date Received: 04/26/2012 2125

SOM01.2/VOA_Tr Trace Water

Analysis Method:	SOM01.2/VOA_Tr	Analysis Batch:	200-37726	Instrument ID:	D.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	N/A	Lab File ID:	dijd15.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	04/27/2012 1354			Final Weight/Volume:	25 mL
Prep Date:	04/27/2012 1354				

Analyte	Result (ug/L)	Qualifier	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	1.4	J	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.50	U	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.50	U	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.50	U	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.017	J	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.014	J	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.12	J	0.50
Ethylbenzene	0.0038	J	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.013	J	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50
1,3-Dichlorobenzene	0.50	U	0.50

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Client Sample ID: **TB04262012**

Lab Sample ID: 200-10545-2
Client Matrix: Water

Date Sampled: 04/26/2012 0000
Date Received: 04/26/2012 2125

SOM01.2/VOA_Tr Trace Water

Analysis Method:	SOM01.2/VOA_Tr	Analysis Batch:	200-37726	Instrument ID:	D.i
Prep Method:	SOM01.2/VOA_PR	Prep Batch:	N/A	Lab File ID:	dijd15.d
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	04/27/2012 1354			Final Weight/Volume:	25 mL
Prep Date:	04/27/2012 1354				

Analyte	Result (ug/L)	Qualifier	RL
1,4-Dichlorobenzene	0.021	J	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	%Rec	Qualifier	Acceptance Limits
Vinyl chloride-d3	99		65 - 131
Chloroethane-d5	113		71 - 131
1,1-Dichloroethene-d2	77		55 - 104
2-Butanone-d5	101		49 - 155
Chloroform-d	96		78 - 121
1,2-Dichloroethane-d4	102		78 - 129
Benzene-d6	99		77 - 124
1,2-Dichloropropane-d6	97		79 - 124
Toluene-d8	97		77 - 121
trans-1,3-Dichloropropene-d4	86		73 - 121
2-Hexanone-d5	86		28 - 135
1,1,2,2-Tetrachloroethane-d2	89		73 - 125
1,2-Dichlorobenzene-d4	102		80 - 131

General Chemistry

Client Sample ID: **PRR1WCCS-04**

Lab Sample ID: 200-10545-1
Client Matrix: Solid

Date Sampled: 04/26/2012 1135
Date Received: 04/26/2012 2125

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	31.9		%	0.250000000000	0.3	1.0	Moisture
Analysis Batch: 200-37655	Analysis Date: 04/27/2012 0809						DryWt Corrected: N
Percent Solids	68.1		%	0.250000000000	0.3	1.0	Moisture
Analysis Batch: 200-37655	Analysis Date: 04/27/2012 0809						DryWt Corrected: N

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.

QUALITY CONTROL RESULTS

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 200-37659					
MB 200-37659/1-A	Method Blank	T	Solid	SOM01.2/VOA_P	
200-10545-1	PRR1WCCS-04	T	Solid	SOM01.2/VOA_P	
200-10545-1DL	PRR1WCCS-04	T	Solid	SOM01.2/VOA_P	
Analysis Batch:200-37725					
MB 200-37659/1-A	Method Blank	T	Solid	SOM01.2/VOA	200-37659
200-10545-1	PRR1WCCS-04	T	Solid	SOM01.2/VOA	200-37659
200-10545-1DL	PRR1WCCS-04	T	Solid	SOM01.2/VOA	200-37659
Analysis Batch:200-37726					
MB 200-37726/4	Method Blank	T	Water	SOM01.2/VOA_T	
200-10545-2	TB04262012	T	Water	SOM01.2/VOA_T	

Report Basis
T = Total

General Chemistry

Analysis Batch:200-37655					
200-10545-1	PRR1WCCS-04	T	Solid	Moisture	

Report Basis
T = Total

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

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
200-10545-1 DL	PRR1WCCS-04 DL	102	143*	85	141	107	94	103	98
200-10545-1	PRR1WCCS-04	101	141*	83	143	117	94	105	101
MB 200-37659/1-A		100	75	75	137	99	93	107	102

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

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

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
200-10545-1 DL	PRR1WCCS-04 DL	103	102	138	122	106	104
200-10545-1	PRR1WCCS-04	105	102	145	103	105	103
MB 200-37659/1-A		105	104	134	126	108	106

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

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Surrogate Recovery Report

SOM01.2/VOA_Tr_Trace Water

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
200-10545-2	TB04262012	99	113	77	101	96	102	99	97
MB 200-37726/4		97	113	78	99	95	99	101	98

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

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Surrogate Recovery Report

SOM01.2/VOA_Tr_Trace Water

Client Matrix: Water

Lab Sample ID	Client Sample ID	TOL %Rec	TDP %Rec	HEX %Rec	TCA %Rec	DCZ %Rec
200-10545-2	TB04262012	97	86	86	89	102
MB 200-37726/4		99	87	86	88	100

