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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

0082240

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

X08-048

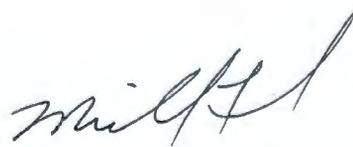
Lot #: F8L050357

SDG #: SL774

Mike Neely

CH2M Hill Plateau Remediation
PO Box 1600, MS B6-06
Richland, WA 99352

TESTAMERICA LABORATORIES, INC.



Michael C. Franks
Project Manager

January 2, 2009

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
 P.O. Box 1600
 MSIN B6-06
 Richland, Washington 99352
 January 2, 2009
 Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL774
Number of Samples	: sample
Sample Matrix	: water
Data Deliverable	: Summary
Date SDG Closed	: December 5, 2008

II. Introduction

On December 5, 2008, one water sample was received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

V. Comments

General

The following SAFs are associated with this SDG: X08-048

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CH2MHill Plateau Remediation Company

TestAmerica Laboratories, Inc.

January 2, 2009

SDG: SL774

Volatiles

Batch: 8346184

The D% CCV is (lower recovered) outside the Method criteria (greater than 20% D) for the following compounds: Chloromethane (25.5%) and trans-1,4-dichloro-2-butene (21.0%). Sample was re-analyzed within hold time in batch 8352511 for the affected analytes.

Affected Samples:

F8L050357 (1): B1W533

For a large number of analytes in the LCS/LCSD, it becomes statistically likely that a few will be outside the laboratory QC limits. Upper and lower marginal exceedance (ME) limits have been established to determine when corrective action is necessary. The number of allowable marginal exceedances is based on the number of analytes in the LCS/LCSD.

LCS/LCSD recoveries for Benzene and 1,4-Dichlorobenzene are outside laboratory QC limits and qualified accordingly. Recoveries are within marginal exceedance limits, and within the number of analytes allowed. Chlorobenzene is outside laboratory QC limits and outside marginal exceedance limits. The sample was re-analyzed within hold time in batch 8352511 for this analyte. The LCS/LCSD RPD values for Vinyl Acetate and Acrolein are outside of the QC limits. However their recoveries are within the QC limits.

Affected Samples:

F8L050357 (1): B1W533

The MS/MSD RPD for 1,4-Dioxane is outside of the QC limits. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.

Affected Samples:

F8L050357 (1): B1W533

Batch: 8352511

The CCV %D for 1,2-Dibromo-3-chloroethane (22.5%) is outside the established QC limits. This analyte is not detected above the reporting limit in the associated samples thus this excursion does not effect the data.

Affected Samples:

F8L050357 (1): B1W533

The LCS/LCSD RPD for trans-1,4-Dichloro-2-butene is outside of the QC limits. The recoveries are within the QC limits.

Affected Samples:

F8L050357(1): B1W533

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CH2MHill Plateau Remediation Company

TestAmerica Laboratories, Inc.

January 2, 2009

SDG: SL774

Semi-Volatiles

Batch: 8343068

The MS/MSD RPD for 1,4-Dichlorobenzene and Napthalene is not within method acceptance criteria. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.

Affected Samples:

F8L050357 (1): B1W533

Pesticides

Batch: 8343467

To perform an MS/MSD on a sample for organic extractables, the laboratory requires 3 liters of sample. Due to receiving less than the required three liters, the laboratory performed the MS/MSD extraction using half volume.

Affected Samples:

F8L050357 (1): B1W533

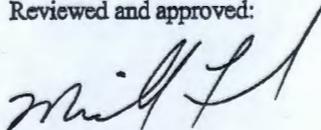
There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.

Affected Samples:

F8L050357 (1): B1W533

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:



Michael Franks
St. Louis Project Manager

METHODS SUMMARY

SL774

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Organochlorine Pesticides	SW846 8081A	SW846 3520C
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3510C
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

SL774 : F8L050357

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
K37A5	001	B1W533	12/03/08	13:53

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

IMPORTANT!

Inclement weather conditions at Memphis, TN hub may cause some service delays and disruptions within the U.S. today. [Learn](#)
Track Shipments/FedEx Kinko's Orders
Detailed Results

Tracking number	796159581876	Reference	GWS-046
Signed for by	B.DANIELS	Destination	EARTH CITY, MO
Ship date	Dec 4, 2008	Delivered to	Shipping/Receiving
Delivery date	Dec 5, 2008 9:21 AM	Service type	Priority Overnight
		Weight	100.0 lbs.
Status	Delivered		
Signature image available	Yes		

Date/Time	Activity	Location	
Dec 5, 2008	9:21 AM	Delivered	EARTH CITY, MO
	7:15 AM	On FedEx vehicle for delivery	EARTH CITY, MO
	7:08 AM	At local FedEx facility	EARTH CITY, MO
	6:09 AM	At dest sort facility	BERKELEY, MO
	4:25 AM	Departed FedEx location	MEMPHIS, TN
Dec 4, 2008	12:46 AM	Arrived at FedEx location	MEMPHIS, TN
	5:40 PM	Left FedEx origin facility	PASCO, WA
	4:22 PM	Picked up	PASCO, WA
	11:05 AM	Package data transmitted to FedEx	

Signature proof E-mail results Track more shipments/o

Subscribe to tracking updates (optional)

Your name: Your e-mail address:

E-mail address	Language	Exception updates	
<input type="text"/>	English	<input type="checkbox"/>	
<input type="text"/>	English	<input type="checkbox"/>	
<input type="text"/>	English	<input type="checkbox"/>	
<input type="text"/>	English	<input type="checkbox"/>	

Select format: HTML Text Wireless

Add personal message:

Not available for Wireless or non-English characters.

