TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

X09-026

Lot #: F9G170249
SDG #: SL811

Mike Neely

CH2M Hill Plateau Remediation
PO Box 1600, MS B3-60
Richland, WA 99352

RECEIVED
SEP 29 2011
EDMC

TESTAMERICA LABORATORIES, INC.

Michael C. Franks
Project Manager

August 13, 2009

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
August 14, 2009
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL811
Number of Samples	: one sample
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: July 17, 2009

II. Introduction

On July 17, 2009, 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.

The following SAFs are associated with this SDG: X09-026

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.

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.

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

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.

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The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** – For organic analyses, the sample is estimated and less than the RL.
- **C** – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** – For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

Semivolatiles

Batch: 9201063

The method blank exhibited concentrations above the reporting limit for bis(2-Ethylhexyl)phthalate, indicating a potential positive bias for this analyte. There was insufficient sample for re-preparation/re-analysis.
Affected Samples:
F9G170249 (1): B20851

Pesticides

Batch: 9201067

There was insufficient sample volume to perform MS/MSD at the usual 1000ml aliquot. A reduced aliquot was used.
Affected Samples:
F9G170249 (1): B20851

Sample surrogate recovery is outside established QC limits. There was insufficient sample to perform repreparation/reanalysis.
Affected Samples:
F9G170249 (1): B20851

The MS recovery for 4,4'-DDT is outside the upper QC limit, indicating a potential positive bias for that analyte. This analyte was not observed above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-BHC, beta-BHC, Heptachlor epoxide, Endrin, Methoxychlor, Dieldrin, Endosulfan sulfate, Endrin ketone, Endrin aldehyde, alpha-Chlordane, and gamma-Chlordane is out of QC limits.
Affected Samples:
F9G170249 (1): B20851

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August 14, 2009
SDG: SL811

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The opening/closing CCV recovery was outside the upper QC limit (greater than 20% RSD) for Heptachlor and 4,4'-DDT indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples.
Affected Samples:
F9G170249 (1): B20851

There were no observations or nonconformances for the following methods:

Volatiles

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

Problem and Discrepancy Report

TASL

SDG SL811

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1. The data package has the following issues:

a) Analytical results, SVOA, remove all M qualifiers from all TIC reports.

Resolution: *Provide correction.*

Lab Response: **None provided**

CHPRC Response:

A review of the problem and discrepancy issue reported above was conducted on 12/21/2010. It was concluded from the review that the "M" designation in the TIC reports does not represent or replace the laboratory qualifier as defined in the Format for Analytical Data (FEAD) guidelines. Instead the "M" designation provides additional information about the makeup of the TIC result. Offered below is the definition provided in the SL811 data package for the "M" designation:

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

Since the "M" designation serves to provide additional information about the nature of the TIC data and does not replace or take the place of laboratory qualifiers as defined by FEAD, no further corrective action is required at this time.

b) Narrative, pesticides, endrin ketone, alpha-chlorane, and gamma-chlorane were not included in the report and all references to them in the narrative should be removed.

Resolution: *Provide correction.*

Lab Response: **None provided**

CHPRC Response:

A review of the problem and discrepancy issue reported above was conducted on 12/21/2010. It was concluded from the review, there were no batch QC and/or RPD data reported in the data package for endrin ketone, alpha-chlorane or gamma-chlorane. Therefore, reference to RPD failures, specifically "out of QC limits" for these pesticides in the case narrative is obviously a laboratory error. No further corrective action is required at this time.

Please correct the issues and resubmit the hard copy.

Provide a resolution to each issue noted on the report

METHODS SUMMARY

F9G170249

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Organochlorine Pesticides	SW846 8081A	SW846 3510C
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

F9G170249

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
LGNG5	001	B20851	07/15/09	08:12

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.

SDG# SL811

CHPRC

SL811

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CLR 13

C.O.C. # X09-026-134

Page 1 of 1

Collector: DJ Woehle, CHPRC	Contact/Requester: Dana Widrig	Telephone No.: 509-376-2858 MSIN FAX
SAF No.: X09-026	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2PO CHAR. SPECIAL SAMPLING MARCH 2009	HNF-N-506-23132	Ice Chest No.: GWS-001 Temp.
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.: 7967 8091 8010
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐

Do not combine X SAF samples with other sets. Need SDG to be stand alone.
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
320851		W	7-15-09	0812	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
320851		W			3x1000-mL aG	8270_SVOA_GCMS: List-2 (17)	7/40 Days	Cool~4C
320851		W			2x1000-mL aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
320851		W			1x20-mL P	Activity Scan	6 Months	None

JUL 15 2009

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DJ Woehle CHPRC		JUL 15 2009	1150	SSU-1		JUL 15 2009	1150
~~RD Julian~~ SSU #1			0830 JUL 16 2009	RD Julian CHPRC			0830 JUL 16 2009
R.D. Julian			JUL 16 2009 1420	FED-EX			
FEDEX				Craig Roberts			7/17/09 0915

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

P&D SUBMITTAL

DECEMBER 21, 2010

REVISION 1

TestAmerica St. Louis

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Detailed Results

Enter tracking number

Detailed Results | Notifications

Tracking no.: 796780918010 E-n

Delivered

Initiated Picked up In transit Delivered

Delivered
Signed for by: S.WILSON

Shipment Dates	Destination
Ship date Jul 16, 2009	EARTH CITY, MO
Delivery date Jul 17, 2009 9:15 AM	Signature Proof of Delivery

