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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

F08-085

Lot #: F8D170378

SDG #: W05296

Steve Trent

Fluor Hanford Inc
PO Box 1000 T6-03
Richland, WA 99352

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EDMC

TESTAMERICA LABORATORIES, INC.



Michael C. Franks
Project Manager

May 19, 2008

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

Fluor Hanford, Inc.
 P.O. Box 1000
 MSIN E6-35
 Richland, Washington 99352
 May 19, 2008
 Attention: Steve Trent

SDG	: W05296
Number of Samples	: 1
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: April 17, 2008

II. Introduction

On April 17, 2008, one (1) 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 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 case narrative, report, and EDD have been updated to report the full target compound list (TCL). The corresponding Problems and Discrepancies is included with this report.

III. Analytical Results/ Methodology

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

Deviation from Request: None

IV. Definitions

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

V. Comments

General

The following SAFs are associated with this SDG: F08-085.

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.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Fluor Hanford Inc.

May 19, 2008
SDG: W05296

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.

Volatiles

Batch: 8112326

The CCV %D for Trichlorofluoromethane, Iodomethane, Vinyl acetate, Tetrahydrofuran, 2-Chloroethyl vinyl ether and Pentachloroethane are outside the established QC limits. These analytes are not part of the analysis request and thus this excursion does not effect the data.

Affected Samples:

F8D170378 (1): B1TPN7

The MS/MSD RPD for cis-1,2-Dichloroethene is outside the QC limits. 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 percent recoveries for the MS/MSD are within QC Limits.

Affected Samples:

F8D170378 (1): B1TPN7

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

Problems and Discrepancies

SDG W05296

TASL

1. 8260 _VOA_GCMS TCL (target compound list) was requested. The entire list was not reported. Please report these results and re-issue the data package.

Response: The target list was updated to report the full TCL (target compound list). Results are reported in the included PDF report and EDD.

METHODS SUMMARY

F8D170378

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
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

F8D170378

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KLJJM	001	B1TPN7	04/09/08	10:37

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.

COLLECTOR CO Sampler *White M.A. White* COMPANY CONTACT Trent, SJ TELEPHONE NO. 373-5869 PROJECT COORDINATOR TRENT, SJ PRICE CODE 7M DATA TURNAROUND 30 Days / 45 Days

SAMPLING LOCATION EC6307-D PROJECT DESIGNATION Aquifer Tube Installation Sampling and Analysis in the 100-FR-3 OU SAF NO. F08-085 AIR QUALITY METHOD OF SHIPMENT GOVERNMENT VEHICLE

ICE CHEST NO. *ERC-99-003* FIELD LOGBOOK NO. *HNF-N-451-3* ACTUAL SAMPLE DEPTH *16.38'* COA 123632ES10

SHIPPED TO TestAmerica St. Louis OFFSITE PROPERTY NO. N/A BILL OF LADING/AIR BILL NO. *7909 8613 1845*

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION HCl or H2SO4 to pH <2/Cool ~4C aGs*																					
		TYPE OF CONTAINER																					
		NO. OF CONTAINER(S)	4																				
		VOLUME	40ml																				
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 82608 (TCL);																				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME																			
B1TPN7	WATER	4-9-08	1037	✓																		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>M.A. White</i>	4-9-08 1432	<i>MC 745</i>	4-9-08 1432		
<i>MO-745</i>	4-16-08 0700	<i>Bill Var</i>	4-16-08 0700		
<i>Bill Var</i>	4-16-08 0705	<i>FED - X</i>			
		<i>Bill Var</i>	04-17-08 0900		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Track Shipments/FedEx Kinko's Orders
Detailed Results

Quick Help

Tracking number 790986131845
Signed for by B.DANIELS
Ship date Apr 16, 2008
Delivery date Apr 17, 2008 9:08 AM

Reference PTR21376 122612
Destination ES10
Delivered to EARTH CITY, MO
Service type Shipping/Receiving
Weight Priority Overnight
 17.0 lbs.

