RECEIVED DECEMBER 16, 2010

0096492

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

X11-005

Lot #: F0K160498
SDG #: SL1000

Mike Neely

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

TESTAMERICA LABORATORIES, INC.

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MAY 23 2011
EDMC

Michael C. Franks
Project Manager

December 10, 2010

13715 Rider Trail North Earth City, MO 63045 tel 314.298.8566 fax 314.298.8757 www.testamericainc.com

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
December 14, 2010
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL1000
Number of Samples	: sample
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: November 16, 2010

II. Introduction

On November 16, 2010, one water sample was received by TestAmerica - St. Louis for chemical analysis. The sample was received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the sample was given a laboratory Id to correspond with the specific client Id. 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: X11-005

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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December 14, 2010
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TestAmerica Laboratories, Inc.

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.

Volatiles

Batch: 0327227

The D% CCV is (higher recovered) outside the Method criteria (greater than 20% D) for Chloroethane (33.3%) and Iodomethane (21.6%) indicating a potential high bias for these analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples.
Affected Samples:
F0K160498 (1): B27X06

The LCS recovery for Acetonitrile is outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F0K160498 (1): B27X06

The MSD recovery for Chloroethane is outside of the upper QC limits. This analyte was not detected above the reporting limit in the associated sample, therefore the sample data was not adversely affected by this excursion. Chloroethane has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F0K160498 (1): B27X06

The RPD values for Acetonitrile and 1,4-Dioxane are outside the QC limits. MS/MSD recoveries for these analytes are within acceptance limits, therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F0K160498 (1): B27X06

13715 Rider Trail North Earth City, MO 63045 tel 314.298.8566 fax 314.298.8757 www.testamericainc.com

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THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company

December 14, 2010
SDG: SL1000

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:

Michael Franks
St. Louis Project Manager

13715 Rider Trail North Earth City, MO 63045 **tel** 314.298.8566 **fax** 314.298.8757 **www.testamericainc.com**

METHODS SUMMARY

SL1000

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B

References:

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

SAMPLE SUMMARY

SL1000 : F0K160498

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L95AX	001	B27X06	11/14/10	09:58

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 SL1000

CHPRC SL1000

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-005-101

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
AF No.: X11-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300118ES20
Project Title: IU2, IU6DURA, OCTOBER 2010	Logbook No.: HNF-N-506 33168	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7941165 4 0745
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

* ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not easable per DOE Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time

Site Wide Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401922.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
327X06	N	W	11/14/10	0958	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
327X06	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SE Hamaker CHPRC		Scott Hamaker	1500 NOV 14 2010	SSU #1			NOV 14 2010 1500
SSU #1			0900 NOV 15 2010	SE Hamaker CHPRC		Scott Hamaker	0900 NOV 15 2010
SE Hamaker CHPRC		Scott Hamaker	1400 NOV 15 2010	FED EX			
FedEx				NICHOLAS OWENS			11/16/10 0930

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

A-6004-842 (REV 2)

TestAmerica St. Louis

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Print page | Close

FedEx

Detailed Results

Tracking no.: 794116540745 Select time format: 12H

Delivered

Delivered
Signed for by: S.WILSON

Shipment Dates	Destination
Ship date Nov 15, 2010	EARTH CITY, MO
Delivery date Nov 16, 2010 9:22 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	78.0 lbs/35.4 kg	Reference	GWS-196

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
Nov 16, 2010 9:22 AM	Delivered	EARTH CITY, MO	
Nov 16, 2010 7:36 AM	On FedEx vehicle for delivery	EARTH CITY, MO	
Nov 16, 2010 7:31 AM	At local FedEx facility	EARTH CITY, MO	
Nov 16, 2010 5:48 AM	At dest sort facility	BERKELEY, MO	
Nov 16, 2010 5:07 AM	Departed FedEx location	MEMPHIS, TN	
Nov 16, 2010 12:36 AM	Arrived at FedEx location	MEMPHIS, TN	
Nov 15, 2010 5:17 PM	Left FedEx origin facility	PASCO, WA	
Nov 15, 2010 4:13 PM	Picked up	PASCO, WA	
Nov 15, 2010 1:38 PM	Shipment information sent to FedEx		

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): FOK160501 FOK160492
493
496
495
498

CONDITION UPON RECEIPT FORM

Client: CHPRC

Quote No: 87094, 86778, ~~84105~~, 87169, 87547, 87104, 87576 341

COC/RFA No: SEE BELOW

Initiated By: NVO Date: 11/16/10 Time: 0930

Shipping Information

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

Shipping # (s):*		Sample Temperature (s):**	
1. 7941 1654 0745	6.	1. 3	6.
2. 7964 5090 7088	7.	2. 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 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)
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:

I10-046-193
W10-008-285
X11-004-76
X11-005-101
X11-006-26
X11-006-23
X11-006-137
X10-106-144

Corrective Action:

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

Project Management Review: Jayna Awalt Date: 11-17-10

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: B27X06

GC/MS Volatiles

Lot-Sample #...: F0K160498-001 Work Order #...: L95AX1AC Matrix.....: WATER
Date Sampled...: 11/14/10 Date Received..: 11/16/10
Prep Date.....: 11/18/10 Analysis Date..: 11/18/10
Prep Batch #...: 0327227
Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Acetonitrile	ND	5.0	ug/L	2.0
Acrolein	ND	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND T	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	20	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
Vinyl chloride	ND	2.0	ug/L	0.084

(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B27X06

GC/MS Volatiles

Lot-Sample #...: F0K160498-001 **Work Order #...:** L95AX1AC **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**0.76 J**	**2.0**	**ug/L**	**0.34**
Methylene chloride	ND	1.0	ug/L	0.11
Carbon disulfide	ND	1.0	ug/L	0.051
1,1-Dichloroethane	ND	1.0	ug/L	0.068
2-Butanone	ND	5.0	ug/L	0.52
Chloroform	ND	1.0	ug/L	0.10
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.087
Propionitrile	ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.083
1,1,1-Trichloroethane	ND	1.0	ug/L	0.069
Carbon tetrachloride	ND	1.0	ug/L	0.12
1,2-Dichloroethane	ND	1.0	ug/L	0.10
Benzene	ND	1.0	ug/L	0.064
Trichloroethene	ND	1.0	ug/L	0.25
4-Methyl-2-pentanone	ND	5.0	ug/L	0.12
1,1,2-Trichloroethane	ND	1.0	ug/L	0.15
Tetrachloroethene	ND	1.0	ug/L	0.18
Tetrahydrofuran	ND	10	ug/L	1.1
Xylenes (total)	ND	3.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.12
1-Butanol	ND	40	ug/L	12
Toluene	ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	96	(70 - 127)
Dibromofluoromethane	95	(71 - 128)
1,2-Dichloroethane-d4	87	(65 - 128)
4-Bromofluorobenzene	90	(69 - 124)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

B27X06

GC/MS Volatiles

Lot-Sample #: F0K160498-001 **Work Order #:** L95AX1AC **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 #...: SL1000 **Work Order #...:** MAPXR1AA **Matrix.....:** WATER
MB Lot-Sample #: F0K230000-227

Prep Date.....: 11/18/10
Analysis Date..: 11/18/10 **Prep Batch #...:** 0327227
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
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
Acetonitrile	ND	5.0	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
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
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
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	20	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
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
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 #...: SL1000 **Work Order #...:** MAPXR1AA **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	95	(70 - 127)
Dibromofluoromethane	92	(71 - 128)
1,2-Dichloroethane-d4	91	(65 - 128)
4-Bromofluorobenzene	95	(69 - 124)

