TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

W12-004

Lot #: F2D200414
SDG #: SL1266

Scot Fitzgerald

CH2M Hill Plateau Remediation
PO Box 1500, MS B6-06
Richland, WA 99352

TESTAMERICA LABORATORIES, INC.

Jayna Awalt
Project Manager

April 30, 2012

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
April 30, 2012
Attention: Scot Fitzgerald

TestAmerica Laboratories, Inc.

SDG	: SL1266
Number of Samples	: four samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: April 20, 2012

II. Introduction

On April 20, 2012, four water samples were 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: W12-004

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: 2114097

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. The MS/MSD was extracted at a lesser volume to preserve a liter for re-analysis.

Affected Samples:

F2D200414 (3): B2KL97

Batch: 2117128

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. LCS/LCSD was performed to demonstrate accuracy and replicate precision in place of the MS/MSD.

Affected Samples:

F2D200414 (4): B2KLB7

There were no observations or nonconformances for the following methods:

Phenols

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company

April 30, 2012

SDG: SL1266

TestAmerica Laboratories, Inc.

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:

Jayna Awalt

Jayna Awalt
St. Louis Project Manager

METHODS SUMMARY

SL1266

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Phenols by GC	SW846 8040A	SW846 3520
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3510C

References:

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

SAMPLE SUMMARY

SL1266 : F2D200414

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
MR4WH	001	B2KK25	04/18/12	07:00
MR4WJ	002	B2KK26	04/18/12	09:51
MR4WL	003	B2KL97	04/17/12	08:19
MR4WM	004	B2KLB7	04/17/12	09:04

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.

CH2MHill Plateau Remediation Company SL1266 CUR 037

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W12-004-038**

SDG #SL1266

Collector	RA Shepard CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	W12-004	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	RCRA, APRIL 2012	**Logbook No.**	HNF-N-506 45 / 83	**Ice Chest No.**	GWS-195
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	793472860688
Protocol	RCRA	**Priority:**	**45 Days**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KK25	N	W	4/18/12	0700	3x1-L aG	8040_PHENOLIC_GC: List-1 (17)	7/40 Days	Na2S2O3/Cool~4C
B2KK25	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RA Shepard CHPRC			APR 18 2012 1330	SSU #1			APR 18 2012 1330
Relinquished By: SSU #1			APR 19 2012 0830	Received By: L.D. Wall CHPRC			APR 19 2012 0830
Relinquished By: L.D. Wall CHPRC			APR 19 2012 1400	Received By: FEDEX			
Relinquished By: FedEx				Received By: NICHOLAS OWENS			4/20/12 ~~0945~~ 0950

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

Matrix *

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

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TestAmerica - St. Louis

CH2MHill Plateau Remediation Company SL1266	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W12-004-039 Page 1 of 1

SDG #SL1266

Collector	RA Shepard CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W12-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, APRIL 2012	Logbook No.	HNF-N-506 45183	Ice Chest No.	GWS-195
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	793472860688
Protocol	RCRA	Priority:	45 Days	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KK26	N	W	4-18-12	0951	3x1-L aG	8040_PHENOLIC_GC: List-1 (17)	7/40 Days	Na2S2O3/Cool~4C
B2KK26	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
RA Shepard CHPRC			APR 18 2012 1330	SSLu-1			APR 18 2012 1330
SSLu-1			APR 19 2012 0830	L.D. Wall CHPRC		L.D. Wall	APR 19 2012 0830
L.D. Wall CHPRC		L.D. Wall	APR 19 2012 1400	FEDEX			
Fed Ex				Nicholas Owens			4/20/12 0950

Matrix *

S	= Soil		DS	= Drum Solids	
SE	= Sediment		DL	= Drum Liquids	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wipe	
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

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TestAmerica - St. Louis

CH2MHill Plateau Remediation Company SL1266	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W12-004-147 Page 1 of 1

Collector	AL MCINTYRE / CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W12-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, APRIL 2012	Logbook No.	HNF-N-506 47/53	Ice Chest No.	GWS-195
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7934728600688
Protocol	RCRA	Priority:	45 Days	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KL97	N	W	APR 17 2012	0815	3x1-L aG	8270_SVOA_GCMS: 1,4 Dioxane (1)	7/40 Days	Cool~4C
B2KL97	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
AL MCINTYRE / CHPRC			APR 17 2012 1245	SSU #1			APR 17 2012 1245
SSU #1			APR 19 2012 0830	L.D. Wall CHPRC		L.D. Wall	APR 19 2012 0830
L.D. Wall CHPRC		L.D. Wall	APR 19 2012 1400	FEDEX			
Fed Ex				NICHOLAS OWENS			4/20/12 0950

Matrix *

S	= Soil		DS	= Drum Solids	
SE	= Sediment		DL	= Drum Liquids	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wipe	
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

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CH2MHill Plateau Remediation Company SL1266	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W12-004-148 Page 1 of 1

Collector	AL MCINTYRE / CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W12-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, APRIL 2012	Logbook No.	HNF-N-506 47/53	Ice Chest No.	GWS-195
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	793472860688
Protocol	RCRA	Priority:	45 Days	Offsite Property No.	N/A

SDG #SL1266

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KLB7	N	W	APR 17 2012	0904	3x1-L aG	8270_SVOA_GCMS: 1,4 Dioxane (1)	7/40 Days	Cool~4C
B2KLB7	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

APRIL 30, 2012

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
AL MCINTYRE / CHPRC			APR 17 2012 1245	SSU #1			APR 17 2012 1295
SSU #1			APR 19 2012 0830	L.D. Wall CHPRC		L.D. Wall	APR 19 2012 0830
L.D. Wall CHPRC		L.D. Wall	APR 19 2012 1400	FEDEX			
Fed Ex				dlicholas owens			4/20/12 0950

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
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

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Print page | Close

FedEx

Detailed Results

Tracking no.: 793472860688 Select time format: **12H**

Delivered

Delivered
Signed for by: S.WILSON

Shipment Dates	Destination
Ship date Apr 19, 2012	EARTH CITY, MO
Delivery date Apr 20, 2012 9:49 AM	Signature Proof of Delivery

Shipment Options

Hold at FedEx Location
Hold at FedEx Location service is not available for this shipment.