Status Delivered
Signature image available [Yes](#)

Date/Time	Activity	Location	Details
Apr 17, 2008	9:08 AM	Delivered	EARTH CITY, MO
	6:29 AM	On FedEx vehicle for delivery	EARTH CITY, MO
	6:24 AM	At local FedEx facility	EARTH CITY, MO
	6:02 AM	At dest sort facility	BERKELEY, MO
Apr 16, 2008	3:51 AM	Departed FedEx location	MEMPHIS, TN
	12:59 AM	Arrived at FedEx location	MEMPHIS, TN
	5:36 PM	Left origin	PASCO, WA
	3:46 PM	Picked up	PASCO, WA
	2:57 PM	Package data transmitted to FedEx	

[Signature proof](#) | [E-mail results](#) | [Track more shipments/orders](#)

Subscribe to tracking updates (optional)

Your name: Your e-mail address:

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

Select format: HTML Text Wireless

Add personal message:

Not available for Wireless or non-English characters.

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



Lot #(s): F6017034U
- 2609 - 378

Client: Hanford Condition Upon Receipt Form
Quote No: 79224 COC/RFA No: F08-087-025, F08-085-012, F08-087 Date: 04-17-08
Initiated By: [Signature] Time: 1900

Shipper Name: FedEx Shipping Information
Shipping # (s):* 7909 8613 1845 Multiple Packages Y (N)
Sample Temperature (s):** 4°
1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
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. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on the cooler?	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on bottles?
2. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?	9. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
3. <input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of cooler frisked after opening, but before unpacking?	10. <input checked="" type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH? (If not, make note below)
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?	11. <input type="radio"/> Y <input type="radio"/> N	If N/A- Was pH taken by original TestAmerica lab?
5. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?
6. <input type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	13. <input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
7. <input checked="" type="radio"/> Y <input type="radio"/> N	Is sample volume sufficient for analysis?	14. <input type="radio"/> Y <input type="radio"/> N	Was Internal COC/Workshare received?

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

Notes:
P recvd. w/pH of 8.
BIT&T?
e-mailed Mike. Add note Lt E06062 JW MP
4/7

Corrective Action:
 Client Contact Name: _____ Informed by: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____
Project Management Review: [Signature] Date: 04-22-08

GC/MS VOLATILES

Fluor Hanford Inc

Client Sample ID: B1TPN7

GC/MS Volatiles

Lot-Sample #....: F8D170378-001 Work Order #....: KLJJM1AA Matrix.....: WATER
 Date Sampled...: 04/09/08 Date Received...: 04/17/08
 Prep Date.....: 04/18/08 Analysis Date...: 04/18/08
 Prep Batch #....: 8112326
 Dilution Factor: 1 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.73
Chloromethane	ND	10	ug/L	0.44
Bromomethane	ND	10	ug/L	0.31
Chloroethane	ND	10	ug/L	0.35
Acetone	9.6 J	20	ug/L	3.8
1,1-Dichloroethene	ND	5.0	ug/L	0.55
Methylene chloride	2.7 J	5.0	ug/L	2.5
Carbon disulfide	ND	5.0	ug/L	0.55
1,1-Dichloroethane	ND	5.0	ug/L	0.95
1,2-Dichloroethane (total)	ND	10	ug/L	0.54
1,1,1-Trichloroethane	ND	5.0	ug/L	0.15
Carbon tetrachloride	ND	5.0	ug/L	0.90
Benzene	ND	5.0	ug/L	0.17
1,2-Dichloropropane	ND	5.0	ug/L	0.37
Bromodichloromethane	ND	5.0	ug/L	0.33
1,1,2-Trichloroethane	ND	5.0	ug/L	0.28
trans-1,3-Dichloropropene	ND	5.0	ug/L	0.20
Toluene	ND	5.0	ug/L	0.13
2-Hexanone	ND	20	ug/L	0.28
4-Methyl-2-pentanone	ND	20	ug/L	1.6
Chlorobenzene	ND	5.0	ug/L	0.12
Bromoform	ND	5.0	ug/L	0.24
Ethylbenzene	ND	5.0	ug/L	0.19
Styrene	ND	5.0	ug/L	1.2
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	0.14
Dibromochloromethane	ND	5.0	ug/L	0.29
n-Butylbenzene	ND	5.0	ug/L	0.53
Cyclohexanone	ND	100	ug/L	14
cis-1,2-Dichloroethene	ND	5.0	ug/L	0.43
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.22
1-Butanol	ND	100	ug/L	3.4
1,2-Dichloroethane	ND	5.0	ug/L	0.44
Tetrachloroethene	ND	5.0	ug/L	0.27
Trichloroethene	ND	5.0	ug/L	0.36
Vinyl chloride	ND	5.0	ug/L	0.24
Xylenes (total)	ND	10	ug/L	0.86
2-Butanone	ND	20	ug/L	1.4