By selecting this check box and the Submit button, I agree to these [Terms and Conditions](#)

Lot #(s): F8050341
346
349
357

CONDITION UPON RECEIPT FORM
 12-5-08 Client: TA. Richmond #12MPR

Quote No: 81467, 81491, 80162

COC/RFA No: See Below

271

Initiated By: [Signature] Date: 12-5-08 Time: 9:30

Shipping Information

Shipper: FedEx UPS DHL Courier Client Other: _____ Multiple Packages: (Y) N

Shipping # (s):*	Sample Temperature (s):**
1. <u>7961-5958-1876</u>	1. <u>5.0</u>
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1. <u>(Y)</u> N	Are there custody seals present on the cooler?	8. <u>(Y)</u> N	Are there custody seals present on bottles?
2. Y <u>(N)</u> N/A	Do custody seals on cooler appear to be tampered with?	9. Y <u>(N)</u> N/A	Do custody seals on bottles appear to be tampered with?
3. <u>(Y)</u> N	Were contents of cooler frisked after opening, but before unpacking?	10. <u>(Y)</u> N N/A	Was sample received with proper pH? (If not, make note below)
4. <u>(Y)</u> N	Sample received with Chain of Custody?	11. <u>(Y)</u> N	Sample received in proper containers?
5. <u>(Y)</u> N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y <u>(N)</u> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6. Y <u>(N)</u>	Was sample received broken?	13. Y N <u>(N/A)</u>	Was Internal COC/Workshare received?
7. <u>(Y)</u> N	Is sample volume sufficient for analysis?	14. Y N <u>(N/A)</u>	Was pH taken by original TestAmerica lab?

*For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes:

W09-011-190

109-007-22

X08048-19

24

29

34

39

44

Corrective Action:

Client Contact Name: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____
 Project Management Review: [Signature]

Informed by: _____

If released, notify: _____
 Date: 12-08-08

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

GC/MS
VOLATILES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B1W533

GC/MS Volatiles

Lot-Sample #....: F8L050357-001 Work Order #....: K37A51AE Matrix.....: WATER
 Date Sampled....: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/09/08 Analysis Date...: 12/09/08
 Prep Batch #....: 8346184
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Hexane	ND	4.0	ug/L	0.16
Acetonitrile	ND	5.0	ug/L	4.2
Acrolein	ND	10	ug/L	0.52
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.27
Bromomethane	ND	2.0	ug/L	0.50
Chloroprene	ND	1.0	ug/L	0.085
Dibromochloromethane	ND	1.0	ug/L	0.17
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	0.48
Chloroethane	ND	2.0	ug/L	0.085
Allyl chloride	ND	2.0	ug/L	0.20
1,2-Dibromoethane	ND	1.0	ug/L	0.15
Dibromomethane	ND	1.0	ug/L	0.14
Dichlorodifluoromethane	ND	2.0	ug/L	0.074
1,1-Dichloroethene	ND	1.0	ug/L	0.085
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.14
1,2-Dichloropropane	ND	1.0	ug/L	0.077
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.099
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.080
1,4-Dioxane	ND	20	ug/L	7.0
Ethylbenzene	ND	1.0	ug/L	0.061
Ethyl methacrylate	ND	1.0	ug/L	0.39
Trichlorofluoromethane	ND	1.0	ug/L	0.10
2-Hexanone	ND	5.0	ug/L	0.080
Iodomethane	ND	2.0	ug/L	0.33
Isobutanol	ND	80	ug/L	6.1
Methacrylonitrile	ND	5.0	ug/L	1.8
Methyl methacrylate	ND	1.0	ug/L	0.62
Styrene	ND	1.0	ug/L	0.079
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.27
1,2,3-Trichloropropane	ND	1.0	ug/L	0.22
Vinyl acetate	ND	2.0	ug/L	0.22
Vinyl chloride	ND	2.0	ug/L	0.13
Acetone	ND	2.0	ug/L	0.56
Methylene chloride	ND	1.0	ug/L	0.091
Carbon disulfide	ND	1.0	ug/L	0.029

(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B1W533

GC/MS Volatiles

Lot-Sample #...: F8L050357-001 Work Order #...: K37A51AE Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
1,1-Dichloroethane	ND	1.0	ug/L	0.070
2-Butanone	ND	5.0	ug/L	0.96
Chloroform	ND	1.0	ug/L	0.080
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.13
Propionitrile	ND	5.0	ug/L	4.7
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.089
1,1,1-Trichloroethane	ND	1.0	ug/L	0.099
Carbon tetrachloride	ND	1.0	ug/L	0.042
1,2-Dichloroethane	ND	1.0	ug/L	0.18
Benzene	ND	1.0	ug/L	0.032
Trichloroethene	ND	1.0	ug/L	0.11
4-Methyl-2-pentanone	ND	5.0	ug/L	0.72
1,1,2-Trichloroethane	ND	1.0	ug/L	0.19
Tetrachloroethene	ND	1.0	ug/L	0.14
Tetrahydrofuran	ND	10	ug/L	3.2
Xylenes (total)	ND	3.0	ug/L	1.6
1,4-Dichlorobenzene	ND	1.0	ug/L	0.10
1-Butanol	ND	40	ug/L	14
Toluene	ND	1.0	ug/L	0.029

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	102	(76 - 115)
Dibromofluoromethane	92	(81 - 123)
1,2-Dichloroethane-d4	93	(70 - 130)
4-Bromofluorobenzene	103	(79 - 115)

CH2M Hill Plateau Remediation DOE RL

B1W533

GC/MS Volatiles

Lot-Sample #: F8L050357-001

Work Order #: K37A51AE

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B1W533

GC/MS Volatiles

Lot-Sample #....: F8L050357-001 Work Order #....: K37A52AE Matrix.....: WATER
 Date Sampled....: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/12/08 Analysis Date...: 12/12/08
 Prep Batch #....: 8352511
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Chlorobenzene	ND	1.0	ug/L	0.48
Chloromethane	ND	2.0	ug/L	0.036
trans-1,4-Dichloro- 2-butene	ND	2.0	ug/L	0.75

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	102	(76 - 115)
Dibromofluoromethane	87	(81 - 123)
1,2-Dichloroethane-d4	94	(70 - 130)
4-Bromofluorobenzene	107	(79 - 115)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL774
 MB Lot-Sample #: F8L110000-184