Shipment Facts

Service type	Priority Overnight	Delivered to	Shipping/Receiving
Weight	82.0 lbs/37.2 kg	Reference	GWS-195

Shipment Travel History

Select time zone: Local Scan Time

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

Date/Time	Activity	Location	Details
Apr 20, 2012 9:49 AM	**Delivered**	EARTH CITY, MO	
Apr 20, 2012 7:53 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
Apr 20, 2012 7:47 AM	At local FedEx facility	EARTH CITY, MO	
Apr 20, 2012 6:20 AM	At destination sort facility	BERKELEY, MO	
Apr 20, 2012 5:33 AM	Departed FedEx location	MEMPHIS, TN	
Apr 20, 2012 12:12 AM	Arrived at FedEx location	MEMPHIS, TN	
Apr 19, 2012 5:08 PM	Left FedEx origin facility	PASCO, WA	
Apr 19, 2012 4:14 PM	Picked up	PASCO, WA	
Apr 19, 2012 11:57 AM	Shipment information sent to FedEx		

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TestAmerica - St. Louis

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THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FZD200414

CUR Form #: 0 3 7

CONDITION UPON RECEIPT FORM

Client: CHPRC

Quote No: 90029

COC/RFA No: SEE Below

Initiated By: NJD Date: 4/20/12 Time: 0950

Shipping Information

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

Shipping # (s):*		Sample Temperature (s):**	
1. 7934 7286 0688	6.	1. 2	6.
2.	7.	2.	7.
3.	8.	3.	8.
4.	9.	4.	9.
5.	10.	5.	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; Rad tests- Liquid or Solids; Perchlorate

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)
4.	(Y) N NJD 4/20/12	Sample received with Chain of Custody?	11.	Y N (N/A)	Containers for C-14, H-3 & I-129/131 marked with "Do Not Preserve" label?
5.	(Y) (N) N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	(Y) N	Sample received in proper containers?
6.	Y (N)	Was sample received broken?	13.	Y N (N/A)	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7.	(Y) N	Is sample volume sufficient for analysis?	14.	Y N (N/A)	Was Internal COC/Workshare received?

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

Notes:

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Corrective Action:

☐ Client Contact Name: _____ Informed by: _____

☐ Sample(s) processed "as is"

☐ Sample(s) on hold until: _____ If released, notify: _____

Project Management Review: Jayna Arwalt Date: 4/25/12

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.

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GC/MS
SEMI-VOLATILES

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B2KL97

GC/MS Semivolatiles

Lot-Sample #...: F2D200414-003 **Work Order #...:** MR4WL1AC **Matrix.....:** WATER
Date Sampled...: 04/17/12 **Date Received..:** 04/20/12
Prep Date.....: 04/23/12 **Analysis Date..:** 04/24/12
Prep Batch #...: 2114097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(19 - 86)
Phenol-d5	34	(10 - 71)
Nitrobenzene-d5	90	(44 - 100)
2-Fluorobiphenyl	80	(44 - 99)
2,4,6-Tribromophenol	77	(43 - 115)
Terphenyl-d14	90	(45 - 131)

CH2M Hill Plateau Remediation DOE RL

B2KL97

GC/MS Semivolatiles

Lot-Sample #: F2D200414-003 **Work Order #:** MR4WL1AC **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		25 J	M	2.4681	ug/L
Unknown aldol condensate		22 J	M	3.0931	ug/L

NOTE(S):

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

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B2KLB7

GC/MS Semivolatiles

Lot-Sample #...: F2D200414-004 **Work Order #...:** MR4WM2AC **Matrix.....:** WATER
Date Sampled...: 04/17/12 **Date Received..:** 04/20/12
Prep Date.....: 04/26/12 **Analysis Date..:** 04/26/12
Prep Batch #...: 2117128
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,4-Dioxane	ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	67	(19 - 86)
Phenol-d5	63	(10 - 71)
Nitrobenzene-d5	73	(44 - 100)
2-Fluorobiphenyl	77	(44 - 99)
2,4,6-Tribromophenol	87	(43 - 115)
Terphenyl-d14	88	(45 - 131)

CH2M Hill Plateau Remediation DOE RL

B2KLB7

GC/MS Semivolatiles

Lot-Sample #: F2D200414-004 **Work Order #:** MR4WM2AC **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		36 J	M	3.3548	ug/L
Unknown		4.7 J	M	3.6223	ug/L
Unknown aldol condensate		880 J	M	4.0234	ug/L
Unknown		9.4 J	M	6.334	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 #...: SL1266 **Work Order #...:** MR5WN1AA **Matrix.....:** WATER
MB Lot-Sample #: F2D230000-097

Prep Date.....: 04/23/12
Analysis Date..: 04/24/12 **Prep Batch #...:** 2114097
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dioxane	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(19 - 86)
Phenol-d5	49	(10 - 71)
Nitrobenzene-d5	91	(44 - 100)
2-Fluorobiphenyl	78	(44 - 99)
2,4,6-Tribromophenol	79	(43 - 115)
Terphenyl-d14	90	(45 - 131)

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 #: F2D230000-097 B **Work Order #:** MR5WN1AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		39 J	M	2.45	ug/L
Unknown Aldol Condensate		22 J	M	3.08	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 #...: SL1266 **Work Order #...:** MR7921AA **Matrix.....:** WATER
MB Lot-Sample #: F2D260000-128

Prep Date.....: 04/26/12
Analysis Date..: 04/26/12 **Prep Batch #...:** 2117128
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dioxane	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(19 - 86)
Phenol-d5	34	(10 - 71)
Nitrobenzene-d5	78	(44 - 100)
2-Fluorobiphenyl	78	(44 - 99)
2,4,6-Tribromophenol	87	(43 - 115)
Terphenyl-d14	91	(45 - 131)