Shipment Facts

Service type	Priority Overnight	Delivered to	Shipping/Receiving
Weight	39.0 lbs/17.7 kg	Reference	GWS-001

Shipment Travel History

Select time zone: Select Select time form

All shipment travel activity is displayed in local time for the location

Date/Time	Activity	Location	Details
Jul 17, 2009 9:15 AM	**Delivered**	EARTH CITY, MO	
Jul 17, 2009 6:49 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
Jul 17, 2009 6:42 AM	At local FedEx facility	EARTH CITY, MO	
Jul 17, 2009 4:37 AM	At dest sort facility	BERKELEY, MO	
Jul 17, 2009 3:36 AM	Departed FedEx location	MEMPHIS, TN	
Jul 16, 2009 5:18 PM	Left FedEx origin facility	PASCO, WA	
Jul 16, 2009 4:12 PM	Picked up	PASCO, WA	
Jul 16, 2009 11:11 AM	Shipment information sent to FedEx		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F9G170247 (249)

CONDITION UPON RECEIPT FORM

Client: CHPRC

Quote No: 83450; 82781

COC/RFA No: see below

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Initiated By: CR Date: 7/17/09 Time: 0915

Shipping Information

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

Shipping # (s):*

1. 7967 8091 8010
2.
3.
4.
5.
6.
7.
8.
9.
10.

Sample Temperature (s):**

1. 4
2.
3.
4.
5.
6.
7.
8.
9.
10.

*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.	(Y) N	Are there custody seals present on the cooler?	8.	(Y) N	Are there custody seals present on bottles?
2.	Y (N) N/A	Do custody seals on cooler appear to be tampered with?	9.	Y (N) N/A	Do custody seals on bottles appear to be tampered with?
3.	(Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	(Y) N (N/A)	Was sample received with proper pH[1]? (If not, make note below) CR 7/17/09
4.	(Y) N	Sample received with Chain of Custody?	11.	(Y) N	Sample received in proper containers?
5.	(Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	Y (N) N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
6.	Y (N)	Was sample received broken?	13.	Y N (N/A)	Was Internal COC/Workshare received?
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Was pH taken by original TestAmerica lab?

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

Notes: X09-026-134
W09-007-365

Corrective Action:

- ☐ Client Contact Name: _____ Informed by: _____
- ☐ Sample(s) processed "as is"
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Project Management Review: [signature] Date: 07-18-09

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: B20851

GC/MS Volatiles

Lot-Sample #...: F9G170249-001 Work Order #...: LGNG51AE Matrix.....: WATER
Date Sampled...: 07/15/09 Date Received..: 07/17/09
Prep Date.....: 07/21/09 Analysis Date..: 07/21/09
Prep Batch #...: 9202371
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	5.0	ug/L	4.2
Acrolein	ND	10	ug/L	2.6
Bromodichloromethane	ND	1.0	ug/L	0.098
Bromoform	ND	1.0	ug/L	0.15
Bromomethane	ND	2.0	ug/L	0.096
Chlorobenzene	ND	1.0	ug/L	0.060
Chloroprene	ND	1.0	ug/L	0.083
Dibromochloromethane	ND	1.0	ug/L	0.21
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.20
Chloroethane	ND	2.0	ug/L	0.085
Chloromethane	**0.12 J**	**2.0**	**ug/L**	**0.086**
Allyl chloride	ND	2.0	ug/L	0.12
1,2-Dibromoethane	ND	1.0	ug/L	0.098
Dibromomethane	ND	1.0	ug/L	0.095
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.20
Dichlorodifluoromethane	**0.11 J**	**2.0**	**ug/L**	**0.058**
1,1-Dichloroethene	ND	1.0	ug/L	0.11
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.21
1,2-Dichloropropane	ND	1.0	ug/L	0.054
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.099
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.23
1,4-Dioxane	ND	20	ug/L	45
Ethylbenzene	ND	1.0	ug/L	0.11
Ethyl methacrylate	ND	1.0	ug/L	0.74
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	1.3
Iodomethane	ND	2.0	ug/L	0.091
Isobutanol	ND	80	ug/L	54
Methacrylonitrile	ND	5.0	ug/L	1.4
Methyl methacrylate	ND	1.0	ug/L	0.97
Styrene	ND	1.0	ug/L	0.042
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.16
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.11
1,2,3-Trichloropropane	ND	1.0	ug/L	0.23
Vinyl acetate	ND	2.0	ug/L	0.23
Vinyl chloride	ND	2.0	ug/L	0.091

(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B20851

GC/MS Volatiles

Lot-Sample #...: F9G170249-001 **Work Order #...:** LGNG51AE **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	ND	2.0	ug/L	0.42
Methylene chloride	ND	1.0	ug/L	0.10
Carbon disulfide	ND	1.0	ug/L	0.52
1,1-Dichloroethane	ND	1.0	ug/L	0.083
2-Butanone	ND	5.0	ug/L	0.83
Chloroform	**0.12 J**	**1.0**	**ug/L**	**0.067**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.14
Propionitrile	ND	5.0	ug/L	2.1
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.081
1,1,1-Trichloroethane	ND	1.0	ug/L	0.088
Carbon tetrachloride	ND	1.0	ug/L	0.073
1,2-Dichloroethane	ND	1.0	ug/L	0.050
Benzene	ND	1.0	ug/L	0.060
Trichloroethene	**0.15 J**	**1.0**	**ug/L**	**0.091**
4-Methyl-2-pentanone	ND	5.0	ug/L	0.32
1,1,2-Trichloroethane	ND	1.0	ug/L	0.071
Tetrachloroethene	ND	1.0	ug/L	0.065
Tetrahydrofuran	ND	10	ug/L	7.5
Xylenes (total)	ND	3.0	ug/L	0.22
1,4-Dichlorobenzene	ND	1.0	ug/L	0.11
1-Butanol	ND	40	ug/L	8.1
Toluene	ND	1.0	ug/L	0.070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	83	(72 - 117)
Dibromofluoromethane	103	(66 - 137)
1,2-Dichloroethane-d4	105	(58 - 144)
4-Bromofluorobenzene	92	(68 - 127)