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 #: F0K230000-227 B **Work Order #:** MAPXR1AA **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 #...: SL1000 Work Order #...: MAPXR1AC Matrix.....: WATER
LCS Lot-Sample#: F0K230000-227
Prep Date.....: 11/18/10 Analysis Date..: 11/18/10
Prep Batch #...: 0327227
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Ethyl methacrylate	10.0	9.34	ug/L	93	SW846 8260B
Methyl methacrylate	10.0	9.61	ug/L	96	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	10.2	ug/L	102	SW846 8260B
Trichlorofluoromethane	10.0	10.4	ug/L	104	SW846 8260B
Acetonitrile	50.0	71.5	ug/L	143	SW846 8260B
Iodomethane	10.0	12.6	ug/L	126	SW846 8260B
Vinyl acetate	10.0	10.2	ug/L	102	SW846 8260B
Acrolein	50.0	41.3	ug/L	83	SW846 8260B
Isobutanol	200	216	ug/L	108	SW846 8260B
Methacrylonitrile	50.0	50.7	ug/L	101	SW846 8260B
1,4-Dioxane	200	236	ug/L	118	SW846 8260B
Chloroprene	10.0	10.4	ug/L	104	SW846 8260B
cis-1,3-Dichloropropene	10.0	10.7	ug/L	107	SW846 8260B
Dibromochloromethane	10.0	10.2	ug/L	102	SW846 8260B
Chloromethane	10.0	8.66	ug/L	87	SW846 8260B
Bromomethane	10.0	10.2	ug/L	102	SW846 8260B
Chloroethane	10.0	9.92	ug/L	99	SW846 8260B
1,1-Dichloroethene	10.0	11.2	ug/L	112	SW846 8260B
1,2-Dichloroethene (total)	20.0	19.7	ug/L	99	SW846 8260B
1,2-Dichloropropane	10.0	10.3	ug/L	103	SW846 8260B
Bromodichloromethane	10.0	10.4	ug/L	104	SW846 8260B
trans-1,3-Dichloropropene	10.0	10.1	ug/L	101	SW846 8260B
2-Hexanone	10.0	9.53	ug/L	95	SW846 8260B
Chlorobenzene	10.0	9.32	ug/L	93	SW846 8260B
Bromoform	10.0	10.4	ug/L	104	SW846 8260B
Ethylbenzene	10.0	9.73	ug/L	97	SW846 8260B
Styrene	10.0	10.6	ug/L	106	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	10.1	ug/L	101	SW846 8260B
Allyl chloride	10.0	9.20	ug/L	92	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	9.28	ug/L	93	SW846 8260B
1,2-Dibromoethane	10.0	9.92	ug/L	99	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	9.73	ug/L	97	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1000 Work Order #...: MAPXR1AC Matrix.....: WATER
LCS Lot-Sample#: F0K230000-227

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Dichlorodifluoromethane (Freon 12)	10.0	9.43	ug/L	94	SW846 8260B
Vinyl chloride	10.0	8.42	ug/L	84	SW846 8260B
Acetone	10.0	11.5	ug/L	115	SW846 8260B
Methylene chloride	10.0	9.06	ug/L	91	SW846 8260B
Carbon disulfide	10.0	12.3	ug/L	123	SW846 8260B
1,1-Dichloroethane	10.0	10.1	ug/L	101	SW846 8260B
2-Butanone	10.0	9.53	ug/L	95	SW846 8260B
Chloroform	10.0	9.82	ug/L	98	SW846 8260B
cis-1,2-Dichloroethene	10.0	10.1	ug/L	101	SW846 8260B
Propionitrile	50.0	53.2	ug/L	106	SW846 8260B
trans-1,2-Dichloroethene	10.0	9.63	ug/L	96	SW846 8260B
1,1,1-Trichloroethane	10.0	10.5	ug/L	105	SW846 8260B
Carbon tetrachloride	10.0	11.8	ug/L	118	SW846 8260B
1,2-Dichloroethane	10.0	9.85	ug/L	99	SW846 8260B
Benzene	10.0	10.4	ug/L	104	SW846 8260B
Trichloroethene	10.0	10.1	ug/L	101	SW846 8260B
4-Methyl-2-pentanone	10.0	9.39	ug/L	94	SW846 8260B
1,1,2-Trichloroethane	10.0	9.55	ug/L	95	SW846 8260B
Tetrachloroethene	10.0	10.0	ug/L	100	SW846 8260B
Tetrahydrofuran	50.0	48.5	ug/L	97	SW846 8260B
1,4-Dichlorobenzene	10.0	9.50	ug/L	95	SW846 8260B
1-Butanol	100	108	ug/L	108	SW846 8260B
Toluene	10.0	9.93	ug/L	99	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	103	(84 - 117)
Dibromofluoromethane	100	(84 - 118)
1,2-Dichloroethane-d4	100	(73 - 122)
4-Bromofluorobenzene	105	(81 - 115)

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 #...: SL1000 Work Order #...: L95AX1AD-MS Matrix.....: WATER
MS Lot-Sample #: F0K160498-001 L95AX1AE-MSD
Date Sampled...: 11/14/10 Date Received..: 11/16/10
Prep Date.....: 11/18/10 Analysis Date..: 11/18/10
Prep Batch #...: 0327227
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	9.22	ug/L	92		SW846 8260B
	ND	10.0	9.27	ug/L	93	0.48	SW846 8260B
Chloromethane	ND	10.0	9.00	ug/L	90		SW846 8260B
	ND	10.0	9.15	ug/L	91	1.6	SW846 8260B
Bromomethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	11.2	ug/L	112	3.1	SW846 8260B
Chloroethane	ND	10.0	14.8	ug/L	148		SW846 8260B
	ND	10.0	15.4	ug/L	154	4.2	SW846 8260B
	Qualifiers:	T					
1,1-Dichloroethene	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.7	ug/L	107	1.3	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	19.2	ug/L	96		SW846 8260B
	ND	20.0	19.7	ug/L	98	2.3	SW846 8260B
1,2-Dichloropropane	ND	10.0	9.54	ug/L	95		SW846 8260B
	ND	10.0	9.68	ug/L	97	1.4	SW846 8260B
Bromodichloromethane	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	9.83	ug/L	98	2.2	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	9.19	ug/L	92		SW846 8260B
	ND	10.0	9.08	ug/L	91	1.2	SW846 8260B
2-Hexanone	ND	10.0	8.39	ug/L	84		SW846 8260B
	ND	10.0	8.41	ug/L	84	0.20	SW846 8260B
Chlorobenzene	ND	10.0	8.93	ug/L	89		SW846 8260B
	ND	10.0	8.92	ug/L	89	0.16	SW846 8260B
Bromoform	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	10.2	ug/L	102	1.7	SW846 8260B
Ethylbenzene	ND	10.0	9.35	ug/L	93		SW846 8260B
	ND	10.0	9.38	ug/L	94	0.33	SW846 8260B
Styrene	ND	10.0	9.55	ug/L	96		SW846 8260B
	ND	10.0	9.32	ug/L	93	2.4	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	9.66	ug/L	97		SW846 8260B
	ND	10.0	9.91	ug/L	99	2.6	SW846 8260B
Dibromochloromethane	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.87	ug/L	99	1.8	SW846 8260B
Allyl chloride	ND	10.0	8.14	ug/L	81		SW846 8260B
	ND	10.0	8.29	ug/L	83	1.8	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1000 Work Order #...: L95AX1AD-MS Matrix.....: WATER
MS Lot-Sample #: F0K160498-001 L95AX1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	9.80	ug/L	98		SW846 8260B
	ND	10.0	9.70	ug/L	97	0.98	SW846 8260B
1,2-Dibromoethane	ND	10.0	9.42	ug/L	94		SW846 8260B
	ND	10.0	9.15	ug/L	91	3.0	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	8.73	ug/L	87		SW846 8260B
	ND	10.0	9.13	ug/L	91	4.5	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	7.74	ug/L	77		SW846 8260B
	ND	10.0	7.93	ug/L	79	2.5	SW846 8260B
Ethyl methacrylate	ND	10.0	8.61	ug/L	86		SW846 8260B
	ND	10.0	8.92	ug/L	89	3.6	SW846 8260B
Methyl methacrylate	ND	10.0	8.36	ug/L	84		SW846 8260B
	ND	10.0	8.67	ug/L	87	3.6	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	10.2	ug/L	102	0.19	SW846 8260B
Trichlorofluoromethane	ND	10.0	11.1	ug/L	111		SW846 8260B
	ND	10.0	11.0	ug/L	110	0.90	SW846 8260B
Acetonitrile	ND	50.0	51.3	ug/L	103		SW846 8260B
	ND	50.0	38.2	ug/L	76	29	SW846 8260B
Iodomethane	ND	10.0	11.8	ug/L	118		SW846 8260B
	ND	10.0	11.9	ug/L	119	0.25	SW846 8260B
Vinyl acetate	ND	10.0	9.18	ug/L	92		SW846 8260B
	ND	10.0	9.70	ug/L	97	5.4	SW846 8260B