Work Order #...: K4GW81AA

Matrix.....: WATER

Analysis Date...: 12/09/08

Prep Date.....: 12/09/08

Dilution Factor: 1

Prep Batch #...: 8346184

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetonitrile	ND	5.0	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Chloroprene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	20	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
Isobutanol	ND	80	ug/L	SW846 8260B
Methacrylonitrile	ND	5.0	ug/L	SW846 8260B
Methyl methacrylate	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Hexane	ND	4.0	ug/L	SW846 8260B
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	0.049 J	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL774

Work Order #...: K4GW81AA

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Chloroform	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Propionitrile	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1-Butanol	ND	40	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	104	(76 - 115)
Dibromofluoromethane	86	(81 - 123)
1,2-Dichloroethane-d4	90	(70 - 130)
4-Bromofluorobenzene	104	(79 - 115)

NOTE(S) :

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

J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F8L110000-184 B Work Order #: K4GW81AA

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/L

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K41EL1AA Matrix.....: WATER
 MB Lot-Sample #: F8L170000-511
 Analysis Date...: 12/12/08 Prep Date.....: 12/12/08
 Dilution Factor: 1 Prep Batch #...: 8352511

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
trans-1,4-Dichloro- 2-butene	ND	2.0	ug/L	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	101	(76 - 116)
Dibromofluoromethane	90	(82 - 123)
1,2-Dichloroethane-d4	90	(71 - 132)
4-Bromofluorobenzene	107	(74 - 120)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: SL774 Work Order #....: K4GW81AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F8L110000-184 K4GW81AD-LCSD
 Prep Date.....: 12/09/08 Analysis Date...: 12/09/08
 Prep Batch #....: 8346184
 Dilution Factor: 1

PARAMETER	SPIKE	MEASURED		PERCENT		METHOD
	AMOUNT	AMOUNT	UNITS	RECOVERY	RPD	
1,1,1,2-Tetrachloroethane	10.0	8.96	ug/L	90		SW846 8260B
	10.0	8.43	ug/L	84	6.1	SW846 8260B
Trichlorofluoromethane	10.0	10.6	ug/L	106		SW846 8260B
	10.0	10.2	ug/L	102	3.3	SW846 8260B
Acetonitrile	50.0	52.2	ug/L	104		SW846 8260B
	50.0	46.9	ug/L	94	11	SW846 8260B
Iodomethane	10.0	9.46	ug/L	95		SW846 8260B
	10.0	9.57	ug/L	96	1.2	SW846 8260B
Vinyl acetate	10.0	10.6	ug/L	106		SW846 8260B
	10.0	8.47 p	ug/L	85	22	SW846 8260B
Acrolein	50.0	63.4	ug/L	127		SW846 8260B
	50.0	49.0 p	ug/L	98	26	SW846 8260B
Isobutanol	200	171	ug/L	85		SW846 8260B
	200	145	ug/L	72	17	SW846 8260B
Methacrylonitrile	50.0	54.9	ug/L	110		SW846 8260B
	50.0	49.7	ug/L	99	10	SW846 8260B
1,4-Dioxane	200	182	ug/L	91		SW846 8260B
	200	176	ug/L	88	3.6	SW846 8260B
cis-1,3-Dichloropropene	10.0	10.6	ug/L	106		SW846 8260B
	10.0	9.48	ug/L	95	11	SW846 8260B
Dibromochloromethane	10.0	9.22	ug/L	92		SW846 8260B
	10.0	8.93	ug/L	89	3.2	SW846 8260B
Bromomethane	10.0	12.5	ug/L	125		SW846 8260B
	10.0	12.6	ug/L	126	1.0	SW846 8260B
Chloroethane	10.0	9.64	ug/L	96		SW846 8260B
	10.0	9.58	ug/L	96	0.62	SW846 8260B
1,1-Dichloroethene	10.0	8.44	ug/L	84		SW846 8260B
	10.0	7.89	ug/L	79	6.7	SW846 8260B
1,2-Dichloroethene (total)	20.0	18.2	ug/L	91		SW846 8260B
	20.0	17.4	ug/L	87	4.5	SW846 8260B
1,2-Dichloropropane	10.0	9.12	ug/L	91		SW846 8260B
	10.0	8.70	ug/L	87	4.7	SW846 8260B
Bromodichloromethane	10.0	10.2	ug/L	102		SW846 8260B
	10.0	9.57	ug/L	96	6.5	SW846 8260B
trans-1,3-Dichloropropene	10.0	10.0	ug/L	100		SW846 8260B
	10.0	9.08	ug/L	91	10	SW846 8260B
2-Hexanone	10.0	8.86	ug/L	89		SW846 8260B
	10.0	7.84	ug/L	78	12	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: SL774 Work Order #....: K4GW81AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F8L110000-184 K4GW81AD-LCSD