NOTE(S):

J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

B20851

GC/MS Volatiles

Lot-Sample #: F9G170249-001 **Work Order #:** LGNG51AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGTKF1AA **Matrix.....:** WATER
MB Lot-Sample #: F9G210000-371

Prep Date.....: 07/21/09
Analysis Date..: 07/21/09 **Prep Batch #...:** 9202371
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Bromodichloromethane	ND	1.0	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
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	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
Chloromethane	ND	2.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	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
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
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	20	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Acetonitrile	ND	5.0	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	2.0	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

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGTKF1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon disulfide	ND	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
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	80	(72 - 117)
Dibromofluoromethane	104	(66 - 137)
1,2-Dichloroethane-d4	105	(58 - 144)
4-Bromofluorobenzene	91	(68 - 127)

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 Volatiles

Lot-Sample #: F9G210000-371 B **Work Order #:** LGTKF1AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGTKF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F9G210000-371 LGTKF1AD-LCSD
Prep Date.....: 07/21/09 **Analysis Date..:** 07/21/09
Prep Batch #...: 9202371
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetonitrile	50.0	40.0	ug/L	80		SW846 8260B
	50.0	41.5	ug/L	83	3.7	SW846 8260B
Iodomethane	10.0	8.88	ug/L	89		SW846 8260B
	10.0	8.26	ug/L	83	7.2	SW846 8260B
Vinyl acetate	10.0	8.81	ug/L	88		SW846 8260B
	10.0	8.05	ug/L	81	9.0	SW846 8260B
Acrolein	50.0	35.5	ug/L	71		SW846 8260B
	50.0	34.2	ug/L	68	3.7	SW846 8260B
Isobutanol	200	193	ug/L	97		SW846 8260B
	200	198	ug/L	99	2.6	SW846 8260B
Methacrylonitrile	50.0	46.0	ug/L	92		SW846 8260B
	50.0	45.7	ug/L	91	0.52	SW846 8260B
1,4-Dioxane	200	196	ug/L	98		SW846 8260B
	200	209	ug/L	105	6.4	SW846 8260B
Chloroprene	10.0	8.78	ug/L	88		SW846 8260B
	10.0	8.59	ug/L	86	2.2	SW846 8260B
1,2-Dichloropropane	10.0	9.22	ug/L	92		SW846 8260B
	10.0	9.37	ug/L	94	1.6	SW846 8260B
Bromodichloromethane	10.0	9.28	ug/L	93		SW846 8260B
	10.0	9.51	ug/L	95	2.4	SW846 8260B
trans-1,3-Dichloropropene	10.0	9.79	ug/L	98		SW846 8260B
	10.0	10.1	ug/L	101	2.7	SW846 8260B
2-Hexanone	10.0	10.1	ug/L	101		SW846 8260B
	10.0	10.8	ug/L	108	6.6	SW846 8260B
Chlorobenzene	10.0	8.55	ug/L	86		SW846 8260B
	10.0	8.69	ug/L	87	1.6	SW846 8260B
Bromoform	10.0	9.81	ug/L	98		SW846 8260B
	10.0	10.2	ug/L	102	3.6	SW846 8260B
Ethylbenzene	10.0	8.87	ug/L	89		SW846 8260B
	10.0	8.95	ug/L	90	0.95	SW846 8260B
Styrene	10.0	9.73	ug/L	97		SW846 8260B
	10.0	10.1	ug/L	101	3.3	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	9.19	ug/L	92		SW846 8260B
	10.0	9.16	ug/L	92	0.32	SW846 8260B
Allyl chloride	10.0	7.93	ug/L	79		SW846 8260B
	10.0	7.54	ug/L	75	5.0	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	10.8	ug/L	108		SW846 8260B
	10.0	10.4	ug/L	104	3.2	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 Work Order #...: LGTKF1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F9G210000-371 LGTKF1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,2-Dibromoethane	10.0	9.40	ug/L	94		SW846 8260B