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 #: F2D260000-128 B **Work Order #:** MR7921AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		54 J	M	3.3656	ug/L
Unknown		11 J	M	3.6224	ug/L
Unknown aldol condensate		23 J	M	3.954	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 #...: SL1266 Work Order #...: MR5WN1AC Matrix.....: WATER
LCS Lot-Sample#: F2D230000-097
Prep Date.....: 04/23/12 Analysis Date..: 04/24/12
Prep Batch #...: 2114097
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	100	33.8	ug/L	34	SW846 8270C
bis(2-Chloroethyl)-ether	100	81.3	ug/L	81	SW846 8270C
2-Chlorophenol	100	73.3	ug/L	73	SW846 8270C
2-Methylphenol	100	67.5	ug/L	68	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	85.2	ug/L	85	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	89.2	ug/L	89	SW846 8270C
Hexachloroethane	100	72.8	ug/L	73	SW846 8270C
Nitrobenzene	100	81.0	ug/L	81	SW846 8270C
Isophorone	100	75.2	ug/L	75	SW846 8270C
2-Nitrophenol	100	75.7	ug/L	76	SW846 8270C
2,4-Dimethylphenol	100	73.3	ug/L	73	SW846 8270C
bis(2-Chloroethoxy) methane	100	79.8	ug/L	80	SW846 8270C
2,4-Dichlorophenol	100	72.0	ug/L	72	SW846 8270C
1,2,4-Trichloro-benzene	100	70.2	ug/L	70	SW846 8270C
Naphthalene	100	73.4	ug/L	73	SW846 8270C
4-Chloroaniline	100	48.8	ug/L	49	SW846 8270C
Hexachlorobutadiene	100	67.1	ug/L	67	SW846 8270C
4-Chloro-3-methylphenol	100	73.2	ug/L	73	SW846 8270C
2-Methylnaphthalene	100	72.1	ug/L	72	SW846 8270C
Hexachlorocyclopenta-diene	100	65.1	ug/L	65	SW846 8270C
2,4,6-Trichloro-phenol	100	75.6	ug/L	76	SW846 8270C
2,4,5-Trichloro-phenol	100	77.0	ug/L	77	SW846 8270C
2-Nitroaniline	100	83.6	ug/L	84	SW846 8270C
Dimethyl phthalate	100	78.8	ug/L	79	SW846 8270C
Acenaphthylene	100	79.2	ug/L	79	SW846 8270C
2,6-Dinitrotoluene	100	78.5	ug/L	78	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR5WN1AC Matrix.....: WATER
LCS Lot-Sample#: F2D230000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
3-Nitroaniline	100	65.1	ug/L	65	SW846 8270C
Acenaphthene	100	77.6	ug/L	78	SW846 8270C
2,4-Dinitrophenol	100	53.5	ug/L	54	SW846 8270C
4-Nitrophenol	100	28.9	ug/L	29	SW846 8270C
Dibenzofuran	100	75.8	ug/L	76	SW846 8270C
2,4-Dinitrotoluene	100	79.9	ug/L	80	SW846 8270C
Diethyl phthalate	100	78.9	ug/L	79	SW846 8270C
4-Chlorophenyl phenyl ether	100	74.5	ug/L	74	SW846 8270C
Fluorene	100	78.2	ug/L	78	SW846 8270C
4-Nitroaniline	100	75.1	ug/L	75	SW846 8270C
4,6-Dinitro-2-methylphenol	100	75.8	ug/L	76	SW846 8270C
N-Nitrosodiphenylamine	100	99.8	ug/L	100	SW846 8270C
4-Bromophenyl phenyl ether	100	78.8	ug/L	79	SW846 8270C
Hexachlorobenzene	100	78.8	ug/L	79	SW846 8270C
Pentachlorophenol	100	71.4	ug/L	71	SW846 8270C
Phenanthrene	100	81.0	ug/L	81	SW846 8270C
Anthracene	100	80.0	ug/L	80	SW846 8270C
Carbazole	100	82.6	ug/L	83	SW846 8270C
Di-n-butyl phthalate	100	82.4	ug/L	82	SW846 8270C
Fluoranthene	100	83.2	ug/L	83	SW846 8270C
Pyrene	100	79.2	ug/L	79	SW846 8270C
Butyl benzyl phthalate	100	81.8	ug/L	82	SW846 8270C
3,3'-Dichlorobenzidine	100	59.2	ug/L	59	SW846 8270C
Benzo(a)anthracene	100	90.8	ug/L	91	SW846 8270C
Chrysene	100	81.2	ug/L	81	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	81.2	ug/L	81	SW846 8270C
Di-n-octyl phthalate	100	84.9	ug/L	85	SW846 8270C
Benzo(b)fluoranthene	100	83.8	ug/L	84	SW846 8270C
Benzo(k)fluoranthene	100	87.3	ug/L	87	SW846 8270C
Benzo(a)pyrene	100	81.5	ug/L	82	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	94.5	ug/L	95	SW846 8270C
Dibenz(a,h)anthracene	100	85.8	ug/L	86	SW846 8270C
Benzo(ghi)perylene	100	86.0	ug/L	86	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR5WN1AC **Matrix.....:** WATER
LCS Lot-Sample#: F2D230000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
3-Methylphenol & 4-Methylphenol	**100**	**71.5**	**ug/L**	**71**	**SW846 8270C**
1,2-Dichlorobenzene	**100**	**74.7**	**ug/L**	**75**	**SW846 8270C**
1,3-Dichlorobenzene	**100**	**71.4**	**ug/L**	**71**	**SW846 8270C**
1,4-Dichlorobenzene	**100**	**70.9**	**ug/L**	**71**	**SW846 8270C**
2-Chloronaphthalene	**100**	**75.8**	**ug/L**	**76**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(29 - 62)
Phenol-d5	34	(20 - 42)
Nitrobenzene-d5	84	(51 - 98)
2-Fluorobiphenyl	75	(50 - 93)
2,4,6-Tribromophenol	78	(54 - 109)
Terphenyl-d14	89	(60 - 121)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR7921AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F2D260000-128 MR7921AD-LCSD
Prep Date.....: 04/26/12 Analysis Date..: 04/26/12
Prep Batch #...: 2117128
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Phenol	100	29.8	ug/L	30		SW846 8270C
	100	28.3	ug/L	28	5.0	SW846 8270C
bis(2-Chloroethyl)-ether	100	66.7	ug/L	67		SW846 8270C