PARAMETER	SPIKE	MEASURED	UNITS	PERCENT	RPD	METHOD
	AMOUNT	AMOUNT		RECOVERY		
Bromoform	10.0	10.3	ug/L	103		SW846 8260B
	10.0	9.52	ug/L	95	7.7	SW846 8260B
Ethylbenzene	10.0	9.41	ug/L	94		SW846 8260B
	10.0	8.89	ug/L	89	5.7	SW846 8260B
Styrene	10.0	9.68	ug/L	97		SW846 8260B
	10.0	9.14	ug/L	91	5.8	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	8.68	ug/L	87		SW846 8260B
	10.0	8.37	ug/L	84	3.7	SW846 8260B
Allyl chloride	10.0	9.68	ug/L	97		SW846 8260B
	10.0	8.90	ug/L	89	8.4	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	9.30	ug/L	93		SW846 8260B
	10.0	9.15	ug/L	91	1.6	SW846 8260B
1,2-Dibromoethane	10.0	9.22	ug/L	92		SW846 8260B
	10.0	8.58	ug/L	86	7.2	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	7.60	ug/L	76		SW846 8260B
	10.0	7.22	ug/L	72	5.1	SW846 8260B
Ethyl methacrylate	10.0	10.2	ug/L	102		SW846 8260B
	10.0	9.69	ug/L	97	5.4	SW846 8260B
Hexane	10.0	10.7	ug/L	107		SW846 8260B
	10.0	11.4	ug/L	114	5.9	SW846 8260B
Methyl methacrylate	10.0	10.8	ug/L	108		SW846 8260B
	10.0	10.8	ug/L	108	0.64	SW846 8260B
Chloroprene	10.0	10.8	ug/L	108		SW846 8260B
	10.0	10.3	ug/L	103	5.2	SW846 8260B
Vinyl chloride	10.0	8.95	ug/L	89		SW846 8260B
	10.0	8.97	ug/L	90	0.27	SW846 8260B
Acetone	10.0	10.8	ug/L	108		SW846 8260B
	10.0	10.7	ug/L	107	0.93	SW846 8260B
Methylene chloride	10.0	10.5	ug/L	105		SW846 8260B
	10.0	9.48	ug/L	95	10	SW846 8260B
Carbon disulfide	10.0	8.90	ug/L	89		SW846 8260B
	10.0	8.63	ug/L	86	3.0	SW846 8260B
1,1-Dichloroethane	10.0	8.96	ug/L	90		SW846 8260B
	10.0	8.62	ug/L	86	3.8	SW846 8260B
2-Butanone	10.0	8.63	ug/L	86		SW846 8260B
	10.0	7.27	ug/L	73	17	SW846 8260B
Chloroform	10.0	9.46	ug/L	95		SW846 8260B
	10.0	8.89	ug/L	89	6.2	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K4GW81AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F8L110000-184 K4GW81AD-LCSD

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
cis-1,2-Dichloroethene	10.0	9.42	ug/L	94		SW846 8260B
	10.0	9.04	ug/L	90	4.2	SW846 8260B
Propionitrile	50.0	51.9	ug/L	104		SW846 8260B
	50.0	47.3	ug/L	95	9.3	SW846 8260B
trans-1,2-Dichloroethene	10.0	8.76	ug/L	88		SW846 8260B
	10.0	8.34	ug/L	83	4.9	SW846 8260B
1,1,1-Trichloroethane	10.0	9.37	ug/L	94		SW846 8260B
	10.0	9.02	ug/L	90	3.8	SW846 8260B
Carbon tetrachloride	10.0	9.57	ug/L	96		SW846 8260B
	10.0	9.16	ug/L	92	4.4	SW846 8260B
1,2-Dichloroethane	10.0	9.26	ug/L	93		SW846 8260B
	10.0	8.69	ug/L	87	6.4	SW846 8260B
Benzene	10.0	8.92	ug/L	89		SW846 8260B
	10.0	8.69 a	ug/L	87	2.6	SW846 8260B
Trichloroethene	10.0	8.86	ug/L	89		SW846 8260B
	10.0	8.45	ug/L	85	4.7	SW846 8260B
4-Methyl-2-pentanone	10.0	9.95	ug/L	99		SW846 8260B
	10.0	9.84	ug/L	98	1.1	SW846 8260B
1,1,2-Trichloroethane	10.0	9.02	ug/L	90		SW846 8260B
	10.0	8.55	ug/L	86	5.3	SW846 8260B
Tetrachloroethene	10.0	8.48	ug/L	85		SW846 8260B
	10.0	8.03	ug/L	80	5.4	SW846 8260B
Tetrahydrofuran	50.0	54.2	ug/L	108		SW846 8260B
	50.0	47.4	ug/L	95	13	SW846 8260B
1,4-Dichlorobenzene	10.0	8.41 a	ug/L	84		SW846 8260B
	10.0	8.11 a	ug/L	81	3.7	SW846 8260B
1-Butanol	100	116	ug/L	116		SW846 8260B
	100	108	ug/L	108	7.2	SW846 8260B
Toluene	10.0	9.09	ug/L	91		SW846 8260B
	10.0	8.59	ug/L	86	5.6	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Toluene-d8	104	(82 - 115)
	97	(82 - 115)
Dibromofluoromethane	101	(79 - 120)
	94	(79 - 120)
1,2-Dichloroethane-d4	107	(62 - 130)
	100	(62 - 130)
4-Bromofluorobenzene	102	(77 - 115)
	100	(77 - 115)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K4GW81AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F8L110000-184 K4GW81AD-LCSD

NOTE(S):

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

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: SL774 Work Order #....: K41EL1AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F8L170000-511 K41EL1AD-LCSD
 Prep Date.....: 12/12/08 Analysis Date...: 12/12/08
 Prep Batch #....: 8352511
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Chloromethane	10.0	9.26	ug/L	93		SW846 8260B
	10.0	9.30	ug/L	93	0.42	SW846 8260B
Chlorobenzene	10.0	8.93	ug/L	89		SW846 8260B
	10.0	9.03	ug/L	90	1.1	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	7.16	ug/L	72		SW846 8260B
	10.0	9.45 p	ug/L	94	28	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(82 - 118)
	104	(82 - 118)
Dibromofluoromethane	95	(78 - 121)
	99	(78 - 121)
1,2-Dichloroethane-d4	89	(63 - 131)
	105	(63 - 131)
4-Bromofluorobenzene	99	(74 - 122)
	106	(74 - 122)

NOTE (S) :