(Continued on next page)

Fluor Hanford Inc

Client Sample ID: B1TPN7

GC/MS Volatiles

Lot-Sample #...: F8D170378-001 Work Order #...: KLJJM1AA Matrix.....: WATER

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	99	(80 - 122)
Dibromofluoromethane	104	(82 - 118)
1,2-Dichloroethane-d4	98	(70 - 131)
4-Bromofluorobenzene	96	(78 - 115)

NOTE(S) :

J Estimated result. Result is less than RL.

Fluor Hanford Inc

B1TPN7

GC/MS Volatiles

Lot-Sample #: F8D170378-001

Work Order #: KLJJMLAA

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F8D170378 Work Order #...: KLN4R1AA Matrix.....: WATER
 MB Lot-Sample #: F8D210000-326
 Analysis Date...: 04/18/08 Prep Date.....: 04/18/08
 Dilution Factor: 1 Prep Batch #...: 8112326

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Chloromethane	ND	10	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Acetone	ND	20	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	10	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
Bromodichloromethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
n-Butylbenzene	ND	5.0	ug/L	SW846 8260B
Cyclohexanone	ND	100	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1-Butanol	ND	100	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
Vinyl chloride	ND	5.0	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
Xylenes (total)	ND	10	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F8D170378

Work Order #...: KLN4R1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8	102	(80 - 122)		
Dibromofluoromethane	108	(82 - 118)		
1,2-Dichloroethane-d4	97	(70 - 131)		
4-Bromofluorobenzene	96	(78 - 115)		

NOTE (S) :

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

Fluor Hanford Inc

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F8D210000-326 B Work Order #: KLN4R1AA

Matrix: WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F8D170378 Work Order #...: KLN4R1AC Matrix.....: WATER
 LCS Lot-Sample#: F8D210000-326
 Prep Date.....: 04/18/08 Analysis Date...: 04/18/08
 Prep Batch #...: 8112326
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>METHOD</u>
cis-1,3-Dichloropropene	50.0	52.8	ug/L	106	SW846 8260B
Chloromethane	50.0	43.5	ug/L	87	SW846 8260B
Bromomethane	50.0	46.0	ug/L	92	SW846 8260B
Chloroethane	50.0	54.2	ug/L	108	SW846 8260B
Acetone	50.0	51.3	ug/L	103	SW846 8260B
1,1-Dichloroethene	50.0	52.3	ug/L	105	SW846 8260B
Methylene chloride	50.0	52.3	ug/L	105	SW846 8260B
Carbon disulfide	50.0	48.4	ug/L	97	SW846 8260B
1,1-Dichloroethane	50.0	50.5	ug/L	101	SW846 8260B
1,2-Dichloroethene (total)	100	103	ug/L	103	SW846 8260B
1,1,1-Trichloroethane	50.0	53.1	ug/L	106	SW846 8260B
Carbon tetrachloride	50.0	52.9	ug/L	106	SW846 8260B
Benzene	50.0	50.8	ug/L	102	SW846 8260B
1,2-Dichloropropane	50.0	49.1	ug/L	98	SW846 8260B
Bromodichloromethane	50.0	51.4	ug/L	103	SW846 8260B
1,1,2-Trichloroethane	50.0	50.2	ug/L	100	SW846 8260B
trans-1,3-Dichloropropene	50.0	52.6	ug/L	105	SW846 8260B
Toluene	50.0	51.0	ug/L	102	SW846 8260B
2-Hexanone	50.0	49.3	ug/L	99	SW846 8260B
4-Methyl-2-pentanone	50.0	51.3	ug/L	103	SW846 8260B
Chlorobenzene	50.0	50.9	ug/L	102	SW846 8260B
Bromoform	50.0	50.5	ug/L	101	SW846 8260B
Ethylbenzene	50.0	50.6	ug/L	101	SW846 8260B
Styrene	50.0	51.4	ug/L	103	SW846 8260B
1,1,2,2-Tetrachloroethane	50.0	48.6	ug/L	97	SW846 8260B
Dibromochloromethane	50.0	53.4	ug/L	107	SW846 8260B
n-Butylbenzene	50.0	49.7	ug/L	99	SW846 8260B
Cyclohexanone	500	500	ug/L	100	SW846 8260B
cis-1,2-Dichloroethene	50.0	51.9	ug/L	104	SW846 8260B
trans-1,2-Dichloroethene	50.0	51.4	ug/L	103	SW846 8260B
1-Butanol	500	489	ug/L	98	SW846 8260B
Vinyl chloride	50.0	62.5	ug/L	125	SW846 8260B
2-Butanone	50.0	49.0	ug/L	98	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F8D170378 Work Order #...: KLN4R1AC Matrix.....: WATER
 LCS Lot-Sample#: F8D210000-326