	100	64.6	ug/L	65	3.2	SW846 8270C
2-Chlorophenol	100	68.9	ug/L	69		SW846 8270C
	100	66.8	ug/L	67	3.2	SW846 8270C
2-Methylphenol	100	60.6	ug/L	61		SW846 8270C
	100	59.4	ug/L	59	1.9	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	58.2	ug/L	58		SW846 8270C
	100	56.1	ug/L	56	3.6	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	69.4	ug/L	69		SW846 8270C
	100	67.7	ug/L	68	2.5	SW846 8270C
Hexachloroethane	100	65.5	ug/L	66		SW846 8270C
	100	64.0	ug/L	64	2.4	SW846 8270C
Nitrobenzene	100	67.2	ug/L	67		SW846 8270C
	100	66.0	ug/L	66	1.8	SW846 8270C
Isophorone	100	63.0	ug/L	63		SW846 8270C
	100	61.6	ug/L	62	2.4	SW846 8270C
2-Nitrophenol	100	72.4	ug/L	72		SW846 8270C
	100	70.6	ug/L	71	2.5	SW846 8270C
2,4-Dimethylphenol	100	68.5	ug/L	68		SW846 8270C
	100	66.7	ug/L	67	2.6	SW846 8270C
bis(2-Chloroethoxy) methane	100	67.5	ug/L	68		SW846 8270C
	100	66.0	ug/L	66	2.2	SW846 8270C
2,4-Dichlorophenol	100	73.3	ug/L	73		SW846 8270C
	100	72.3	ug/L	72	1.4	SW846 8270C
1,2,4-Trichloro-benzene	100	73.2	ug/L	73		SW846 8270C
	100	71.4	ug/L	71	2.5	SW846 8270C
Naphthalene	100	69.7	ug/L	70		SW846 8270C
	100	68.0	ug/L	68	2.5	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR7921AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F2D260000-128 MR7921AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
4-Chloroaniline	100	47.2	ug/L	47		SW846 8270C
	100	49.5	ug/L	49	4.6	SW846 8270C
Hexachlorobutadiene	100	74.4	ug/L	74		SW846 8270C
	100	72.9	ug/L	73	1.9	SW846 8270C
4-Chloro-3-methylphenol	100	69.7	ug/L	70		SW846 8270C
	100	68.1	ug/L	68	2.4	SW846 8270C
2-Methylnaphthalene	100	72.0	ug/L	72		SW846 8270C
	100	70.0	ug/L	70	2.9	SW846 8270C
Hexachlorocyclopenta-diene	100	90.4	ug/L	90		SW846 8270C
	100	88.3	ug/L	88	2.3	SW846 8270C
2,4,6-Trichloro-phenol	100	75.4	ug/L	75		SW846 8270C
	100	73.2	ug/L	73	3.0	SW846 8270C
2,4,5-Trichloro-phenol	100	78.8	ug/L	79		SW846 8270C
	100	77.1	ug/L	77	2.2	SW846 8270C
2-Nitroaniline	100	66.4	ug/L	66		SW846 8270C
	100	64.9	ug/L	65	2.2	SW846 8270C
Dimethyl phthalate	100	76.0	ug/L	76		SW846 8270C
	100	73.9	ug/L	74	2.8	SW846 8270C
Acenaphthylene	100	72.7	ug/L	73		SW846 8270C
	100	70.6	ug/L	71	2.8	SW846 8270C
2,6-Dinitrotoluene	100	75.2	ug/L	75		SW846 8270C
	100	73.9	ug/L	74	1.8	SW846 8270C
3-Nitroaniline	100	61.7	ug/L	62		SW846 8270C
	100	61.0	ug/L	61	1.2	SW846 8270C
Acenaphthene	100	71.3	ug/L	71		SW846 8270C
	100	69.4	ug/L	69	2.8	SW846 8270C
2,4-Dinitrophenol	100	51.1	ug/L	51		SW846 8270C
	100	56.8	ug/L	57	11	SW846 8270C
4-Nitrophenol	100	31.7	ug/L	32		SW846 8270C
	100	30.6	ug/L	31	3.8	SW846 8270C
Dibenzofuran	100	71.6	ug/L	72		SW846 8270C
	100	69.8	ug/L	70	2.6	SW846 8270C
2,4-Dinitrotoluene	100	76.9	ug/L	77		SW846 8270C
	100	75.2	ug/L	75	2.3	SW846 8270C
Diethyl phthalate	100	75.6	ug/L	76		SW846 8270C
	100	73.0	ug/L	73	3.4	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR7921AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F2D260000-128 MR7921AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
4-Chlorophenyl phenyl ether	100	77.0	ug/L	77		SW846 8270C
	100	74.8	ug/L	75	2.9	SW846 8270C
Fluorene	100	74.7	ug/L	75		SW846 8270C
	100	72.8	ug/L	73	2.6	SW846 8270C
4-Nitroaniline	100	69.9	ug/L	70		SW846 8270C
	100	67.8	ug/L	68	3.1	SW846 8270C
4,6-Dinitro-2-methylphenol	100	66.8	ug/L	67		SW846 8270C
	100	68.5	ug/L	68	2.5	SW846 8270C
N-Nitrosodiphenylamine	100	89.0	ug/L	89		SW846 8270C
	100	86.7	ug/L	87	2.6	SW846 8270C
4-Bromophenyl phenyl ether	100	79.6	ug/L	80		SW846 8270C
	100	78.9	ug/L	79	0.87	SW846 8270C
Hexachlorobenzene	100	84.3	ug/L	84		SW846 8270C
	100	82.3	ug/L	82	2.4	SW846 8270C
Pentachlorophenol	100	83.4	ug/L	83		SW846 8270C
	100	81.6	ug/L	82	2.2	SW846 8270C
Phenanthrene	100	74.1	ug/L	74		SW846 8270C
	100	72.2	ug/L	72	2.5	SW846 8270C
Anthracene	100	73.4	ug/L	73		SW846 8270C
	100	71.2	ug/L	71	3.1	SW846 8270C
Carbazole	100	74.4	ug/L	74		SW846 8270C
	100	73.0	ug/L	73	1.8	SW846 8270C
Di-n-butyl phthalate	100	73.5	ug/L	73		SW846 8270C
	100	72.3	ug/L	72	1.6	SW846 8270C
Fluoranthene	100	78.6	ug/L	79		SW846 8270C
	100	77.5	ug/L	77	1.4	SW846 8270C
Pyrene	100	73.2	ug/L	73		SW846 8270C
	100	71.5	ug/L	71	2.4	SW846 8270C
Butyl benzyl phthalate	100	68.8	ug/L	69		SW846 8270C
	100	66.8	ug/L	67	3.0	SW846 8270C
3,3'-Dichlorobenzidine	100	61.0	ug/L	61		SW846 8270C
	100	61.0	ug/L	61	0.010	SW846 8270C
Benzo(a)anthracene	100	86.0	ug/L	86		SW846 8270C
	100	83.8	ug/L	84	2.6	SW846 8270C
Chrysene	100	74.5	ug/L	75		SW846 8270C
	100	72.5	ug/L	72	2.8	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR7921AC-LCS Matrix.....: WATER
LCS Lot-Sample#: F2D260000-128 MR7921AD-LCSD