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

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K37A51AH-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AJ-MSD
 Date Sampled...: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/09/08 Analysis Date...: 12/09/08
 Prep Batch #...: 8346184
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
cis-1,3-Dichloropropene	ND	10.0	8.30	ug/L	83		SW846 8260B
	ND	10.0	8.79	ug/L	88	5.7	SW846 8260B
Bromomethane	ND	10.0	8.80	ug/L	88		SW846 8260B
	ND	10.0	10.8	ug/L	108	20	SW846 8260B
Chloroethane	ND	10.0	8.80	ug/L	88		SW846 8260B
	ND	10.0	9.23	ug/L	92	4.8	SW846 8260B
1,1-Dichloroethene	ND	10.0	8.49	ug/L	85		SW846 8260B
	ND	10.0	8.86	ug/L	89	4.3	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	17.1	ug/L	85		SW846 8260B
	ND	20.0	17.7	ug/L	89	3.8	SW846 8260B
1,2-Dichloropropane	ND	10.0	8.48	ug/L	85		SW846 8260B
	ND	10.0	8.70	ug/L	87	2.5	SW846 8260B
Bromodichloromethane	ND	10.0	9.53	ug/L	95		SW846 8260B
	ND	10.0	9.33	ug/L	93	2.1	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	7.45	ug/L	74		SW846 8260B
	ND	10.0	8.07	ug/L	81	8.0	SW846 8260B
2-Hexanone	ND	10.0	7.33	ug/L	73		SW846 8260B
	ND	10.0	7.80	ug/L	78	6.2	SW846 8260B
Bromoform	ND	10.0	8.62	ug/L	86		SW846 8260B
	ND	10.0	8.92	ug/L	89	3.4	SW846 8260B
Ethylbenzene	ND	10.0	8.81	ug/L	88		SW846 8260B
	ND	10.0	9.07	ug/L	91	2.9	SW846 8260B
Styrene	ND	10.0	9.06	ug/L	91		SW846 8260B
	ND	10.0	8.99	ug/L	90	0.87	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	7.80	ug/L	78		SW846 8260B
	ND	10.0	7.64	ug/L	76	2.0	SW846 8260B
Dibromochloromethane	ND	10.0	8.17	ug/L	82		SW846 8260B
	ND	10.0	8.87	ug/L	89	8.2	SW846 8260B
Allyl chloride	ND	10.0	9.95	ug/L	100		SW846 8260B
	ND	10.0	9.98	ug/L	100	0.27	SW846 8260B
1,2-Dibromo-3- chloropropane (DBCP)	ND	10.0	6.50	ug/L	65		SW846 8260B
	ND	10.0	6.78	ug/L	68	4.2	SW846 8260B
1,2-Dibromoethane	ND	10.0	7.97	ug/L	80		SW846 8260B
	ND	10.0	8.46	ug/L	85	6.0	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K37A51AH-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AJ-MSD

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Dichlorodifluoromethane (Freon 12)	ND	10.0	7.24	ug/L	72		SW846 8260B
	ND	10.0	7.53	ug/L	75	3.9	SW846 8260B
Ethyl methacrylate	ND	10.0	8.03	ug/L	80		SW846 8260B
	ND	10.0	8.51	ug/L	85	5.8	SW846 8260B
Hexane	ND	10.0	11.2	ug/L	112		SW846 8260B
	ND	10.0	11.4	ug/L	114	1.8	SW846 8260B
Methyl methacrylate	ND	10.0	8.02	ug/L	80		SW846 8260B
	ND	10.0	8.98	ug/L	90	11	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	8.35	ug/L	83		SW846 8260B
	ND	10.0	8.36	ug/L	84	0.16	SW846 8260B
Trichlorofluoromethane	ND	10.0	9.26	ug/L	93		SW846 8260B
	ND	10.0	9.39	ug/L	94	1.4	SW846 8260B
Acetonitrile	ND	50.0	42.3	ug/L	85		SW846 8260B
	ND	50.0	45.2	ug/L	90	6.7	SW846 8260B
Iodomethane	ND	10.0	8.28	ug/L	83		SW846 8260B
	ND	10.0	8.75	ug/L	88	5.5	SW846 8260B
Vinyl acetate	ND	10.0	5.75	ug/L	57		SW846 8260B
	ND	10.0	6.56	ug/L	66	13	SW846 8260B
Acrolein	ND	50.0	50.5	ug/L	101		SW846 8260B
	ND	50.0	50.0	ug/L	100	1.1	SW846 8260B
Isobutanol	ND	200	121	ug/L	61		SW846 8260B
	ND	200	138	ug/L	69	13	SW846 8260B
Methacrylonitrile	ND	50.0	47.2	ug/L	94		SW846 8260B
	ND	50.0	49.0	ug/L	98	3.8	SW846 8260B
1,4-Dioxane	ND	200	116	ug/L	58		SW846 8260B
	ND	200	144	ug/L	72 p	21	SW846 8260B
Chloroprene	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.9	ug/L	109	2.6	SW846 8260B
Vinyl chloride	ND	10.0	7.98	ug/L	80		SW846 8260B
	ND	10.0	9.10	ug/L	91	13	SW846 8260B
Acetone	ND	10.0	8.69	ug/L	87		SW846 8260B
	ND	10.0	10.5	ug/L	105	19	SW846 8260B
Methylene chloride	ND	10.0	7.88	ug/L	79		SW846 8260B
	ND	10.0	7.98	ug/L	80	1.4	SW846 8260B
Carbon disulfide	ND	10.0	9.06	ug/L	91		SW846 8260B
	ND	10.0	9.12	ug/L	91	0.70	SW846 8260B
1,1-Dichloroethane	ND	10.0	8.84	ug/L	88		SW846 8260B
	ND	10.0	8.69	ug/L	87	1.8	SW846 8260B
2-Butanone	ND	10.0	6.04	ug/L	60		SW846 8260B
	ND	10.0	7.03	ug/L	70	15	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL774 Work Order #...: K37A51AH-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AJ-MSD