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
1,2-Dichloroethane	50.0	50.5	ug/L	101	SW846 8260B
Trichloroethene	50.0	49.2	ug/L	98	SW846 8260B
Tetrachloroethene	50.0	49.3	ug/L	99	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	103	(85 - 124)
Dibromofluoromethane	114	(81 - 118)
1,2-Dichloroethane-d4	101	(76 - 121)
4-Bromofluorobenzene	96	(78 - 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 Volatiles

Client Lot #...: F8D170378 Work Order #...: KLJJM1AC-MS Matrix.....: WATER
 MS Lot-Sample #: F8D170378-001 KLJJM1AD-MSD
 Date Sampled...: 04/09/08 Date Received...: 04/17/08
 Prep Date.....: 04/18/08 Analysis Date...: 04/18/08
 Prep Batch #...: 8112326
 Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	50.0	45.7	ug/L	91		SW846 8260B
	ND	50.0	47.1	ug/L	94	2.9	SW846 8260B
Chloromethane	ND	50.0	41.4	ug/L	83		SW846 8260B
	ND	50.0	42.0	ug/L	84	1.4	SW846 8260B
Bromomethane	ND	50.0	51.3	ug/L	103		SW846 8260B
	ND	50.0	53.4	ug/L	107	4.0	SW846 8260B
Chloroethane	ND	50.0	52.4	ug/L	105		SW846 8260B
	ND	50.0	54.3	ug/L	109	3.5	SW846 8260B
Acetone	9.6	50.0	46.3	ug/L	73		SW846 8260B
	9.6	50.0	49.7	ug/L	80	7.0	SW846 8260B
1,1-Dichloroethene	ND	50.0	47.8	ug/L	96		SW846 8260B
	ND	50.0	49.1	ug/L	98	2.7	SW846 8260B
Methylene chloride	2.7	50.0	58.1	ug/L	111		SW846 8260B
	2.7	50.0	59.6	ug/L	114	2.5	SW846 8260B
Carbon disulfide	ND	50.0	44.3	ug/L	89		SW846 8260B
	ND	50.0	45.7	ug/L	91	3.1	SW846 8260B
1,1-Dichloroethane	ND	50.0	48.5	ug/L	97		SW846 8260B
	ND	50.0	49.2	ug/L	98	1.4	SW846 8260B
1,2-Dichloroethene (total)	ND	100	97.5	ug/L	97		SW846 8260B
	ND	100	112	ug/L	112	14	SW846 8260B
1,1,1-Trichloroethane	ND	50.0	48.3	ug/L	97		SW846 8260B
	ND	50.0	48.1	ug/L	96	0.37	SW846 8260B
Carbon tetrachloride	ND	50.0	48.8	ug/L	98		SW846 8260B
	ND	50.0	49.5	ug/L	99	1.3	SW846 8260B
Benzene	ND	50.0	47.5	ug/L	95		SW846 8260B
	ND	50.0	47.7	ug/L	95	0.46	SW846 8260B
1,2-Dichloropropane	ND	50.0	45.5	ug/L	91		SW846 8260B
	ND	50.0	45.7	ug/L	91	0.30	SW846 8260B
Bromodichloromethane	ND	50.0	48.2	ug/L	96		SW846 8260B
	ND	50.0	49.2	ug/L	98	2.2	SW846 8260B
1,1,2-Trichloroethane	ND	50.0	46.5	ug/L	93		SW846 8260B
	ND	50.0	49.7	ug/L	99	6.6	SW846 8260B
trans-1,3-Dichloropropene	ND	50.0	49.2	ug/L	98		SW846 8260B
	ND	50.0	49.6	ug/L	99	0.76	SW846 8260B
Toluene	ND	50.0	47.4	ug/L	95		SW846 8260B
	ND	50.0	48.3	ug/L	97	1.8	SW846 8260B
2-Hexanone	ND	50.0	41.9	ug/L	84		SW846 8260B
	ND	50.0	45.9	ug/L	92	9.1	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F8D170378 Work Order #...: KLJJMLAC-MS Matrix.....: WATER
 MS Lot-Sample #: F8D170378-001 KLJJMLAD-MSD

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
4-Methyl-2-pentanone	ND	50.0	41.7	ug/L	83		SW846 8260B
	ND	50.0	46.1	ug/L	92	10	SW846 8260B
Chlorobenzene	ND	50.0	47.8	ug/L	96		SW846 8260B
	ND	50.0	47.9	ug/L	96	0.39	SW846 8260B
Bromoform	ND	50.0	46.0	ug/L	92		SW846 8260B
	ND	50.0	49.1	ug/L	98	6.6	SW846 8260B
Ethylbenzene	ND	50.0	46.3	ug/L	93		SW846 8260B
	ND	50.0	46.8	ug/L	94	0.88	SW846 8260B
Styrene	ND	50.0	48.4	ug/L	97		SW846 8260B
	ND	50.0	48.8	ug/L	98	0.84	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	50.0	45.4	ug/L	91		SW846 8260B
	ND	50.0	48.9	ug/L	98	7.5	SW846 8260B
Dibromochloromethane	ND	50.0	48.6	ug/L	97		SW846 8260B
	ND	50.0	50.4	ug/L	101	3.7	SW846 8260B
n-Butylbenzene	ND	50.0	47.2	ug/L	94		SW846 8260B
	ND	50.0	48.3	ug/L	97	2.4	SW846 8260B
Cyclohexanone	ND	500	382	ug/L	76		SW846 8260B
	ND	500	423	ug/L	85	10	SW846 8260B
cis-1,2-Dichloroethene	ND	50.0	48.4	ug/L	97		SW846 8260B
	ND	50.0	63.0	ug/L	126 p	26	SW846 8260B
trans-1,2-Dichloroethene	ND	50.0	49.0	ug/L	98		SW846 8260B
	ND	50.0	49.3	ug/L	99	0.42	SW846 8260B
1-Butanol	ND	500	417	ug/L	83		SW846 8260B
	ND	500	457	ug/L	91	9.2	SW846 8260B
Vinyl chloride	ND	50.0	59.2	ug/L	118		SW846 8260B
	ND	50.0	61.8	ug/L	124	4.4	SW846 8260B
1,2-Dichloroethane	ND	50.0	45.6	ug/L	91		SW846 8260B
	ND	50.0	47.4	ug/L	95	3.7	SW846 8260B
Trichloroethene	ND	50.0	46.4	ug/L	93		SW846 8260B
	ND	50.0	46.7	ug/L	93	0.73	SW846 8260B
Tetrachloroethene	ND	50.0	37.1	ug/L	74		SW846 8260B
	ND	50.0	37.4	ug/L	75	0.72	SW846 8260B
2-Butanone	ND	50.0	41.4	ug/L	83		SW846 8260B
	ND	50.0	45.7	ug/L	91	10	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	95	(80 - 122)
	98	(80 - 122)
Dibromofluoromethane	105	(82 - 118)
	107	(82 - 118)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F8D170378 Work Order #...: KLJJM1AC-MS Matrix.....: WATER
 MS Lot-Sample #: F8D170378-001 KLJJM1AD-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	89	(70 - 131)
	94	(70 - 131)
4-Bromofluorobenzene	93	(78 - 115)
	93	(78 - 115)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters
 p Relative percent difference (RPD) is outside stated control limits.