Acrolein	ND	50.0	50.8	ug/L	102		SW846 8260B
	ND	50.0	50.4	ug/L	101	0.77	SW846 8260B
Isobutanol	ND	200	178	ug/L	89		SW846 8260B
	ND	200	178	ug/L	89	0.11	SW846 8260B
Methacrylonitrile	ND	50.0	47.4	ug/L	95		SW846 8260B
	ND	50.0	47.9	ug/L	96	1.1	SW846 8260B
1,4-Dioxane	ND	200	131	ug/L	65		SW846 8260B
	ND	200	92.4	ug/L	46	34	SW846 8260B
Chloroprene	ND	10.0	9.20	ug/L	92		SW846 8260B
	ND	10.0	9.58	ug/L	96	4.0	SW846 8260B
Vinyl chloride	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.87	ug/L	99	0.13	SW846 8260B
Acetone	0.76	10.0	9.74	ug/L	90		SW846 8260B
	0.76	10.0	8.99	ug/L	82	8.0	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1000 Work Order #...: L95AX1AD-MS Matrix.....: WATER
MS Lot-Sample #: F0K160498-001 L95AX1AE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Methylene chloride	ND	10.0	8.75	ug/L	88		SW846 8260B
	ND	10.0	8.73	ug/L	87	0.25	SW846 8260B
Carbon disulfide	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.8	ug/L	108	1.1	SW846 8260B
1,1-Dichloroethane	ND	10.0	9.34	ug/L	93		SW846 8260B
	ND	10.0	9.58	ug/L	96	2.5	SW846 8260B
2-Butanone	ND	10.0	8.61	ug/L	86		SW846 8260B
	ND	10.0	8.62	ug/L	86	0.09	SW846 8260B
Chloroform	ND	10.0	9.26	ug/L	93		SW846 8260B
	ND	10.0	9.48	ug/L	95	2.3	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	9.69	ug/L	97		SW846 8260B
	ND	10.0	10.0	ug/L	100	3.4	SW846 8260B
Propionitrile	ND	50.0	47.3	ug/L	95		SW846 8260B
	ND	50.0	42.1	ug/L	84	12	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	9.53	ug/L	95		SW846 8260B
	ND	10.0	9.65	ug/L	97	1.3	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	10.2	ug/L	102		SW846 8260B
	ND	10.0	10.1	ug/L	101	0.09	SW846 8260B
Carbon tetrachloride	ND	10.0	11.2	ug/L	112		SW846 8260B
	ND	10.0	11.4	ug/L	114	1.8	SW846 8260B
1,2-Dichloroethane	ND	10.0	9.19	ug/L	92		SW846 8260B
	ND	10.0	9.30	ug/L	93	1.2	SW846 8260B
Benzene	ND	10.0	9.64	ug/L	96		SW846 8260B
	ND	10.0	9.83	ug/L	98	1.9	SW846 8260B
Trichloroethene	ND	10.0	9.77	ug/L	98		SW846 8260B
	ND	10.0	9.77	ug/L	98	0.01	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	8.66	ug/L	87		SW846 8260B
	ND	10.0	9.37	ug/L	94	7.8	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	9.26	ug/L	93		SW846 8260B
	ND	10.0	9.21	ug/L	92	0.54	SW846 8260B
Tetrachloroethene	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	9.71	ug/L	97	0.92	SW846 8260B
Tetrahydrofuran	ND	50.0	46.3	ug/L	93		SW846 8260B
	ND	50.0	48.5	ug/L	97	4.7	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	8.94	ug/L	89		SW846 8260B
	ND	10.0	9.19	ug/L	92	2.7	SW846 8260B
1-Butanol	ND	100	76.1	ug/L	76		SW846 8260B
	ND	100	78.5	ug/L	78	3.1	SW846 8260B
Toluene	ND	10.0	9.63	ug/L	96		SW846 8260B
	ND	10.0	9.68	ug/L	97	0.57	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1000 Work Order #...: L95AX1AD-MS Matrix.....: WATER
MS Lot-Sample #: F0K160498-001 L95AX1AE-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	96	(70 - 127)
	96	(70 - 127)
Dibromofluoromethane	96	(71 - 128)
	98	(71 - 128)
1,2-Dichloroethane-d4	89	(65 - 128)
	91	(65 - 128)
4-Bromofluorobenzene	94	(69 - 124)
	94	(69 - 124)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.