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Chloroform	ND	10.0	8.84	ug/L	88		SW846 8260B
	ND	10.0	8.88	ug/L	89	0.47	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	8.99	ug/L	90		SW846 8260B
	ND	10.0	9.10	ug/L	91	1.2	SW846 8260B
Propionitrile	ND	50.0	44.3	ug/L	89		SW846 8260B
	ND	50.0	41.4	ug/L	83	6.9	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	8.06	ug/L	81		SW846 8260B
	ND	10.0	8.62	ug/L	86	6.7	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	9.04	ug/L	90		SW846 8260B
	ND	10.0	9.16	ug/L	92	1.4	SW846 8260B
Carbon tetrachloride	ND	10.0	8.98	ug/L	90		SW846 8260B
	ND	10.0	9.29	ug/L	93	3.4	SW846 8260B
1,2-Dichloroethane	ND	10.0	8.43	ug/L	84		SW846 8260B
	ND	10.0	8.08	ug/L	81	4.2	SW846 8260B
Benzene	ND	10.0	8.65	ug/L	86		SW846 8260B
	ND	10.0	8.72	ug/L	87	0.78	SW846 8260B
Trichloroethene	ND	10.0	8.76	ug/L	88		SW846 8260B
	ND	10.0	8.92	ug/L	89	1.9	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	8.62	ug/L	86		SW846 8260B
	ND	10.0	9.10	ug/L	91	5.3	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	8.18	ug/L	82		SW846 8260B
	ND	10.0	8.40	ug/L	84	2.7	SW846 8260B
Tetrachloroethene	ND	10.0	8.20	ug/L	82		SW846 8260B
	ND	10.0	8.42	ug/L	84	2.7	SW846 8260B
Tetrahydrofuran	ND	50.0	43.3	ug/L	87		SW846 8260B
	ND	50.0	45.8	ug/L	92	5.5	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	7.65	ug/L	77		SW846 8260B
	ND	10.0	7.68	ug/L	77	0.27	SW846 8260B
1-Butanol	ND	100	82.7	ug/L	83		SW846 8260B
	ND	100	76.8	ug/L	77	7.5	SW846 8260B
Toluene	ND	10.0	8.64	ug/L	86		SW846 8260B
	ND	10.0	8.87	ug/L	89	2.6	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	98	(76 - 115)
	99	(76 - 115)
Dibromofluoromethane	93	(81 - 123)
	93	(81 - 123)
1,2-Dichloroethane-d4	95	(70 - 130)
	93	(70 - 130)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #....: SL774 Work Order #....: K4E2P1AK-MS Matrix.....: WATER
 MS Lot-Sample #: F8L100200-004 K4E2P1AL-MSD
 Date Sampled...: 12/08/08 Date Received...: 12/10/08
 Prep Date.....: 12/12/08 Analysis Date...: 12/12/08
 Prep Batch #....: 8352511
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Chloromethane	0.058	10.0	8.19	ug/L	81		SW846 8260B
	0.058	10.0	8.62	ug/L	86	5.2	SW846 8260B
Chlorobenzene	ND	10.0	7.88	ug/L	79		SW846 8260B
	ND	10.0	7.93	ug/L	79	0.64	SW846 8260B
trans-1,4-Dichloro- 2-butene	ND	10.0	5.94	ug/L	59		SW846 8260B
	ND	10.0	5.84	ug/L	58	1.7	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	97	(76 - 116)
	99	(76 - 116)
Dibromofluoromethane	92	(82 - 123)
	90	(82 - 123)
1,2-Dichloroethane-d4	90	(71 - 132)
	89	(71 - 132)
4-Bromofluorobenzene	95	(74 - 120)
	97	(74 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

GC/MS
SEMIVOLATILES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B1W533

GC/MS Semivolatiles

Lot-Sample #....: F8L050357-001 Work Order #....: K37A51AD Matrix.....: WATER
 Date Sampled....: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/08/08 Analysis Date...: 12/22/08
 Prep Batch #....: 8343068
 Dilution Factor: 1 Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
3-Methylphenol & 4-Methylphenol	ND	20	ug/L	1.0
1,4-Dioxane	ND	10	ug/L	5.0
2-Picoline	ND	20	ug/L	1.0
Phenol	ND	10	ug/L	4.0
1,4-Dichlorobenzene	ND	10	ug/L	1.0
2-Methylphenol	ND	10	ug/L	2.0
Nitrobenzene	ND	10	ug/L	1.0
2-Nitrophenol	ND	10	ug/L	1.0
2,4-Dichlorophenol	ND	10	ug/L	1.0
Naphthalene	ND	10	ug/L	1.0
2,4-Dinitrophenol	ND	50	ug/L	2.0
Dimethoate	ND	20	ug/L	1.1
Pentachlorophenol	ND	50	ug/L	2.0
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	1.0
Benzothiazole	ND	10	ug/L	1.0
Tributyl phosphate	ND	10	ug/L	1.5
Tris(2-chloroethyl)phosphate	ND	10	ug/L	1.0

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	37	(15 - 78)
Phenol-d5	22	(15 - 63)
Nitrobenzene-d5	56	(20 - 103)
2-Fluorobiphenyl	49	(20 - 103)
2,4,6-Tribromophenol	58	(20 - 110)
Terphenyl-d14	60	(15 - 114)

CH2M Hill Plateau Remediation DOE RL

B1W533

GC/MS Semivolatiles

Lot-Sample #: F8L050357-001

Work Order #: K37A51AD

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
Unknown		3.9	M 3.4821	ug/L
Unknown aldol condensate		110	M 4.2844	ug/L

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL774
 MB Lot-Sample #: F8L080000-068

Work Order #...: K38051AA

Matrix.....: WATER

Analysis Date...: 12/22/08
 Dilution Factor: 1

Prep Date.....: 12/08/08

Prep Batch #...: 8343068

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
1,4-Dioxane	ND	10	ug/L	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	20	ug/L	SW846 8270C
2-Picoline	ND	20	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
Dimethoate	ND	20	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Benzothiazole	ND	10	ug/L	SW846 8270C
Tributyl phosphate	ND	10	ug/L	SW846 8270C
Tris(2-chloroethyl)phosph	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	33	(15 - 78)
Phenol-d5	20	(15 - 63)
Nitrobenzene-d5	49	(20 - 103)
2-Fluorobiphenyl	41	(20 - 103)
2,4,6-Tribromophenol	48	(20 - 110)
Terphenyl-d14	55	(15 - 114)

NOTE (S) :

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

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F8L080000-068 B Work Order #: K38051AA

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
Unknown Aldol Condensate		66	M 4.263	ug/L