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
bis(2-Ethylhexyl) phthalate	100	69.2	ug/L	69		SW846 8270C
	100	67.6	ug/L	68	2.4	SW846 8270C
Di-n-octyl phthalate	100	71.5	ug/L	71		SW846 8270C
	100	69.3	ug/L	69	3.1	SW846 8270C
Benzo(b)fluoranthene	100	81.5	ug/L	82		SW846 8270C
	100	78.6	ug/L	79	3.6	SW846 8270C
Benzo(k)fluoranthene	100	82.5	ug/L	82		SW846 8270C
	100	81.0	ug/L	81	1.7	SW846 8270C
Benzo(a)pyrene	100	76.4	ug/L	76		SW846 8270C
	100	75.3	ug/L	75	1.5	SW846 8270C
Indeno(1,2,3-cd)pyrene	100	88.9	ug/L	89		SW846 8270C
	100	87.3	ug/L	87	1.8	SW846 8270C
Dibenz(a,h)anthracene	100	84.5	ug/L	84		SW846 8270C
	100	81.9	ug/L	82	3.0	SW846 8270C
Benzo(ghi)perylene	100	87.0	ug/L	87		SW846 8270C
	100	83.8	ug/L	84	3.8	SW846 8270C
3-Methylphenol & 4-Methylphenol	100	62.6	ug/L	63		SW846 8270C
	100	61.0	ug/L	61	2.6	SW846 8270C
1,2-Dichlorobenzene	100	70.2	ug/L	70		SW846 8270C
	100	68.2	ug/L	68	2.9	SW846 8270C
1,3-Dichlorobenzene	100	68.4	ug/L	68		SW846 8270C
	100	66.7	ug/L	67	2.6	SW846 8270C
1,4-Dichlorobenzene	100	68.7	ug/L	69		SW846 8270C
	100	66.5	ug/L	66	3.4	SW846 8270C
2-Chloronaphthalene	100	70.7	ug/L	71		SW846 8270C
	100	68.7	ug/L	69	3.0	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	49	(29 - 62)
	46	(29 - 62)
Phenol-d5	32	(20 - 42)
	30	(20 - 42)
Nitrobenzene-d5	71	(51 - 98)
	69	(51 - 98)
2-Fluorobiphenyl	74	(50 - 93)
	71	(50 - 93)
2,4,6-Tribromophenol	87	(54 - 109)
	86	(54 - 109)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR7921AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: F2D260000-128 MR7921AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	87	(60 - 121)
	84	(60 - 121)

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 #...: SL1266 Work Order #...: MR4WL1AD-MS Matrix.....: WATER
MS Lot-Sample #: F2D200414-003 MR4WL1AE-MSD
Date Sampled...: 04/17/12 Date Received..: 04/20/12
Prep Date.....: 04/23/12 Analysis Date..: 04/24/12
Prep Batch #...: 2114097
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	194	92.7	ug/L	48		SW846 8270C
	ND	192	95.0	ug/L	49	2.5	SW846 8270C
bis(2-Chloroethyl)-ether	ND	194	153	ug/L	79		SW846 8270C
	ND	192	159	ug/L	83	3.6	SW846 8270C
2-Chlorophenol	ND	194	147	ug/L	76		SW846 8270C
	ND	192	148	ug/L	77	0.40	SW846 8270C
2-Methylphenol	ND	194	142	ug/L	74		SW846 8270C
	ND	192	145	ug/L	75	1.7	SW846 8270C
3-Methylphenol & 4-Methylphenol	ND	194	159	ug/L	82		SW846 8270C
	ND	192	161	ug/L	84	1.6	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	194	154	ug/L	79		SW846 8270C
	ND	192	167	ug/L	87	8.3	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	194	168	ug/L	87		SW846 8270C
	ND	192	175	ug/L	91	4.0	SW846 8270C
Hexachloroethane	ND	194	150	ug/L	77		SW846 8270C
	ND	192	155	ug/L	81	3.5	SW846 8270C
Nitrobenzene	ND	194	152	ug/L	79		SW846 8270C
	ND	192	159	ug/L	83	4.1	SW846 8270C
Isophorone	ND	194	143	ug/L	74		SW846 8270C
	ND	192	148	ug/L	77	3.1	SW846 8270C
2-Nitrophenol	ND	194	150	ug/L	78		SW846 8270C
	ND	192	151	ug/L	79	0.53	SW846 8270C
2,4-Dimethylphenol	ND	194	146	ug/L	75		SW846 8270C
	ND	192	147	ug/L	77	1.3	SW846 8270C
bis(2-Chloroethoxy) methane	ND	194	153	ug/L	79		SW846 8270C
	ND	192	157	ug/L	81	2.6	SW846 8270C
2,4-Dichlorophenol	ND	194	146	ug/L	75		SW846 8270C
	ND	192	144	ug/L	75	1.2	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR4WL1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: F2D200414-003 MR4WL1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2,4-Trichloro-benzene	ND	194	149	ug/L	77		SW846 8270C
	ND	192	147	ug/L	76	1.4	SW846 8270C
Naphthalene	ND	194	149	ug/L	77		SW846 8270C
	ND	192	150	ug/L	78	0.93	SW846 8270C
4-Chloroaniline	ND	194	103	ug/L	53		SW846 8270C
	ND	192	95.0	ug/L	49	8.1	SW846 8270C
Hexachlorobutadiene	ND	194	147	ug/L	76		SW846 8270C
	ND	192	144	ug/L	75	2.1	SW846 8270C
4-Chloro-3-methylphenol	ND	194	149	ug/L	77		SW846 8270C
	ND	192	148	ug/L	77	0.53	SW846 8270C
2-Methylnaphthalene	ND	194	150	ug/L	77		SW846 8270C
	ND	192	150	ug/L	78	0.13	SW846 8270C
Hexachlorocyclopenta-diene	ND	194	127	ug/L	66		SW846 8270C
	ND	192	134	ug/L	70	5.2	SW846 8270C
2,4,6-Trichloro-phenol	ND	194	152	ug/L	79		SW846 8270C
	ND	192	151	ug/L	78	1.1	SW846 8270C
2,4,5-Trichloro-phenol	ND	194	157	ug/L	81		SW846 8270C
	ND	192	157	ug/L	81	0.06	SW846 8270C
2-Nitroaniline	ND	194	157	ug/L	81		SW846 8270C
	ND	192	165	ug/L	86	5.1	SW846 8270C
Dimethyl phthalate	ND	194	159	ug/L	82		SW846 8270C
	ND	192	157	ug/L	82	0.94	SW846 8270C
Acenaphthylene	ND	194	158	ug/L	82		SW846 8270C
	ND	192	158	ug/L	82	0.19	SW846 8270C
2,6-Dinitrotoluene	ND	194	157	ug/L	81		SW846 8270C
	ND	192	158	ug/L	82	0.19	SW846 8270C
3-Nitroaniline	ND	194	136	ug/L	70		SW846 8270C
	ND	192	129	ug/L	67	5.8	SW846 8270C
Acenaphthene	ND	194	156	ug/L	81		SW846 8270C
	ND	192	156	ug/L	81	0.19	SW846 8270C
2,4-Dinitrophenol	ND	194	98.9	ug/L	51		SW846 8270C
	ND	192	107	ug/L	56	7.8	SW846 8270C
4-Nitrophenol	ND	194	86.4	ug/L	45		SW846 8270C
	ND	192	86.6	ug/L	45	0.17	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 Work Order #...: MR4WL1AD-MS Matrix.....: WATER
MS Lot-Sample #: F2D200414-003 MR4WL1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Dibenzofuran	ND	194	153	ug/L	79		SW846 8270C
	ND	192	152	ug/L	79	1.2	SW846 8270C
2,4-Dinitrotoluene	ND	194	161	ug/L	83		SW846 8270C
	ND	192	159	ug/L	83	1.4	SW846 8270C
Diethyl phthalate	ND	194	158	ug/L	81		SW846 8270C
	ND	192	156	ug/L	81	1.3	SW846 8270C
4-Chlorophenyl phenyl ether	ND	194	155	ug/L	80		SW846 8270C
	ND	192	150	ug/L	78	3.7	SW846 8270C
Fluorene	ND	194	158	ug/L	82		SW846 8270C
	ND	192	157	ug/L	81	1.0	SW846 8270C
4-Nitroaniline	ND	194	151	ug/L	78		SW846 8270C
	ND	192	149	ug/L	78	1.1	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	194	150	ug/L	78		SW846 8270C
	ND	192	149	ug/L	77	0.93	SW846 8270C
N-Nitrosodiphenylamine	ND	194	194	ug/L	100		SW846 8270C
	ND	192	191	ug/L	99	1.2	SW846 8270C
4-Bromophenyl phenyl ether	ND	194	161	ug/L	83		SW846 8270C
	ND	192	154	ug/L	80	4.7	SW846 8270C
Hexachlorobenzene	ND	194	161	ug/L	83		SW846 8270C
	ND	192	154	ug/L	80	4.4	SW846 8270C
Pentachlorophenol	ND	194	152	ug/L	79		SW846 8270C
	ND	192	144	ug/L	75	5.8	SW846 8270C
Phenanthrene	ND	194	161	ug/L	83		SW846 8270C
	ND	192	158	ug/L	82	2.2	SW846 8270C
Anthracene	ND	194	158	ug/L	82		SW846 8270C
	ND	192	154	ug/L	80	2.5	SW846 8270C
Carbazole	ND	194	165	ug/L	85		SW846 8270C
	ND	192	162	ug/L	84	1.9	SW846 8270C
Di-n-butyl phthalate	ND	194	160	ug/L	82		SW846 8270C
	ND	192	160	ug/L	83	0.0	SW846 8270C
Fluoranthene	ND	194	167	ug/L	86		SW846 8270C
	ND	192	163	ug/L	85	2.4	SW846 8270C
Pyrene	ND	194	153	ug/L	79		SW846 8270C
	ND	192	155	ug/L	81	1.3	SW846 8270C
Butyl benzyl phthalate	ND	194	156	ug/L	80		SW846 8270C
	ND	192	159	ug/L	83	2.0	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR4WL1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: F2D200414-003 MR4WL1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
3,3'-Dichlorobenzidine	ND	194	125	ug/L	64		SW846 8270C
	ND	192	114	ug/L	59	8.9	SW846 8270C
Benzo(a)anthracene	ND	194	180	ug/L	93		SW846 8270C
	ND	192	180	ug/L	94	0.22	SW846 8270C
Chrysene	ND	194	162	ug/L	83		SW846 8270C
	ND	192	162	ug/L	84	0.12	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	194	157	ug/L	81		SW846 8270C
	ND	192	161	ug/L	84	2.6	SW846 8270C
Di-n-octyl phthalate	ND	194	164	ug/L	85		SW846 8270C
	ND	192	168	ug/L	87	2.4	SW846 8270C
Benzo(b)fluoranthene	ND	194	170	ug/L	88		SW846 8270C
	ND	192	173	ug/L	90	1.6	SW846 8270C
Benzo(k)fluoranthene	ND	194	180	ug/L	93		SW846 8270C
	ND	192	171	ug/L	89	5.4	SW846 8270C
Benzo(a)pyrene	ND	194	161	ug/L	83		SW846 8270C
	ND	192	160	ug/L	83	0.93	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	194	182	ug/L	94		SW846 8270C
	ND	192	186	ug/L	97	2.1	SW846 8270C
Dibenz(a,h)anthracene	ND	194	175	ug/L	90		SW846 8270C
	ND	192	172	ug/L	89	1.7	SW846 8270C
Benzo(ghi)perylene	ND	194	176	ug/L	91		SW846 8270C
	ND	192	174	ug/L	91	0.97	SW846 8270C
1,2-Dichlorobenzene	ND	194	153	ug/L	79		SW846 8270C
	ND	192	154	ug/L	80	0.84	SW846 8270C
1,3-Dichlorobenzene	ND	194	149	ug/L	77		SW846 8270C
	ND	192	150	ug/L	78	0.33	SW846 8270C
1,4-Dichlorobenzene	ND	194	148	ug/L	77		SW846 8270C
	ND	192	149	ug/L	78	0.53	SW846 8270C
2-Chloronaphthalene	ND	194	153	ug/L	79		SW846 8270C
	ND	192	154	ug/L	80	0.19	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(19 - 86)
	67	(19 - 86)
Phenol-d5	50	(10 - 71)
	51	(10 - 71)
Nitrobenzene-d5	83	(44 - 100)
	86	(44 - 100)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR4WL1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: F2D200414-003 MR4WL1AE-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	83	(44 - 99)
	83	(44 - 99)
2,4,6-Tribromophenol	85	(43 - 115)
	80	(43 - 115)
Terphenyl-d14	93	(45 - 131)
	90	(45 - 131)