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

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Method Blank - Batch: 200-37659

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

Lab Sample ID:	MB 200-37659/1-A	Analysis Batch:	200-37725	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	200-37659	Lab File ID:	nfvc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 g
Analysis Date:	04/27/2012 0954	Units:	ug/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/27/2012 0829				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	250	U	250
Chloromethane	250	U	250
Vinyl chloride	250	U	250
Bromomethane	250	U	250
Chloroethane	250	U	250
Trichlorofluoromethane	250	U	250
1,1-Dichloroethene	250	U	250
1,1,2-Trichloro-1,2,2-trifluoroethane	250	U	250
Acetone	500	U	500
Carbon disulfide	30	J	250
Methyl acetate	250	U	250
Methylene chloride	250	U	250
trans-1,2-Dichloroethene	250	U	250
Methyl tert-butyl ether	250	U	250
1,1-Dichloroethane	250	U	250
cis-1,2-Dichloroethene	250	U	250
2-Butanone	500	U	500
Bromochloromethane	250	U	250
Chloroform	250	U	250
1,1,1-Trichloroethane	250	U	250
Cyclohexane	250	U	250
Carbon tetrachloride	250	U	250
Benzene	250	U	250
1,2-Dichloroethane	250	U	250
1,4-Dioxane	5000	U	5000
Trichloroethene	250	U	250
Methylcyclohexane	250	U	250
1,2-Dichloropropane	250	U	250
Bromodichloromethane	250	U	250
cis-1,3-Dichloropropene	250	U	250
4-Methyl-2-pentanone	500	U	500
Toluene	250	U	250
trans-1,3-Dichloropropene	250	U	250
1,1,2-Trichloroethane	250	U	250
Tetrachloroethene	5.2	J	250
2-Hexanone	500	U	500
Dibromochloromethane	250	U	250
1,2-Dibromoethane	250	U	250
Chlorobenzene	250	U	250
Ethylbenzene	250	U	250
o-Xylene	250	U	250
m,p-Xylene	250	U	250
Styrene	250	U	250
Bromoform	250	U	250
Isopropylbenzene	250	U	250

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Method Blank - Batch: 200-37659

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

Lab Sample ID:	MB 200-37659/1-A	Analysis Batch:	200-37725	Instrument ID:	N.i
Client Matrix:	Solid	Prep Batch:	200-37659	Lab File ID:	nfvc04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 g
Analysis Date:	04/27/2012 0954	Units:	ug/Kg	Final Weight/Volume:	50 mL
Prep Date:	04/27/2012 0829				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,1,2,2-Tetrachloroethane	250	U	250
1,3-Dichlorobenzene	250	U	250
1,4-Dichlorobenzene	250	U	250
1,2-Dichlorobenzene	250	U	250
1,2-Dibromo-3-chloropropane	250	U	250
1,2,4-Trichlorobenzene	22	J	250
1,2,3-Trichlorobenzene	26	J	250

Surrogate	% Rec	Acceptance Limits
Vinyl chloride-d3	100	68 - 122
Chloroethane-d5	75	61 - 130
1,1-Dichloroethene-d2	75	45 - 132
2-Butanone-d5	137	20 - 182
Chloroform-d	99	72 - 123
1,2-Dichloroethane-d4	93	79 - 122
Benzene-d6	107	80 - 121
1,2-Dichloropropane-d6	102	74 - 124
Toluene-d8	105	78 - 121
trans-1,3-Dichloropropene-d4	104	72 - 130
2-Hexanone-d5	134	17 - 184
1,4-Dioxane-d8	126	50 - 150
1,1,2,2-Tetrachloroethane-d2	108	56 - 161
1,2-Dichlorobenzene-d4	106	70 - 131

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Method Blank - Batch: 200-37726

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR

Lab Sample ID:	MB 200-37726/4	Analysis Batch:	200-37726	Instrument ID:	D.i
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	dijd04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	04/27/2012 0910	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	04/27/2012 0910				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Dichlorodifluoromethane	0.50	U	0.50
Chloromethane	0.50	U	0.50
Vinyl chloride	0.50	U	0.50
Bromomethane	0.50	U	0.50
Chloroethane	0.50	U	0.50
Trichlorofluoromethane	0.50	U	0.50
1,1-Dichloroethene	0.50	U	0.50
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50
Acetone	5.0	U	5.0
Carbon disulfide	0.50	U	0.50
Methyl acetate	0.50	U	0.50
Methylene chloride	0.084	J	0.50
trans-1,2-Dichloroethene	0.50	U	0.50
Methyl tert-butyl ether	0.50	U	0.50
1,1-Dichloroethane	0.50	U	0.50
cis-1,2-Dichloroethene	0.50	U	0.50
2-Butanone	5.0	U	5.0
Bromochloromethane	0.50	U	0.50
Chloroform	0.50	U	0.50
1,1,1-Trichloroethane	0.50	U	0.50
Cyclohexane	0.50	U	0.50
Carbon tetrachloride	0.50	U	0.50
Benzene	0.50	U	0.50
1,2-Dichloroethane	0.50	U	0.50
Trichloroethene	0.50	U	0.50
Methylcyclohexane	0.50	U	0.50
1,2-Dichloropropane	0.50	U	0.50
Bromodichloromethane	0.50	U	0.50
cis-1,3-Dichloropropene	0.50	U	0.50
4-Methyl-2-pentanone	5.0	U	5.0
Toluene	0.50	U	0.50
trans-1,3-Dichloropropene	0.50	U	0.50
1,1,2-Trichloroethane	0.50	U	0.50
Tetrachloroethene	0.50	U	0.50
2-Hexanone	5.0	U	5.0
Dibromochloromethane	0.50	U	0.50
1,2-Dibromoethane	0.50	U	0.50
Chlorobenzene	0.50	U	0.50
Ethylbenzene	0.50	U	0.50
o-Xylene	0.50	U	0.50
m,p-Xylene	0.50	U	0.50
Styrene	0.50	U	0.50
Bromoform	0.50	U	0.50
Isopropylbenzene	0.50	U	0.50
1,1,2,2-Tetrachloroethane	0.50	U	0.50

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
Sdg Number: WC03

Method Blank - Batch: 200-37726

Method: SOM01.2/VOA_Tr
Preparation: SOM01.2/VOA_PR

Lab Sample ID:	MB 200-37726/4	Analysis Batch:	200-37726	Instrument ID:	D.i
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	dijd04.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	04/27/2012 0910	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	04/27/2012 0910				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,3-Dichlorobenzene	0.50	U	0.50
1,4-Dichlorobenzene	0.50	U	0.50
1,2-Dichlorobenzene	0.50	U	0.50
1,2-Dibromo-3-chloropropane	0.50	U	0.50
1,2,4-Trichlorobenzene	0.50	U	0.50
1,2,3-Trichlorobenzene	0.50	U	0.50

Surrogate	% Rec	Acceptance Limits
Vinyl chloride-d3	97	65 - 131
Chloroethane-d5	113	71 - 131
1,1-Dichloroethene-d2	78	55 - 104
2-Butanone-d5	99	49 - 155
Chloroform-d	95	78 - 121
1,2-Dichloroethane-d4	99	78 - 129
Benzene-d6	101	77 - 124
1,2-Dichloropropane-d6	98	79 - 124
Toluene-d8	99	77 - 121
trans-1,3-Dichloropropene-d4	87	73 - 121
2-Hexanone-d5	86	28 - 135
1,1,2,2-Tetrachloroethane-d2	88	73 - 125
1,2-Dichlorobenzene-d4	100	80 - 131

ARCADIS
Infrastructure, environment, buildings

ARCADIS
6723 Towpath Rd
Syracuse, NY 13214
Phone/Fax: (315) 671-9688

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

PROJ. NO.	PROJECT NAME	SDG NUMBER	COC Number
B0009966.0002.70004	Waste Characterization Quality Assurance Project Plan - Phase I Removal Action	WC03	

SAMPLERS:

SAMPLE ID	DATE	TIME	MATRIX	Composite/Grab	# Containers	Requested Analyses 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Remarks
PRR1WCCS-04	4/26/2012	11:35	Solid	Composite	2	X	X																			
TB04262012	4/26/2012	—	Water	GRAB	3	X																				

Requested Analyses	
1	VOCs
2	moisture content
3	
4	
5	
6	
7	
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16	
17	
18	
19	
20	

Special Instructions/Comments:

Please use procedure as per 4/26 conference call between TA Burlington and ARCADIS

☐ **Special QA/QC Instructions**

Laboratory Information and Receipt

Lab Name: TestAmerica - Burlington, VT

Shipping Tracking #

Specify Turnaround Requirements: RUSH TAT (24 hr if possible) for PRR1WCCS-04. Trip Blank should be run on standard TAT

☐ Cooler packed with ice

☐ Cooler custody seal intact

Sample Receipt:

Condition/Cooler Temp:

Relinquished by:	DATE	TIME	Received by:	Relinquished by:	DATE	TIME	Received by:
[signature]	4/26/12	2125	[signature]				

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 200-10545-1
SDG Number: WC03

Login Number: 10545
List Number: 1
Creator: Marion, Greg T

List Source: TestAmerica Burlington

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.	N/A	Not present
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	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	7.8ºC IR GUN ID 154/CF=-0.2
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	Refer to Job Narrative for details.
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
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	