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: SL774 Work Order #....: K38051AC Matrix.....: WATER
 LCS Lot-Sample#: F8L080000-068
 Prep Date.....: 12/08/08 Analysis Date...: 12/22/08
 Prep Batch #....: 8343068
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
3-Methylphenol & 4-Methylphenol	100	49.9	ug/L	50	SW846 8270C
Phenol	100	24.8	ug/L	25	SW846 8270C
1,4-Dichlorobenzene	100	38.6	ug/L	39	SW846 8270C
2-Methylphenol	100	50.1	ug/L	50	SW846 8270C
Nitrobenzene	100	55.6	ug/L	56	SW846 8270C
2-Nitrophenol	100	59.4	ug/L	59	SW846 8270C
2,4-Dichlorophenol	100	58.2	ug/L	58	SW846 8270C
Naphthalene	100	44.2	ug/L	44	SW846 8270C
2,4-Dinitrophenol	100	39.0	ug/L	39	SW846 8270C
Pentachlorophenol	100	47.7	ug/L	48	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	66.5	ug/L	67	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	39	(15 - 58)
Phenol-d5	25	(10 - 39)
Nitrobenzene-d5	56	(22 - 94)
2-Fluorobiphenyl	51	(20 - 97)
2,4,6-Tribromophenol	61	(23 - 102)
Terphenyl-d14	65	(30 - 114)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: SL774 Work Order #....: K37A51AF-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AG-MSD
 Date Sampled...: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/08/08 Analysis Date...: 12/22/08
 Prep Batch #....: 8343068
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
3-Methylphenol & 4-Methylphenol	ND	94.7	46.8	ug/L	49		SW846 8270C
	ND	94.9	53.7	ug/L	57	14	SW846 8270C
Phenol	ND	94.7	22.3	ug/L	24		SW846 8270C
	ND	94.9	25.2	ug/L	27	12	SW846 8270C
1,4-Dichlorobenzene	ND	94.7	34.8	ug/L	37		SW846 8270C
	ND	94.9	46.3	ug/L	49 p	28	SW846 8270C
2-Methylphenol	ND	94.7	47.9	ug/L	51		SW846 8270C
	ND	94.9	54.6	ug/L	57	13	SW846 8270C
Nitrobenzene	ND	94.7	53.6	ug/L	57		SW846 8270C
	ND	94.9	60.1	ug/L	63	11	SW846 8270C
2-Nitrophenol	ND	94.7	59.2	ug/L	63		SW846 8270C
	ND	94.9	66.4	ug/L	70	11	SW846 8270C
2,4-Dichlorophenol	ND	94.7	56.2	ug/L	59		SW846 8270C
	ND	94.9	64.2	ug/L	68	13	SW846 8270C
Naphthalene	ND	94.7	41.1	ug/L	43		SW846 8270C
	ND	94.9	51.6	ug/L	54 p	23	SW846 8270C
2,4-Dinitrophenol	ND	94.7	47.2	ug/L	50		SW846 8270C
	ND	94.9	54.2	ug/L	57	14	SW846 8270C
Pentachlorophenol	ND	94.7	47.2	ug/L	50		SW846 8270C
	ND	94.9	53.2	ug/L	56	12	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	94.7	61.2	ug/L	65		SW846 8270C
	ND	94.9	70.2	ug/L	74	14	SW846 8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	38	(15 - 78)
	42	(15 - 78)
Phenol-d5	23	(15 - 63)
	26	(15 - 63)
Nitrobenzene-d5	57	(20 - 103)
	63	(20 - 103)
2-Fluorobiphenyl	53	(20 - 103)
	58	(20 - 103)
2,4,6-Tribromophenol	62	(20 - 110)
	71	(20 - 110)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL774 Work Order #...: K37A51AF-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AG-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Terphenyl-d14	63	(15 - 114)
	72	(15 - 114)

NOTE (S) :

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

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

PESTICIDES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B1W533

GC Semivolatiles

Lot-Sample #....: F8L050357-001 Work Order #....: K37A51AC Matrix.....: WATER
 Date Sampled...: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/08/08 Analysis Date...: 12/23/08
 Prep Batch #....: 8343467
 Dilution Factor: 1 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Aldrin	ND	0.20	ug/L	0.0040
4,4'-DDD	ND	0.20	ug/L	0.0038
4,4'-DDE	ND	0.20	ug/L	0.0027
4,4'-DDT	ND	0.20	ug/L	0.0056
Endosulfan I	ND	0.20	ug/L	0.0025
Endosulfan II	ND	0.20	ug/L	0.010
gamma-BHC (Lindane)	ND	0.20	ug/L	0.0025
alpha-BHC	ND	0.20	ug/L	0.0025
beta-BHC	ND	0.20	ug/L	0.013
Endrin	ND	0.20	ug/L	0.0028
delta-BHC	ND	0.20	ug/L	0.0060
Heptachlor	ND	0.20	ug/L	0.0025
Heptachlor epoxide	ND	0.20	ug/L	0.0032
Methoxychlor	ND	0.40	ug/L	0.0050
Chlordane (technical)	ND	2.0	ug/L	0.18
Dieldrin	ND	0.20	ug/L	0.0023
Endosulfan sulfate	ND	0.20	ug/L	0.017
Endrin aldehyde	ND	0.20	ug/L	0.0032
Toxaphene	ND	8.0	ug/L	0.33

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	97	(72 - 135)
Decachlorobiphenyl	89	(68 - 133)

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL774
 MB Lot-Sample #: F8L080000-467