	10.0	9.65	ug/L	96	2.6	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	9.44	ug/L	94		SW846 8260B
	10.0	8.33	ug/L	83	12	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	5.05	ug/L	50		SW846 8260B
	10.0	5.22	ug/L	52	3.4	SW846 8260B
Ethyl methacrylate	10.0	8.63	ug/L	86		SW846 8260B
	10.0	8.76	ug/L	88	1.5	SW846 8260B
Methyl methacrylate	10.0	9.76	ug/L	98		SW846 8260B
	10.0	9.75	ug/L	97	0.15	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	9.16	ug/L	92		SW846 8260B
	10.0	9.31	ug/L	93	1.6	SW846 8260B
Trichlorofluoromethane	10.0	8.52	ug/L	85		SW846 8260B
	10.0	8.63	ug/L	86	1.3	SW846 8260B
cis-1,3-Dichloropropene	10.0	10.2	ug/L	102		SW846 8260B
	10.0	10.2	ug/L	102	0.78	SW846 8260B
Dibromochloromethane	10.0	9.36	ug/L	94		SW846 8260B
	10.0	9.64	ug/L	96	2.9	SW846 8260B
Chloromethane	10.0	7.75	ug/L	78		SW846 8260B
	10.0	7.82	ug/L	78	0.91	SW846 8260B
Bromomethane	10.0	7.63	ug/L	76		SW846 8260B
	10.0	7.32	ug/L	73	4.2	SW846 8260B
Chloroethane	10.0	7.29	ug/L	73		SW846 8260B
	10.0	7.14	ug/L	71	2.0	SW846 8260B
1,1-Dichloroethene	10.0	8.07	ug/L	81		SW846 8260B
	10.0	7.88	ug/L	79	2.4	SW846 8260B
1,2-Dichloroethene (total)	20.0	18.2	ug/L	91		SW846 8260B
	20.0	17.9	ug/L	89	1.7	SW846 8260B
Vinyl chloride	10.0	8.27	ug/L	83		SW846 8260B
	10.0	8.60	ug/L	86	3.9	SW846 8260B
Acetone	10.0	8.89	ug/L	89		SW846 8260B
	10.0	8.85	ug/L	88	0.45	SW846 8260B
Methylene chloride	10.0	11.0	ug/L	110		SW846 8260B
	10.0	10.6	ug/L	106	3.4	SW846 8260B
Carbon disulfide	10.0	7.90	ug/L	79		SW846 8260B
	10.0	7.52	ug/L	75	5.0	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 Work Order #...: LGTKF1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F9G210000-371 LGTKF1AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethane	10.0	8.92	ug/L	89		SW846 8260B
	10.0	8.80	ug/L	88	1.4	SW846 8260B
2-Butanone	10.0	10.7	ug/L	107		SW846 8260B
	10.0	10.6	ug/L	106	1.4	SW846 8260B
Chloroform	10.0	9.09	ug/L	91		SW846 8260B
	10.0	9.00	ug/L	90	1.1	SW846 8260B
cis-1,2-Dichloroethene	10.0	9.48	ug/L	95		SW846 8260B
	10.0	9.44	ug/L	94	0.40	SW846 8260B
Propionitrile	50.0	45.0	ug/L	90		SW846 8260B
	50.0	45.5	ug/L	91	0.99	SW846 8260B
trans-1,2-Dichloroethene	10.0	8.69	ug/L	87		SW846 8260B
	10.0	8.42	ug/L	84	3.2	SW846 8260B
1,1,1-Trichloroethane	10.0	8.86	ug/L	89		SW846 8260B
	10.0	8.76	ug/L	88	1.2	SW846 8260B
Carbon tetrachloride	10.0	8.96	ug/L	90		SW846 8260B
	10.0	8.75	ug/L	88	2.3	SW846 8260B
1,2-Dichloroethane	10.0	9.51	ug/L	95		SW846 8260B
	10.0	9.56	ug/L	96	0.49	SW846 8260B
Benzene	10.0	8.95	ug/L	90		SW846 8260B
	10.0	8.83	ug/L	88	1.4	SW846 8260B
Trichloroethene	10.0	8.71	ug/L	87		SW846 8260B
	10.0	8.50	ug/L	85	2.4	SW846 8260B
4-Methyl-2-pentanone	10.0	10.6	ug/L	106		SW846 8260B
	10.0	10.9	ug/L	109	2.2	SW846 8260B
1,1,2-Trichloroethane	10.0	9.31	ug/L	93		SW846 8260B
	10.0	9.52	ug/L	95	2.2	SW846 8260B
Tetrachloroethene	10.0	8.56	ug/L	86		SW846 8260B
	10.0	8.74	ug/L	87	2.0	SW846 8260B
Tetrahydrofuran	50.0	47.3	ug/L	95		SW846 8260B
	50.0	48.6	ug/L	97	2.7	SW846 8260B
1,4-Dichlorobenzene	10.0	8.75	ug/L	87		SW846 8260B
	10.0	8.57	ug/L	86	2.0	SW846 8260B
1-Butanol	100	97.4	ug/L	97		SW846 8260B
	100	100	ug/L	100	2.6	SW846 8260B
Toluene	10.0	8.83	ug/L	88		SW846 8260B
	10.0	8.96	ug/L	90	1.5	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	92	(80 - 117)
	94	(80 - 117)
Dibromofluoromethane	95	(77 - 120)
	94	(77 - 120)
1,2-Dichloroethane-d4	94	(61 - 136)
	92	(61 - 136)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGTKF1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F9G210000-371 LGTKF1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(72 - 123)
	94	(72 - 123)