NOTE(S):

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

Bold print denotes control parameters

Phenols

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B2KK25

GC Semivolatiles

Lot-Sample #...: F2D200414-001 **Work Order #...:** MR4WH1AC **Matrix.....:** WATER
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/25/12 **Analysis Date..:** 04/26/12
Prep Batch #...: 2116114
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.2
4-Chloro-3-methylphenol	ND	5.0	ug/L	2.4
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.2
2-Methylphenol	ND	5.0	ug/L	2.2
2,4-Dichlorophenol	ND	5.0	ug/L	2.1
2,6-Dichlorophenol	ND	5.0	ug/L	2.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.1
2,4-Dinitrophenol	ND	5.0	ug/L	2.4
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.2
Dinoseb	ND	5.0	ug/L	2.4
2-Nitrophenol	ND	5.0	ug/L	2.3
4-Nitrophenol	ND	5.0	ug/L	2.2
Pentachlorophenol	ND	5.0	ug/L	2.4
Phenol	ND	5.0	ug/L	2.3
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.0
2,4,5-Trichloro-phenol	ND	5.0	ug/L	2.2
2,4,6-Trichloro-phenol	ND	5.0	ug/L	2.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	92	(54 - 139)
2-Fluorophenol	76	(34 - 121)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B2KK26

GC Semivolatiles

Lot-Sample #...: F2D200414-002 **Work Order #...:** MR4WJ1AC **Matrix.....:** WATER
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/25/12 **Analysis Date..:** 04/26/12
Prep Batch #...: 2116114
Dilution Factor: 1 **Method.....:** SW846 8040A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
2-Chlorophenol	ND	5.0	ug/L	2.2
4-Chloro-3-methylphenol	ND	5.0	ug/L	2.4
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	2.2
2-Methylphenol	ND	5.0	ug/L	2.2
2,4-Dichlorophenol	ND	5.0	ug/L	2.1
2,6-Dichlorophenol	ND	5.0	ug/L	2.1
2,4-Dimethylphenol	ND	5.0	ug/L	2.1
2,4-Dinitrophenol	ND	5.0	ug/L	2.4
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	2.2
Dinoseb	ND	5.0	ug/L	2.4
2-Nitrophenol	ND	5.0	ug/L	2.3
4-Nitrophenol	ND	5.0	ug/L	2.2
Pentachlorophenol	ND	5.0	ug/L	2.4
Phenol	ND	5.0	ug/L	2.3
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	2.0
2,4,5-Trichloro-phenol	ND	5.0	ug/L	2.2
2,4,6-Trichloro-phenol	ND	5.0	ug/L	2.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	91	(54 - 139)
2-Fluorophenol	76	(34 - 121)

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR7HM1AA **Matrix.....:** WATER
MB Lot-Sample #: F2D250000-114

