TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

F07-058

Lot #: F7I200219
SDG #: W05207

Steve Trent

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

OCT 2007
RECEIVED

TESTAMERICA LABORATORIES, INC.

Michael C. Franks
Project Manager

September 26, 2007

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Case Narrative
LOT NUMBER: **F7I200219**
SDG: **W05207**

This report contains the analytical results for the two samples received under chain of custody by STL St. Louis on September 20, 2007. These samples are associated with your F07-058 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances
Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Volatiles by SW-846 8260B

The CCV recovery was outside the upper QC limit (greater than 20% D) for Bromomethane, Chloroethane, Styrene, and n-Butylbenzene indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples.
Affected Samples:
F7I200219 (1): B1PLF9
F7I200219 (2): B1PLH0

For a large number of analytes in the LCS, it becomes statistically likely that a few will be outside the laboratory QC limits. Upper and lower marginal exceedance (ME) limits have been established to determine when corrective action is necessary. The number of allowable marginal exceedances is based on the number of analytes in the LCS.
LCS recoveries are outside laboratory QC limits for Bromomethane, Acetone, and 1,1,2-Trichloroethane and qualified accordingly. Recoveries are within marginal exceedance limits, and within the number of analytes allowed. Results are reported with this narrative.
Affected Samples:
F7I200219 (1): B1PLF9
F7I200219 (2): B1PLH0

METHODS SUMMARY

F7I200219

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
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

F7I200219

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J69K7	001	B1PLF9	09/06/07	08:25
J69LD	002	B1PLH0	09/06/07	08:25

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.

Fluor Hanford Inc. W05207

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F07-058-014

COLLECTOR: POPE	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 7N	DATA TURNAROUND: 45 Days / 45 Days	AIR QUALITY: [ ]	
SAMPLING LOCATION: C5515, I-Water-FB	PROJECT DESIGNATION: 216-A-2 and 216-A-21 Characterization Sampling and Analysis - Groundwat	SAF NO.: F07-058	
ICE CHEST NO.: CWF 330	FIELD LOGBOOK NO.:	COA: 122585ES10	METHOD OF SHIPMENT: FEDERAL EXPRESS
SHIPPED TO: Severn Trent St. Louis	OFFSITE PROPERTY NO.: See PTR		BILL OF LADING/AIR BILL NO.: See PTR

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, 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) Radiological tie to B1PLF8

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool~4C
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	3
VOLUME	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1PLF9	WATER	9-6-07	0825	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J.S. Pope / [signature] 9-6-07		MO 745 FREDGE 1	9-6-07 1500
MO-745 REF #1 9/19/07	1250	R. PEISTER / [signature] 9/19/07	1250
R. PEISTER / [signature] 9/19/07	1310	FEDEX	9-19-07 1310
FEDEX 9-20-07	08:45	[signature] 09-20-07	0845
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

(1)VOA - 8260B (TCL); VOA - 8260B (Add-On) {1,4-Dioxane, 1-Butanol, Hexane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}

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

A-6003-618(01/06)

TestAmerica St. Louis

Fluor Hanford Inc. W05207

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F07-058-015

COLLECTOR: Pope	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 7N	DATA TURNAROUND: 45 Days / 45 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5515, I-Water 322'	PROJECT DESIGNATION: 216-A-2 and 216-A-21 Characterization Sampling and Analysis - Groundwat	SAF NO.: F07-058	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 122585ES10	METHOD OF SHIPMENT: FEDERAL EXPRESS
SHIPPED TO: Severn Trent St. Louis	OFFSITE PROPERTY NO.: See PTR		BILL OF LADING/AIR BILL NO.: See PTR

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
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) Radiological tie to B1PLF8

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool~4C								
TYPE OF CONTAINER	aGs*								
NO. OF CONTAINER(S)	3								
VOLUME	40mL								
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS								

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1PLH0	WATER	9-6-07	0625	X							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
T. Pope/[signature] 9-6-07		MO 745 FRIDGE /	9-6-07 / 1500
MO 745 REF #1 9/19/07	1250	R. Pfister/[signature]	9/19/07 1250
R. Pfister/[signature] 9/19/07	1310	FEDEX	9-19-07 1310
FEDEX 9-20-07	08:45	[signature] 09-20-07	0845

SPECIAL INSTRUCTIONS
(1)VOA - 8260B (TCL); VOA - 8260B (Add-On) {1,4-Dioxane, 1-Butanol, Hexane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}

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

A-6003-618(01/06)

TestAmerica St. Louis

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Lot #(s): F7I200219 TestAmerica St. Louis

Condition Upon Receipt Form

Client: Hanford COC/RFA No: F07-058-014,015 Date: 09-20-07

Quote No: 76776 Initiated By: [illegible] Time: 0845

Shipping Information

Shipper Name: FedX Multiple Packages Y (N)

Shipping # (s):* Sample Temperature (s):**

1. 7924 2228 3615	6.	1. 6°	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 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	If N/A- Was pH taken by original TestAmerica lab?
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	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:

samples recv'd. out of hold time.

Corrective Action:

☐ Client Contact Name: Informed by:

☐ Sample(s) processed "as is"

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

Project Management Review: [illegible] Date: 09-22-07

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.

VOLATILES

Fluor Hanford Inc

Client Sample ID: B1PLF9

GC/MS Volatiles

Lot-Sample #...: F7I200219-001 **Work Order #...:** J69K71AA **Matrix.....:** WATER
Date Sampled...: 09/06/07 **Date Received..:** 09/20/07
Prep Date.....: 09/20/07 **Analysis Date..:** 09/20/07
Prep Batch #...: 7264187
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**100**	**20**	**ug/L**	**3.8**
Acetonitrile	ND	50	ug/L	2.0
Benzene	ND	5.0	ug/L	0.17
Bromoform	ND	5.0	ug/L	0.24
Bromomethane	ND	10	ug/L	0.31
2-Butanone	**53**	**20**	**ug/L**	**1.4**
Carbon disulfide	ND	5.0	ug/L	0.55
Carbon tetrachloride	ND	5.0	ug/L	0.90
Chlorobenzene	ND	5.0	ug/L	0.12
Dibromochloromethane	ND	5.0	ug/L	0.29
Chloroethane	ND	10	ug/L	0.35
Chloroform	ND	5.0	ug/L	0.14
Chloromethane	ND	10	ug/L	0.44
Cyclohexanone	ND	100	ug/L	14
1,1-Dichloroethane	ND	5.0	ug/L	0.95
1,2-Dichloroethane	ND	5.0	ug/L	0.44
1,1-Dichloroethene	ND	5.0	ug/L	0.55
1,2-Dichloroethene (total)	ND	10	ug/L	0.54
1,2-Dichloropropane	ND	5.0	ug/L	0.37
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.73
trans-1,3-Dichloropropene	ND	5.0	ug/L	0.20
Ethylbenzene	ND	5.0	ug/L	0.19
n-Hexane	ND	10	ug/L	0.45
2-Hexanone	ND	20	ug/L	0.28
Methylene chloride	ND	5.0	ug/L	2.5
4-Methyl-2-pentanone	ND	20	ug/L	1.6
Styrene	ND	5.0	ug/L	1.2
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	0.14
Tetrachloroethene	ND	5.0	ug/L	0.27
Toluene	**0.18 J,B**	**5.0**	**ug/L**	**0.13**
1,1,1-Trichloroethane	ND	5.0	ug/L	0.15
1,1,2-Trichloroethane	ND	5.0	ug/L	0.28
Trichloroethene	ND	5.0	ug/L	0.36
1,2,4-Trimethylbenzene	**0.30 J,B**	**5.0**	**ug/L**	**0.22**
Vinyl chloride	ND	5.0	ug/L	0.24
Xylenes (total)	ND	10	ug/L	0.86
1-Butanol	ND	100	ug/L	3.4
n-Butylbenzene	ND	5.0	ug/L	0.53

(Continued on next page)

Fluor Hanford Inc

Client Sample ID: B1PLF9

GC/MS Volatiles

Lot-Sample #...: F7I200219-001 **Work Order #...:** J69K71AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,2-Dichloroethene	ND	5.0	ug/L	0.43
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.22
1,4-Dioxane	ND	400	ug/L	21

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(79 - 130)
Dibromofluoromethane	110	(73 - 116)
1,2-Dichloroethane-d4	119	(68 - 130)
4-Bromofluorobenzene	115	(77 - 128)

NOTE(S):

J Estimated result. Result is less than RL.

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

Fluor Hanford Inc

B1PLF9

GC/MS Volatiles

Lot-Sample #: F7I200219-001 **Work Order #:** J69K71AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

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

Fluor Hanford Inc

Client Sample ID: B1PLH0

GC/MS Volatiles

Lot-Sample #...: F7I200219-002 **Work Order #...:** J69LD1AA **Matrix.....:** WATER
Date Sampled...: 09/06/07 **Date Received..:** 09/20/07
Prep Date.....: 09/20/07 **Analysis Date..:** 09/20/07
Prep Batch #...: 7264187
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzene	ND	5.0	ug/L	0.17
Bromoform	ND	5.0	ug/L	0.24
Bromomethane	ND	10	ug/L	0.31
2-Butanone	ND	20	ug/L	1.4
Carbon disulfide	ND	5.0	ug/L	0.55
Carbon tetrachloride	ND	5.0	ug/L	0.90
Chlorobenzene	ND	5.0	ug/L	0.12
Dibromochloromethane	ND	5.0	ug/L	0.29
Chloroethane	ND	10	ug/L	0.35
Chloroform	**0.37 J**	**5.0**	**ug/L**	**0.14**
Chloromethane	ND	10	ug/L	0.44
Cyclohexanone	ND	100	ug/L	14
1,1-Dichloroethane	ND	5.0	ug/L	0.95
1,2-Dichloroethane	ND	5.0	ug/L	0.44
1,1-Dichloroethene	ND	5.0	ug/L	0.55
1,2-Dichloroethene (total)	ND	10	ug/L	0.54
1,2-Dichloropropane	ND	5.0	ug/L	0.37
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.73
Acetone	**15 J**	**20**	**ug/L**	**3.8**
Acetonitrile	ND	50	ug/L	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/L	0.20
Ethylbenzene	ND	5.0	ug/L	0.19
n-Hexane	ND	10	ug/L	0.45
2-Hexanone	ND	20	ug/L	0.28
Methylene chloride	ND	5.0	ug/L	2.5
4-Methyl-2-pentanone	ND	20	ug/L	1.6
Styrene	ND	5.0	ug/L	1.2
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	0.14
Tetrachloroethene	ND	5.0	ug/L	0.27
Toluene	**0.21 J,B**	**5.0**	**ug/L**	**0.13**
1,1,1-Trichloroethane	ND	5.0	ug/L	0.15
1,1,2-Trichloroethane	ND	5.0	ug/L	0.28
Trichloroethene	**2.1 J**	**5.0**	**ug/L**	**0.36**
1,2,4-Trimethylbenzene	**0.25 J,B**	**5.0**	**ug/L**	**0.22**
Vinyl chloride	ND	5.0	ug/L	0.24
Xylenes (total)	ND	10	ug/L	0.86
1-Butanol	ND	100	ug/L	3.4
n-Butylbenzene	ND	5.0	ug/L	0.53

(Continued on next page)

Fluor Hanford Inc

Client Sample ID: B1PLH0

GC/MS Volatiles

Lot-Sample #...: F7I200219-002 **Work Order #...:** J69LD1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
cis-1,2-Dichloroethene	ND	5.0	ug/L	0.43
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.22
1,4-Dioxane	ND	400	ug/L	21

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(79 - 130)
Dibromofluoromethane	108	(73 - 116)
1,2-Dichloroethane-d4	116	(68 - 130)
4-Bromofluorobenzene	108	(77 - 128)

NOTE(S):

J Estimated result. Result is less than RL.

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

Fluor Hanford Inc

B1PLH0

GC/MS Volatiles

Lot-Sample #: F7I200219-002 **Work Order #:** J69LD1AA **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 #...: F7I200219 **Work Order #...:** J7JRR1AA **Matrix.....:** WATER
MB Lot-Sample #: F7I210000-187

Prep Date.....: 09/20/07
Analysis Date..: 09/20/07 **Prep Batch #...:** 7264187
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	20	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
Toluene	**0.15 J**	**5.0**	**ug/L**	**SW846 8260B**
Acetonitrile	ND	50	ug/L	SW846 8260B
Benzene	ND	5.0	ug/L	SW846 8260B
Bromoform	ND	5.0	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
1-Butanol	ND	100	ug/L	SW846 8260B
2-Butanone	ND	20	ug/L	SW846 8260B
n-Butylbenzene	ND	5.0	ug/L	SW846 8260B
Carbon disulfide	ND	5.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/L	SW846 8260B
Chlorobenzene	ND	5.0	ug/L	SW846 8260B
Dibromochloromethane	ND	5.0	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Chloromethane	ND	10	ug/L	SW846 8260B
Cyclohexanone	ND	100	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	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
1,2-Dichloroethene (total)	ND	10	ug/L	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/L	SW846 8260B
1,4-Dioxane	ND	400	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
n-Hexane	ND	10	ug/L	SW846 8260B
2-Hexanone	ND	20	ug/L	SW846 8260B
Methylene chloride	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	20	ug/L	SW846 8260B
Styrene	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/L	SW846 8260B
Trichloroethene	ND	5.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	**0.29 J**	**5.0**	**ug/L**	**SW846 8260B**
Vinyl chloride	ND	5.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: F7I200219 **Work Order #...:** J7JRR1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Xylenes (total)	ND	10	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	121	(79 - 130)
Dibromofluoromethane	112	(73 - 116)
1,2-Dichloroethane-d4	119	(68 - 130)
4-Bromofluorobenzene	116	(77 - 128)

NOTE(S):

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

J Estimated result. Result is less than RL.

Fluor Hanford Inc

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F7I210000-187 B **Work Order #:** J7JRR1AA **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 #...: F7I200219 Work Order #...: J7JRR1AC Matrix.....: WATER
LCS Lot-Sample#: F7I210000-187
Prep Date.....: 09/20/07 Analysis Date..: 09/20/07
Prep Batch #...: 7264187
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
n-Hexane	50.0	51.5	ug/L	103	SW846 8260B
cis-1,3-Dichloropropene	50.0	56.7	ug/L	113	SW846 8260B
Dibromochloromethane	50.0	57.7	ug/L	115	SW846 8260B
Chloromethane	50.0	59.7	ug/L	119	SW846 8260B
Vinyl chloride	50.0	63.6	ug/L	127	SW846 8260B
Bromomethane	50.0	77.9 a	ug/L	156	SW846 8260B
Chloroethane	50.0	68.8	ug/L	138	SW846 8260B
Acetone	50.0	75.4 a	ug/L	151	SW846 8260B
1,1-Dichloroethene	50.0	53.2	ug/L	106	SW846 8260B
Methylene chloride	50.0	47.7	ug/L	95	SW846 8260B
Carbon disulfide	50.0	55.2	ug/L	110	SW846 8260B
1,1-Dichloroethane	50.0	54.0	ug/L	108	SW846 8260B
2-Butanone	50.0	59.4	ug/L	119	SW846 8260B
1,2-Dichloroethene (total)	100	102	ug/L	102	SW846 8260B
Chloroform	50.0	50.7	ug/L	101	SW846 8260B
1,1,1-Trichloroethane	50.0	53.7	ug/L	107	SW846 8260B
Carbon tetrachloride	50.0	52.4	ug/L	105	SW846 8260B
1,2-Dichloroethane	50.0	55.6	ug/L	111	SW846 8260B
Benzene	50.0	53.7	ug/L	107	SW846 8260B
Trichloroethene	50.0	52.4	ug/L	105	SW846 8260B
1,2-Dichloropropane	50.0	55.2	ug/L	110	SW846 8260B
1,1,2-Trichloroethane	50.0	58.7 a	ug/L	117	SW846 8260B
trans-1,3-Dichloropropene	50.0	61.1	ug/L	122	SW846 8260B
Toluene	50.0	54.0	ug/L	108	SW846 8260B
2-Hexanone	50.0	59.6	ug/L	119	SW846 8260B
4-Methyl-2-pentanone	50.0	62.6	ug/L	125	SW846 8260B
Chlorobenzene	50.0	54.4	ug/L	109	SW846 8260B
Bromoform	50.0	58.0	ug/L	116	SW846 8260B
Ethylbenzene	50.0	55.3	ug/L	111	SW846 8260B
Styrene	50.0	61.0	ug/L	122	SW846 8260B
1,1,2,2-Tetrachloroethane	50.0	59.8	ug/L	120	SW846 8260B
Tetrachloroethene	50.0	52.2	ug/L	104	SW846 8260B
n-Butylbenzene	50.0	61.0	ug/L	122	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F7I200219 **Work Order #...:** J7JRR1AC **Matrix.....:** WATER
LCS Lot-Sample#: F7I210000-187

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Cyclohexanone	**500**	**698**	**ug/L**	**140**	**SW846 8260B**
cis-1,2-Dichloroethene	**50.0**	**51.8**	**ug/L**	**104**	**SW846 8260B**
trans-1,2-Dichloroethene	**50.0**	**50.7**	**ug/L**	**101**	**SW846 8260B**
1-Butanol	**500**	**506**	**ug/L**	**101**	**SW846 8260B**
Acetonitrile	**250**	**306**	**ug/L**	**122**	**SW846 8260B**
1,4-Dioxane	**1000**	**993**	**ug/L**	**99**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	118	(81 - 130)
Dibromofluoromethane	106	(77 - 115)
1,2-Dichloroethane-d4	111	(71 - 123)
4-Bromofluorobenzene	107	(78 - 131)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F7I200219 Work Order #...: J69K71AC-MS Matrix.....: WATER
MS Lot-Sample #: F7I200219-001 J69K71AD-MSD
Date Sampled...: 09/06/07 Date Received..: 09/20/07
Prep Date.....: 09/20/07 Analysis Date..: 09/20/07
Prep Batch #...: 7264187
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	50.0	49.5	ug/L	99		SW846 8260B
	ND	50.0	49.3	ug/L	99	0.40	SW846 8260B
Chloromethane	ND	50.0	54.3	ug/L	109		SW846 8260B
	ND	50.0	53.8	ug/L	108	0.92	SW846 8260B
Vinyl chloride	ND	50.0	56.5	ug/L	113		SW846 8260B
	ND	50.0	57.9	ug/L	116	2.4	SW846 8260B
Bromomethane	ND	50.0	72.2	ug/L	144		SW846 8260B
	ND	50.0	70.9	ug/L	142	1.8	SW846 8260B
Chloroethane	ND	50.0	63.0	ug/L	126		SW846 8260B
	ND	50.0	62.2	ug/L	124	1.2	SW846 8260B
Acetone	100	50.0	124	ug/L	43		SW846 8260B
	100	50.0	132	ug/L	59	6.3	SW846 8260B
1,1-Dichloroethene	ND	50.0	50.2	ug/L	100		SW846 8260B
	ND	50.0	49.8	ug/L	100	0.76	SW846 8260B
Methylene chloride	ND	50.0	43.8	ug/L	88		SW846 8260B
	ND	50.0	42.9	ug/L	86	1.9	SW846 8260B
Carbon disulfide	ND	50.0	51.9	ug/L	104		SW846 8260B
	ND	50.0	50.8	ug/L	102	2.2	SW846 8260B
1,1-Dichloroethane	ND	50.0	52.5	ug/L	105		SW846 8260B
	ND	50.0	50.3	ug/L	101	4.2	SW846 8260B
1,2-Dichloroethene (total)	ND	100	98.4	ug/L	98		SW846 8260B
	ND	100	98.1	ug/L	98	0.24	SW846 8260B
Chloroform	ND	50.0	48.8	ug/L	98		SW846 8260B
	ND	50.0	46.7	ug/L	93	4.3	SW846 8260B
1,1,1-Trichloroethane	ND	50.0	51.6	ug/L	103		SW846 8260B
	ND	50.0	49.6	ug/L	99	4.0	SW846 8260B
Carbon tetrachloride	ND	50.0	50.7	ug/L	101		SW846 8260B
	ND	50.0	49.6	ug/L	99	2.1	SW846 8260B
1,2-Dichloroethane	ND	50.0	52.2	ug/L	104		SW846 8260B
	ND	50.0	50.8	ug/L	102	2.7	SW846 8260B
Benzene	ND	50.0	51.6	ug/L	103		SW846 8260B
	ND	50.0	51.1	ug/L	102	0.91	SW846 8260B
Trichloroethene	ND	50.0	49.8	ug/L	100		SW846 8260B
	ND	50.0	49.1	ug/L	98	1.3	SW846 8260B
1,2-Dichloropropane	ND	50.0	53.5	ug/L	107		SW846 8260B
	ND	50.0	51.9	ug/L	104	3.0	SW846 8260B
1,1,2-Trichloroethane	ND	50.0	54.3	ug/L	109		SW846 8260B
	ND	50.0	53.4	ug/L	107	1.7	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F7I200219 Work Order #...: J69K71AC-MS Matrix.....: WATER
MS Lot-Sample #: F7I200219-001 J69K71AD-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
trans-1,3-Dichloropropene	ND	50.0	56.8	ug/L	114		SW846 8260B
	ND	50.0	56.5	ug/L	113	0.47	SW846 8260B
Toluene	0.18	50.0	51.4	ug/L	102		SW846 8260B
	0.18	50.0	50.6	ug/L	101	1.7	SW846 8260B
2-Hexanone	ND	50.0	58.2	ug/L	116		SW846 8260B
	ND	50.0	59.2	ug/L	118	1.6	SW846 8260B
4-Methyl-2-pentanone	ND	50.0	53.5	ug/L	107		SW846 8260B
	ND	50.0	53.2	ug/L	106	0.52	SW846 8260B
Chlorobenzene	ND	50.0	51.6	ug/L	103		SW846 8260B
	ND	50.0	52.2	ug/L	104	1.2	SW846 8260B
Bromoform	ND	50.0	53.3	ug/L	107		SW846 8260B
	ND	50.0	53.4	ug/L	107	0.05	SW846 8260B
Ethylbenzene	ND	50.0	53.2	ug/L	106		SW846 8260B
	ND	50.0	52.9	ug/L	106	0.56	SW846 8260B
Styrene	ND	50.0	59.1	ug/L	118		SW846 8260B
	ND	50.0	58.7	ug/L	117	0.71	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	50.0	53.8	ug/L	108		SW846 8260B
	ND	50.0	53.9	ug/L	108	0.18	SW846 8260B
Tetrachloroethene	ND	50.0	48.7	ug/L	97		SW846 8260B
	ND	50.0	48.0	ug/L	96	1.4	SW846 8260B
2-Butanone	53	50.0	103	ug/L	101		SW846 8260B
	53	50.0	105	ug/L	104	1.3	SW846 8260B
Dibromochloromethane	ND	50.0	53.8	ug/L	108		SW846 8260B
	ND	50.0	52.6	ug/L	105	2.1	SW846 8260B
n-Butylbenzene	ND	50.0	59.1	ug/L	118		SW846 8260B
	ND	50.0	59.0	ug/L	118	0.10	SW846 8260B
Cyclohexanone	ND	500	458	ug/L	92		SW846 8260B
	ND	500	448	ug/L	90	2.2	SW846 8260B
cis-1,2-Dichloroethene	ND	50.0	50.0	ug/L	100		SW846 8260B
	ND	50.0	50.0	ug/L	100	0.0	SW846 8260B
trans-1,2-Dichloroethene	ND	50.0	48.3	ug/L	97		SW846 8260B
	ND	50.0	48.1	ug/L	96	0.49	SW846 8260B
n-Hexane	ND	50.0	48.9	ug/L	98		SW846 8260B
	ND	50.0	48.8	ug/L	98	0.08	SW846 8260B
1-Butanol	ND	500	494	ug/L	99		SW846 8260B
	ND	500	500	ug/L	100	1.2	SW846 8260B
Acetonitrile	ND	250	279	ug/L	112		SW846 8260B
	ND	250	270	ug/L	108	3.4	SW846 8260B
1,4-Dioxane	ND	1000	1080	ug/L	108		SW846 8260B
	ND	1000	966	ug/L	97	11	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F7I200219 **Work Order #...:** J69K71AC-MS **Matrix.....:** WATER
MS Lot-Sample #: F7I200219-001 J69K71AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	112	(79 - 130)
	115	(79 - 130)
Dibromofluoromethane	105	(73 - 116)
	102	(73 - 116)
1,2-Dichloroethane-d4	106	(68 - 130)
	103	(68 - 130)
4-Bromofluorobenzene	101	(77 - 128)
	105	(77 - 128)

NOTE(S):

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

Bold print denotes control parameters