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 Volatiles

Client Lot #...: F9G170249 Work Order #...: LGNG51AK-MS Matrix.....: WATER
MS Lot-Sample #: F9G170249-001 LGNG51AL-MSD
Date Sampled...: 07/15/09 Date Received..: 07/17/09
Prep Date.....: 07/21/09 Analysis Date..: 07/21/09
Prep Batch #...: 9202371
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	12.0	ug/L	120		SW846 8260B
	ND	10.0	12.0	ug/L	120	0.49	SW846 8260B
Chloromethane	0.12	10.0	8.69	ug/L	86		SW846 8260B
	0.12	10.0	8.71	ug/L	86	0.28	SW846 8260B
Bromomethane	ND	10.0	8.48	ug/L	85		SW846 8260B
	ND	10.0	9.16	ug/L	92	7.6	SW846 8260B
Chloroethane	ND	10.0	9.14	ug/L	91		SW846 8260B
	ND	10.0	9.02	ug/L	90	1.2	SW846 8260B
1,1-Dichloroethene	ND	10.0	9.80	ug/L	98		SW846 8260B
	ND	10.0	9.61	ug/L	96	1.9	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	21.5	ug/L	108		SW846 8260B
	ND	20.0	21.3	ug/L	107	0.84	SW846 8260B
1,2-Dichloropropane	ND	10.0	10.9	ug/L	109		SW846 8260B
	ND	10.0	11.1	ug/L	111	1.3	SW846 8260B
Bromodichloromethane	ND	10.0	11.8	ug/L	118		SW846 8260B
	ND	10.0	11.7	ug/L	117	0.34	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	10.6	ug/L	106	2.1	SW846 8260B
2-Hexanone	ND	10.0	9.92	ug/L	99		SW846 8260B
	ND	10.0	10.1	ug/L	101	2.2	SW846 8260B
Chlorobenzene	ND	10.0	9.23	ug/L	92		SW846 8260B
	ND	10.0	9.16	ug/L	92	0.79	SW846 8260B
Bromoform	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.82	ug/L	98	0.32	SW846 8260B
Ethylbenzene	ND	10.0	9.56	ug/L	96		SW846 8260B
	ND	10.0	9.50	ug/L	95	0.73	SW846 8260B
Styrene	ND	10.0	10.2	ug/L	102		SW846 8260B
	ND	10.0	10.0	ug/L	100	2.2	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	9.24	ug/L	92		SW846 8260B
	ND	10.0	8.96	ug/L	90	3.1	SW846 8260B
Dibromochloromethane	ND	10.0	9.93	ug/L	99		SW846 8260B
	ND	10.0	9.86	ug/L	99	0.70	SW846 8260B
Allyl chloride	ND	10.0	9.81	ug/L	98		SW846 8260B
	ND	10.0	8.93	ug/L	89	9.4	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.7	ug/L	107	3.5	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGNG51AK-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AL-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromoethane	ND	10.0	9.92	ug/L	99		SW846 8260B
	ND	10.0	10.0	ug/L	100	0.92	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	9.02	ug/L	90		SW846 8260B
	ND	10.0	9.06	ug/L	91	0.43	SW846 8260B
Dichlorodifluoromethane (Freon 12)	0.11	10.0	6.37	ug/L	63		SW846 8260B
	0.11	10.0	6.27	ug/L	62	1.5	SW846 8260B
Ethyl methacrylate	ND	10.0	8.60	ug/L	86		SW846 8260B
	ND	10.0	8.70	ug/L	87	1.2	SW846 8260B
Methyl methacrylate	ND	10.0	11.5	ug/L	115		SW846 8260B
	ND	10.0	11.8	ug/L	118	2.2	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	9.65	ug/L	96		SW846 8260B
	ND	10.0	9.77	ug/L	98	1.3	SW846 8260B
Trichlorofluoromethane	ND	10.0	11.2	ug/L	112		SW846 8260B
	ND	10.0	10.7	ug/L	107	4.5	SW846 8260B
Acetonitrile	ND	50.0	43.7	ug/L	87		SW846 8260B
	ND	50.0	45.8	ug/L	92	4.8	SW846 8260B
Iodomethane	ND	10.0	9.24	ug/L	92		SW846 8260B
	ND	10.0	8.07	ug/L	81	14	SW846 8260B
Vinyl acetate	ND	10.0	8.86	ug/L	89		SW846 8260B
	ND	10.0	9.59	ug/L	96	7.9	SW846 8260B
Acrolein	ND	50.0	38.1	ug/L	76		SW846 8260B
	ND	50.0	37.5	ug/L	75	1.4	SW846 8260B
Isobutanol	ND	200	197	ug/L	98		SW846 8260B
	ND	200	200	ug/L	100	1.5	SW846 8260B
Methacrylonitrile	ND	50.0	54.7	ug/L	109		SW846 8260B
	ND	50.0	55.2	ug/L	110	0.94	SW846 8260B
1,4-Dioxane	ND	200	173	ug/L	86		SW846 8260B
	ND	200	192	ug/L	96	11	SW846 8260B
Chloroprene	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.6	ug/L	106	0.66	SW846 8260B
Vinyl chloride	ND	10.0	9.26	ug/L	93		SW846 8260B
	ND	10.0	10.6	ug/L	106	13	SW846 8260B
Acetone	ND	10.0	9.84	ug/L	98		SW846 8260B
	ND	10.0	10.9	ug/L	109	10	SW846 8260B
Methylene chloride	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.4	ug/L	104	3.5	SW846 8260B
Carbon disulfide	ND	10.0	9.25	ug/L	92		SW846 8260B
	ND	10.0	9.08	ug/L	91	1.8	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGNG51AK-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AL-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethane	ND	10.0	10.9	ug/L	109		SW846 8260B
	ND	10.0	10.7	ug/L	107	2.0	SW846 8260B
2-Butanone	ND	10.0	12.7	ug/L	127		SW846 8260B
	ND	10.0	11.4	ug/L	114	11	SW846 8260B
Chloroform	0.12	10.0	11.5	ug/L	113		SW846 8260B
	0.12	10.0	11.3	ug/L	112	1.2	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	11.4	ug/L	114		SW846 8260B
	ND	10.0	11.2	ug/L	112	1.3	SW846 8260B
Propionitrile	ND	50.0	51.4	ug/L	103		SW846 8260B
	ND	50.0	51.4	ug/L	103	0.05	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	10.1	ug/L	101	0.29	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	11.2	ug/L	112		SW846 8260B
	ND	10.0	11.2	ug/L	112	0.09	SW846 8260B
Carbon tetrachloride	ND	10.0	11.5	ug/L	115		SW846 8260B
	ND	10.0	11.5	ug/L	115	0.0	SW846 8260B
1,2-Dichloroethane	ND	10.0	12.2	ug/L	122		SW846 8260B
	ND	10.0	11.9	ug/L	119	2.6	SW846 8260B
Benzene	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.7	ug/L	107	0.46	SW846 8260B
Trichloroethene	0.15	10.0	10.7	ug/L	105		SW846 8260B
	0.15	10.0	10.7	ug/L	105	0.28	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.9	ug/L	109	1.1	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	9.84	ug/L	98		SW846 8260B
	ND	10.0	10.1	ug/L	101	2.7	SW846 8260B
Tetrachloroethene	ND	10.0	8.92	ug/L	89		SW846 8260B
	ND	10.0	9.05	ug/L	91	1.4	SW846 8260B
Tetrahydrofuran	ND	50.0	55.3	ug/L	111		SW846 8260B
	ND	50.0	57.0	ug/L	114	3.0	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	8.54	ug/L	85		SW846 8260B
	ND	10.0	8.68	ug/L	87	1.7	SW846 8260B
1-Butanol	ND	100	99.8	ug/L	100		SW846 8260B
	ND	100	92.5	ug/L	93	7.5	SW846 8260B
Toluene	ND	10.0	9.27	ug/L	93		SW846 8260B
	ND	10.0	9.26	ug/L	93	0.04	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	84	(72 - 117)
	84	(72 - 117)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F9G170249 **Work Order #...:** LGNG51AK-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AL-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(66 - 137)
	100	(66 - 137)
1,2-Dichloroethane-d4	104	(58 - 144)
	102	(58 - 144)
4-Bromofluorobenzene	90	(68 - 127)
	94	(68 - 127)

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: B20851

GC/MS Semivolatiles

Lot-Sample #...: F9G170249-001 **Work Order #...:** LGNG51AD **Matrix.....:** WATER
Date Sampled...: 07/15/09 **Date Received..:** 07/17/09
Prep Date.....: 07/20/09 **Analysis Date..:** 07/22/09
Prep Batch #...: 9201063
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Methylphenol & 4-Methylphenol	ND	20	ug/L	2.0
1,4-Dioxane	ND	10	ug/L	5.0
2-Picoline	ND	20	ug/L	1.0
Phenol	ND	10	ug/L	2.0
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	1.0
Pentachlorophenol	ND	50	ug/L	2.0
bis(2-Ethylhexyl) phthalate	**13 B**	**10**	**ug/L**	**1.0**
Benzothiazole	ND	10	ug/L	1.1
Tributyl phosphate	ND	10	ug/L	1.0
Tris(2-chloroethyl)phosphate	ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	35	(20 - 73)
Phenol-d5	24	(10 - 59)
Nitrobenzene-d5	51	(42 - 94)
2-Fluorobiphenyl	39	(33 - 101)
2,4,6-Tribromophenol	72	(42 - 109)
Terphenyl-d14	91	(40 - 113)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CH2M Hill Plateau Remediation DOE RL

B20851

GC/MS Semivolatiles

Lot-Sample #: F9G170249-001 **Work Order #:** LGNG51AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		6.2 J	M	3.6701	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 #...: F9G170249 **Work Order #...:** LGQH31AA **Matrix.....:** WATER
MB Lot-Sample #: F9G200000-063

Prep Date.....: 07/20/09
Analysis Date..: 07/21/09 **Prep Batch #...:** 9201063
Dilution Factor: 1

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	**10**	**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	41	(20 - 73)
Phenol-d5	29	(10 - 59)
Nitrobenzene-d5	62	(42 - 94)
2-Fluorobiphenyl	47	(33 - 101)
2,4,6-Tribromophenol	75	(42 - 109)
Terphenyl-d14	92	(40 - 113)

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 #: F9G200000-063 B **Work Order #:** LGQH31AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		4.4 J	M	3.6592	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 #...: F9G170249 **Work Order #...:** LGQH31AC **Matrix.....:** WATER
LCS Lot-Sample#: F9G200000-063
Prep Date.....: 07/20/09 **Analysis Date..:** 07/21/09
Prep Batch #...: 9201063
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
3-Methylphenol & 4-Methylphenol	**100**	**75.8**	**ug/L**	**76**	**SW846 8270C**
Phenol	**100**	**33.9**	**ug/L**	**34**	**SW846 8270C**
1,4-Dichlorobenzene	**100**	**49.7**	**ug/L**	**50**	**SW846 8270C**
2-Methylphenol	**100**	**67.3**	**ug/L**	**67**	**SW846 8270C**
Nitrobenzene	**100**	**70.9**	**ug/L**	**71**	**SW846 8270C**
2-Nitrophenol	**100**	**71.4**	**ug/L**	**71**	**SW846 8270C**
2,4-Dichlorophenol	**100**	**73.0**	**ug/L**	**73**	**SW846 8270C**
Naphthalene	**100**	**61.2**	**ug/L**	**61**	**SW846 8270C**
2,4-Dinitrophenol	**100**	**66.0**	**ug/L**	**66**	**SW846 8270C**
Pentachlorophenol	**100**	**75.1**	**ug/L**	**75**	**SW846 8270C**
bis(2-Ethylhexyl) phthalate	**100**	**99.3**	**ug/L**	**99**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(26 - 63)
Phenol-d5	35	(15 - 44)
Nitrobenzene-d5	72	(43 - 92)
2-Fluorobiphenyl	67	(37 - 92)
2,4,6-Tribromophenol	91	(43 - 101)
Terphenyl-d14	97	(44 - 106)

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 #...: F9G170249 **Work Order #...:** LGNG51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AJ-MSD
Date Sampled...: 07/15/09 **Date Received..:** 07/17/09
Prep Date.....: 07/20/09 **Analysis Date..:** 07/22/09
Prep Batch #...: 9201063
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
3-Methylphenol & 4-Methylphenol	ND	94.9	68.4	ug/L	72		SW846 8270C
	ND	95.0	73.9	ug/L	78	7.7	SW846 8270C
Phenol	ND	94.9	30.2	ug/L	32		SW846 8270C
	ND	95.0	32.3	ug/L	34	6.8	SW846 8270C
1,4-Dichlorobenzene	ND	94.9	42.3	ug/L	45		SW846 8270C
	ND	95.0	49.4	ug/L	52	16	SW846 8270C
2-Methylphenol	ND	94.9	62.0	ug/L	65		SW846 8270C
	ND	95.0	67.8	ug/L	71	8.9	SW846 8270C
Nitrobenzene	ND	94.9	64.3	ug/L	68		SW846 8270C
	ND	95.0	72.2	ug/L	76	12	SW846 8270C
2-Nitrophenol	ND	94.9	68.4	ug/L	72		SW846 8270C
	ND	95.0	73.7	ug/L	78	7.4	SW846 8270C
2,4-Dichlorophenol	ND	94.9	68.5	ug/L	72		SW846 8270C
	ND	95.0	73.4	ug/L	77	7.0	SW846 8270C
Naphthalene	ND	94.9	50.8	ug/L	54		SW846 8270C
	ND	95.0	59.5	ug/L	63	16	SW846 8270C
2,4-Dinitrophenol	ND	94.9	61.2	ug/L	65		SW846 8270C
	ND	95.0	71.9	ug/L	76	16	SW846 8270C
Pentachlorophenol	ND	94.9	69.1	ug/L	73		SW846 8270C
	ND	95.0	76.4	ug/L	80	10	SW846 8270C
bis(2-Ethylhexyl) phthalate	13	94.9	88.7	ug/L	79		SW846 8270C
	13	95.0	86.8	ug/L	77	2.2	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(20 - 73)
	51	(20 - 73)
Phenol-d5	33	(10 - 59)
	35	(10 - 59)
Nitrobenzene-d5	74	(42 - 94)
	78	(42 - 94)
2-Fluorobiphenyl	64	(33 - 101)
	66	(33 - 101)
2,4,6-Tribromophenol	89	(42 - 109)
	94	(42 - 109)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F9G170249 **Work Order #...:** LGNG51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AJ-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	97	(40 - 113)
	79	(40 - 113)

NOTE(S):

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

Bold print denotes control parameters

PESTICIDES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B20851

GC Semivolatiles

Lot-Sample #...: F9G170249-001 Work Order #...: LGNG51AC Matrix.....: WATER
Date Sampled...: 07/15/09 Date Received..: 07/17/09
Prep Date.....: 07/20/09 Analysis Date..: 08/11/09
Prep Batch #...: 9201067
Dilution Factor: 1 Method.....: SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.0047
4,4'-DDD	ND	0.050	ug/L	0.0031
4,4'-DDE	ND	0.050	ug/L	0.0059
4,4'-DDT	ND N	0.050	ug/L	0.0098
Endosulfan I	ND	0.050	ug/L	0.0031
Endosulfan II	ND	0.050	ug/L	0.0032
gamma-BHC (Lindane)	ND	0.050	ug/L	0.0029
alpha-BHC	ND	0.050	ug/L	0.0044
beta-BHC	ND	0.050	ug/L	0.0065
Endrin	ND	0.050	ug/L	0.0067
delta-BHC	ND	0.050	ug/L	0.0032
Heptachlor	ND	0.050	ug/L	0.0052
Heptachlor epoxide	ND	0.050	ug/L	0.0041
Methoxychlor	ND	0.10	ug/L	0.0081
Chlordane (technical)	ND	0.50	ug/L	0.032
Dieldrin	ND	0.050	ug/L	0.0036
Endosulfan sulfate	ND	0.050	ug/L	0.0082
Endrin aldehyde	ND	0.050	ug/L	0.0027
Toxaphene	ND	2.0	ug/L	0.19

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	64 *	(70 - 130)
Decachlorobiphenyl	111	(70 - 130)

NOTE(S):

* Surrogate recovery is outside stated control limits.

N Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F9G170249 **Work Order #...:** LGQEJ1AA **Matrix.....:** WATER
MB Lot-Sample #: F9G200000-067

Prep Date.....: 07/20/09
Analysis Date..: 08/11/09 **Prep Batch #...:** 9201067
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(70 - 130)
Decachlorobiphenyl	103	(70 - 130)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F9G170249 **Work Order #...:** LGQEJ1AC **Matrix.....:** WATER
LCS Lot-Sample#: F9G200000-067
Prep Date.....: 07/20/09 **Analysis Date..:** 08/11/09
Prep Batch #...: 9201067
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**0.500**	**0.451**	**ug/L**	**90**	**SW846 8081A**
4,4'-DDT	**0.500**	**0.561**	**ug/L**	**112**	**SW846 8081A**
4,4'-DDD	**0.500**	**0.553**	**ug/L**	**111**	**SW846 8081A**
4,4'-DDE	**0.500**	**0.476**	**ug/L**	**95**	**SW846 8081A**
Endosulfan I	**0.500**	**0.474**	**ug/L**	**95**	**SW846 8081A**
Endosulfan II	**0.500**	**0.498**	**ug/L**	**100**	**SW846 8081A**
gamma-BHC (Lindane)	**0.500**	**0.505**	**ug/L**	**101**	**SW846 8081A**
alpha-BHC	**0.500**	**0.483**	**ug/L**	**97**	**SW846 8081A**
Endrin	**0.500**	**0.526**	**ug/L**	**105**	**SW846 8081A**
beta-BHC	**0.500**	**0.483**	**ug/L**	**97**	**SW846 8081A**
Heptachlor	**0.500**	**0.594**	**ug/L**	**119**	**SW846 8081A**
delta-BHC	**0.500**	**0.521**	**ug/L**	**104**	**SW846 8081A**
Heptachlor epoxide	**0.500**	**0.484**	**ug/L**	**97**	**SW846 8081A**
Methoxychlor	**0.500**	**0.564**	**ug/L**	**113**	**SW846 8081A**
Dieldrin	**0.500**	**0.481**	**ug/L**	**96**	**SW846 8081A**
Endosulfan sulfate	**0.500**	**0.492**	**ug/L**	**98**	**SW846 8081A**
Endrin aldehyde	**0.500**	**0.510**	**ug/L**	**102**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102	(70 - 130)
Decachlorobiphenyl	103	(70 - 130)

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 #...: F9G170249 Work Order #...: LGNG51AF-MS Matrix.....: WATER
MS Lot-Sample #: F9G170249-001 LGNG51AG-MSD
Date Sampled...: 07/15/09 Date Received..: 07/17/09
Prep Date.....: 07/20/09 Analysis Date..: 08/11/09
Prep Batch #...: 9201067
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aldrin	ND	0.961	0.888	ug/L	92		SW846 8081A
	ND	0.950	0.749	ug/L	79	17	SW846 8081A
4,4'-DDT	ND	0.961	1.30	ug/L	135		SW846 8081A
	Qualifiers: N						
	ND	0.950	0.884	ug/L	93	38	SW846 8081A
4,4'-DDD	ND	0.961	1.17	ug/L	122		SW846 8081A
	ND	0.950	0.919	ug/L	97	24	SW846 8081A
4,4'-DDE	ND	0.961	0.999	ug/L	104		SW846 8081A
	ND	0.950	0.784	ug/L	83	24	SW846 8081A
Endosulfan I	ND	0.961	0.930	ug/L	97		SW846 8081A
	ND	0.950	0.761	ug/L	80	20	SW846 8081A
Endosulfan II	ND	0.961	1.02	ug/L	106		SW846 8081A
	ND	0.950	0.831	ug/L	87	20	SW846 8081A
gamma-BHC (Lindane)	ND	0.961	1.03	ug/L	107		SW846 8081A
	ND	0.950	0.839	ug/L	88	20	SW846 8081A
alpha-BHC	ND	0.961	0.996	ug/L	104		SW846 8081A
	ND	0.950	0.800	ug/L	84	22	SW846 8081A
Endrin	ND	0.961	1.08	ug/L	112		SW846 8081A
	ND	0.950	0.876	ug/L	92	21	SW846 8081A
beta-BHC	ND	0.961	0.993	ug/L	103		SW846 8081A
	ND	0.950	0.795	ug/L	84	22	SW846 8081A
Heptachlor	ND	0.961	1.12	ug/L	117		SW846 8081A
	ND	0.950	0.971	ug/L	102	14	SW846 8081A
delta-BHC	ND	0.961	1.05	ug/L	109		SW846 8081A
	ND	0.950	0.869	ug/L	91	19	SW846 8081A
Heptachlor epoxide	ND	0.961	1.02	ug/L	106		SW846 8081A
	ND	0.950	0.815	ug/L	86	22	SW846 8081A
Methoxychlor	ND	0.961	1.15	ug/L	120		SW846 8081A
	ND	0.950	0.890	ug/L	94	26	SW846 8081A
Dieldrin	ND	0.961	1.01	ug/L	105		SW846 8081A
	ND	0.950	0.803	ug/L	85	22	SW846 8081A
Endosulfan sulfate	ND	0.961	1.01	ug/L	105		SW846 8081A
	ND	0.950	0.816	ug/L	86	21	SW846 8081A
Endrin aldehyde	ND	0.961	1.08	ug/L	113		SW846 8081A
	ND	0.950	0.870	ug/L	92	22	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	105	(70 - 130)
	86	(70 - 130)

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F9G170249 **Work Order #...:** LGNG51AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F9G170249-001 LGNG51AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	112	(70 - 130)
	86	(70 - 130)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.