Prep Date.....: 04/25/12
Analysis Date..: 04/26/12 **Prep Batch #...:** 2116114
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2-Chlorophenol	ND	5.0	ug/L	SW846 8040A
4-Chloro-3-methylphenol	ND	5.0	ug/L	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	5.0	ug/L	SW846 8040A
2-Methylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,6-Dichlorophenol	ND	5.0	ug/L	SW846 8040A
2,4-Dimethylphenol	ND	5.0	ug/L	SW846 8040A
2,4-Dinitrophenol	ND	5.0	ug/L	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	5.0	ug/L	SW846 8040A
Dinoseb	ND	5.0	ug/L	SW846 8040A
2-Nitrophenol	ND	5.0	ug/L	SW846 8040A
4-Nitrophenol	ND	5.0	ug/L	SW846 8040A
Pentachlorophenol	ND	5.0	ug/L	SW846 8040A
Phenol	ND	5.0	ug/L	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	5.0	ug/L	SW846 8040A
2,4,5-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A
2,4,6-Trichloro-phenol	ND	5.0	ug/L	SW846 8040A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	96	(54 - 139)
2-Fluorophenol	77	(34 - 121)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR7HM1AC **Matrix.....:** WATER
LCS Lot-Sample#: F2D250000-114
Prep Date.....: 04/25/12 **Analysis Date..:** 04/26/12
Prep Batch #...: 2116114
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Chlorophenol	**100**	**80.8**	**ug/L**	**81**	**SW846 8040A**
4-Chloro-3-methylphenol	**100**	**90.7**	**ug/L**	**91**	**SW846 8040A**
3-Methylphenol & 4-Methylphenol	**100**	**85.8**	**ug/L**	**86**	**SW846 8040A**
2-Methylphenol	**100**	**83.8**	**ug/L**	**84**	**SW846 8040A**
2,4-Dichlorophenol	**100**	**89.3**	**ug/L**	**89**	**SW846 8040A**
2,6-Dichlorophenol	**100**	**85.3**	**ug/L**	**85**	**SW846 8040A**
2,4-Dimethylphenol	**100**	**85.1**	**ug/L**	**85**	**SW846 8040A**
2,4-Dinitrophenol	**100**	**89.4**	**ug/L**	**89**	**SW846 8040A**
4,6-Dinitro-2-methylphenol	**100**	**105**	**ug/L**	**105**	**SW846 8040A**
Dinoseb	**100**	**94.2**	**ug/L**	**94**	**SW846 8040A**
2-Nitrophenol	**100**	**88.4**	**ug/L**	**88**	**SW846 8040A**
4-Nitrophenol	**100**	**101**	**ug/L**	**101**	**SW846 8040A**
Pentachlorophenol	**100**	**106**	**ug/L**	**106**	**SW846 8040A**
Phenol	**100**	**84.4**	**ug/L**	**84**	**SW846 8040A**
2,3,4,6-Tetrachlorophenol	**100**	**91.4**	**ug/L**	**91**	**SW846 8040A**
2,4,5-Trichloro-phenol	**100**	**93.4**	**ug/L**	**93**	**SW846 8040A**
2,4,6-Trichloro-phenol	**100**	**94.8**	**ug/L**	**95**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	98	(43 - 140)
2-Fluorophenol	85	(38 - 122)

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 #...: SL1266 **Work Order #...:** MR4WJ1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: F2D200414-002 MR4WJ1AE-MSD
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/25/12 **Analysis Date..:** 04/26/12
Prep Batch #...: 2116114
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2-Chlorophenol	ND	94.7	82.3	ug/L	87		SW846 8040A
	ND	95.0	80.4	ug/L	85	2.4	SW846 8040A
4-Chloro-3-methylphenol	ND	94.7	93.5	ug/L	99		SW846 8040A
	ND	95.0	90.4	ug/L	95	3.3	SW846 8040A
3-Methylphenol & 4-Methylphenol	ND	94.7	87.6	ug/L	93		SW846 8040A
	ND	95.0	85.7	ug/L	90	2.2	SW846 8040A
2-Methylphenol	ND	94.7	85.4	ug/L	90		SW846 8040A
	ND	95.0	83.5	ug/L	88	2.3	SW846 8040A
2,4-Dichlorophenol	ND	94.7	91.1	ug/L	96		SW846 8040A
	ND	95.0	89.0	ug/L	94	2.3	SW846 8040A
2,6-Dichlorophenol	ND	94.7	87.1	ug/L	92		SW846 8040A
	ND	95.0	84.9	ug/L	89	2.5	SW846 8040A
2,4-Dimethylphenol	ND	94.7	86.8	ug/L	92		SW846 8040A
	ND	95.0	85.2	ug/L	90	1.8	SW846 8040A
2,4-Dinitrophenol	ND	94.7	94.4	ug/L	100		SW846 8040A
	ND	95.0	90.9	ug/L	96	3.7	SW846 8040A
4,6-Dinitro-2-methylphenol	ND	94.7	107	ug/L	113		SW846 8040A
	ND	95.0	102	ug/L	108	4.9	SW846 8040A
Dinoseb	ND	94.7	94.4	ug/L	100		SW846 8040A
	ND	95.0	89.7	ug/L	94	5.1	SW846 8040A
2-Nitrophenol	ND	94.7	90.8	ug/L	96		SW846 8040A
	ND	95.0	88.2	ug/L	93	2.9	SW846 8040A
4-Nitrophenol	ND	94.7	104	ug/L	110		SW846 8040A
	ND	95.0	98.1	ug/L	103	5.6	SW846 8040A
Pentachlorophenol	ND	94.7	108	ug/L	113		SW846 8040A
	ND	95.0	103	ug/L	108	4.3	SW846 8040A
Phenol	ND	94.7	86.0	ug/L	91		SW846 8040A
	ND	95.0	84.2	ug/L	89	2.2	SW846 8040A
2,3,4,6-Tetrachlorophenol	ND	94.7	94.0	ug/L	99		SW846 8040A
	ND	95.0	90.2	ug/L	95	4.2	SW846 8040A
2,4,5-Trichloro-phenol	ND	94.7	96.3	ug/L	102		SW846 8040A
	ND	95.0	93.2	ug/L	98	3.3	SW846 8040A

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1266 **Work Order #...:** MR4WJ1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: F2D200414-002 MR4WJ1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4,6-Trichloro- phenol	**ND**	**94.7**	**97.7**	**ug/L**	**103**		**SW846 8040A**
	ND	**95.0**	**94.7**	**ug/L**	**100**	**3.1**	**SW846 8040A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	104	(54 - 139)
	99	(54 - 139)
2-Fluorophenol	93	(34 - 121)
	92	(34 - 121)

NOTE(S):

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

Bold print denotes control parameters