Work Order #...: K391M1AA

Matrix.....: WATER

Analysis Date...: 12/22/08
 Dilution Factor: 1

Prep Date.....: 12/08/08
 Prep Batch #...: 8343467

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Aldrin	ND	0.20	ug/L	SW846 8081A
4,4'-DDD	ND	0.20	ug/L	SW846 8081A
4,4'-DDE	ND	0.20	ug/L	SW846 8081A
4,4'-DDT	ND	0.20	ug/L	SW846 8081A
Endosulfan I	ND	0.20	ug/L	SW846 8081A
Endosulfan II	ND	0.20	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.20	ug/L	SW846 8081A
alpha-BHC	ND	0.20	ug/L	SW846 8081A
beta-BHC	ND	0.20	ug/L	SW846 8081A
Endrin	ND	0.20	ug/L	SW846 8081A
delta-BHC	ND	0.20	ug/L	SW846 8081A
Heptachlor	ND	0.20	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.20	ug/L	SW846 8081A
Methoxychlor	ND	0.40	ug/L	SW846 8081A
Chlordane (technical)	ND	2.0	ug/L	SW846 8081A
Dieldrin	ND	0.20	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.20	ug/L	SW846 8081A
Endrin aldehyde	ND	0.20	ug/L	SW846 8081A
Toxaphene	ND	8.0	ug/L	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	108	(72 - 135)
Decachlorobiphenyl	96	(68 - 133)

NOTE (S) :

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #....: SL774 Work Order #....: K391M1AC Matrix.....: WATER
 LCS Lot-Sample#: F8L080000-467
 Prep Date.....: 12/08/08 Analysis Date...: 12/22/08
 Prep Batch #....: 8343467
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Aldrin	0.500	0.472	ug/L	94	SW846 8081A
4,4'-DDT	0.500	0.498	ug/L	100	SW846 8081A
4,4'-DDD	0.500	0.468	ug/L	94	SW846 8081A
4,4'-DDE	0.500	0.474	ug/L	95	SW846 8081A
Endosulfan I	0.500	0.456	ug/L	91	SW846 8081A
Endosulfan II	0.500	0.456	ug/L	91	SW846 8081A
gamma-BHC (Lindane)	0.500	0.483	ug/L	97	SW846 8081A
alpha-BHC	0.500	0.482	ug/L	96	SW846 8081A
Endrin	0.500	0.492	ug/L	98	SW846 8081A
beta-BHC	0.500	0.470	ug/L	94	SW846 8081A
Heptachlor	0.500	0.538	ug/L	108	SW846 8081A
delta-BHC	0.500	0.487	ug/L	97	SW846 8081A
Heptachlor epoxide	0.500	0.465	ug/L	93	SW846 8081A
Methoxychlor	0.500	0.484	ug/L	97	SW846 8081A
Dieldrin	0.500	0.464	ug/L	93	SW846 8081A
Endosulfan sulfate	0.500	0.459	ug/L	92	SW846 8081A
Endrin aldehyde	0.500	0.449	ug/L	90	SW846 8081A

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Tetrachloro-m-xylene	94	(65 - 140)
Decachlorobiphenyl	83	(66 - 137)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL774 Work Order #...: K37A51AK-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AL-MSD
 Date Sampled...: 12/03/08 Date Received...: 12/05/08
 Prep Date.....: 12/08/08 Analysis Date...: 12/23/08
 Prep Batch #...: 8343467
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Aldrin	ND	0.954	0.900	ug/L	94		SW846 8081A
	ND	0.953	0.985	ug/L	103	9.0	SW846 8081A
4,4'-DDT	ND	0.954	1.04	ug/L	109		SW846 8081A
	ND	0.953	1.07	ug/L	112	2.9	SW846 8081A
4,4'-DDD	ND	0.954	0.943	ug/L	99		SW846 8081A
	ND	0.953	0.990	ug/L	104	4.9	SW846 8081A
4,4'-DDE	ND	0.954	0.944	ug/L	99		SW846 8081A
	ND	0.953	1.00	ug/L	105	6.2	SW846 8081A
Endosulfan I	ND	0.954	0.900	ug/L	94		SW846 8081A
	ND	0.953	0.959	ug/L	101	6.3	SW846 8081A
Endosulfan II	ND	0.954	0.905	ug/L	95		SW846 8081A
	ND	0.953	0.954	ug/L	100	5.3	SW846 8081A
gamma-BHC (Lindane)	ND	0.954	0.951	ug/L	100		SW846 8081A
	ND	0.953	1.04	ug/L	109	9.0	SW846 8081A
alpha-BHC	ND	0.954	0.937	ug/L	98		SW846 8081A
	ND	0.953	1.03	ug/L	108	9.4	SW846 8081A
Endrin	ND	0.954	0.987	ug/L	103		SW846 8081A
	ND	0.953	1.04	ug/L	109	5.5	SW846 8081A
beta-BHC	ND	0.954	0.915	ug/L	96		SW846 8081A
	ND	0.953	1.00	ug/L	105	9.0	SW846 8081A
Heptachlor	ND	0.954	1.05	ug/L	110		SW846 8081A
	ND	0.953	1.08	ug/L	113	2.6	SW846 8081A
delta-BHC	ND	0.954	0.952	ug/L	100		SW846 8081A
	ND	0.953	1.04	ug/L	109	8.7	SW846 8081A
Heptachlor epoxide	ND	0.954	0.905	ug/L	95		SW846 8081A
	ND	0.953	0.968	ug/L	102	6.7	SW846 8081A
Methoxychlor	ND	0.954	1.00	ug/L	105		SW846 8081A
	ND	0.953	1.04	ug/L	110	3.9	SW846 8081A
Dieldrin	ND	0.954	0.912	ug/L	96		SW846 8081A
	ND	0.953	0.972	ug/L	102	6.4	SW846 8081A
Endosulfan sulfate	ND	0.954	0.939	ug/L	98		SW846 8081A
	ND	0.953	0.999	ug/L	105	6.2	SW846 8081A
Endrin aldehyde	ND	0.954	0.901	ug/L	94		SW846 8081A
	ND	0.953	0.906	ug/L	95	0.55	SW846 8081A

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Tetrachloro-m-xylene	98	(72 - 135)
	106	(72 - 135)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #....: SL774 Work Order #....: K37A51AK-MS Matrix.....: WATER
 MS Lot-Sample #: F8L050357-001 K37A51AL-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	90	(68 - 133)
	93	(68 - 133)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters