



STL

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ANALYTICAL REPORT

PROJECT NO. 300 AREA TEDF

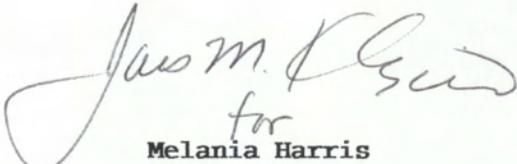
R06-001

Lot #: F6J250274
SDG #: W05041

John Trechter

Fluor Hanford Inc
600 Area, MO280, MSIN S3-30
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.


for
Melania Harris
Project Manager

November 6, 2006

Case Narrative
Lot Number: **F6J250274**
SDG: W05041

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on October 24, 2006. This sample is associated with your R06-001 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below.

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 EPA 624

The LCS/MS/MSD Standard mix used in the analysis expired one day prior to the analysis. The recoveries are still within acceptable range. There was insufficient sample to perform a reanalysis.

Affected Samples:

F6J250274 (1): TEDF1024061

Semivolatiles by EPA 625

Batch: 6300395

In the original analysis, the method blank, LCS and sample surrogate recoveries were low, indicating a potential negative bias. The sample was reprepared and reanalyzed outside of holding time in batch 6305219. Both the original and reanalysis are reported.

Affected Samples:

F6J250274 (1): TEDF1024061

Reanalysis Batch: 6305219

The LCS surrogate recoveries is outside acceptance limits. LCS spike recovery is within QC limits demonstrating acceptable sample extraction and instrument performance. There is an apparent anomaly in the surrogate addition, isolated to the LCS and not indicative of the batch.

There was insufficient sample volume to perform a MS/MSD analysis. A LCS/LCSD were performed to demonstrate accuracy and replicate precision.

Affected Samples:

F6J250274 (1): TEDF1024061

Mercury by EPA 245.2

The initial ICV recovery was outside the upper QC limit (105%) at 106%, indicating a potential high bias in the sample associated with this ICV. Mercury was not detected above the reporting limit in the associated sample.

Affected Samples:

F6J250274 (1): TEDF1024061

There were no observations or nonconformances to report for the following analyses:

Ammonia by EPA 350.1

ICP Metals by EPA 200.7

Nitrite by EPA 354.1

METHODS SUMMARY

F6J250274

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Base/Neutrals and Acids	CFR136A 625	CFR136A 625
Mercury (Automated Cold Vapor Technique)	MCAWW 245.2	
Nitrite	MCAWW 354.1	
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Purgeables	CFR136A 624	SW846 5030B
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7	MCAWW 200.7

References:

CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

F6J250274

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JG78L	001	TEDF1024061	10/24/06	06:29

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

Client Sample ID: TEDF1024061

GC/MS Volatiles

Lot-Sample #...: F6J250274-001 Work Order #...: JG78L1AD Matrix.....: WATER
 Date Sampled...: 10/24/06 Date Received...: 10/24/06
 Prep Date.....: 11/02/06 Analysis Date...: 11/02/06
 Prep Batch #...: 6306467
 Dilution Factor: 1 Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Bromodichloromethane	0.21 J	2.2	ug/L	0.14
Chloroform	2.8 J	5.0	ug/L	0.19
1,1-Dichloroethane	ND	4.7	ug/L	0.16
Methylene chloride	ND	5.0	ug/L	0.10
Tetrachloroethene	ND	5.0	ug/L	0.19
Toluene	ND	5.0	ug/L	0.20
1,1,1-Trichloroethane	ND	5.0	ug/L	0.15
Trichloroethene	ND	1.9	ug/L	0.20

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
1,2-Dichloroethane-d4	113	(70 - 123)
Toluene-d8	104	(75 - 126)
4-Bromofluorobenzene	102	(72 - 124)

NOTE(S) :

J Estimated result. Result is less than RL.

Fluor Hanford Inc

TEDF1024061

GC/MS Volatiles

Lot-Sample #: F6J250274-001

Work Order #: JG78L1AD

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 #...: F6J250274
 MB Lot-Sample #: F6K020000-467

Work Order #...: JHTL71AA

Matrix.....: WATER

Prep Date.....: 11/02/06

Analysis Date...: 11/02/06

Prep Batch #...: 6306467

Dilution Factor: 1

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Bromodichloromethane	ND	2.2	ug/L	CFR136A 624
Chloroform	ND	5.0	ug/L	CFR136A 624
1,1-Dichloroethane	ND	4.7	ug/L	CFR136A 624
Methylene chloride	0.24 J	5.0	ug/L	CFR136A 624
Tetrachloroethene	ND	5.0	ug/L	CFR136A 624
Toluene	ND	5.0	ug/L	CFR136A 624
1,1,1-Trichloroethane	ND	5.0	ug/L	CFR136A 624
Trichloroethene	ND	1.9	ug/L	CFR136A 624

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
1,2-Dichloroethane-d4	115	(70 - 123)
Toluene-d8	105	(75 - 126)
4-Bromofluorobenzene	101	(72 - 124)

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 #: F6K020000-467 B Work Order #: JHTL71AA 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 #...: F6J250274 Work Order #...: JHTL71AC Matrix.....: WATER
 LCS Lot-Sample#: F6K020000-467
 Prep Date.....: 11/02/06 Analysis Date...: 11/02/06
 Prep Batch #...: 6306467
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Trichloroethene	20.0	19.9	ug/L	99	CFR136A 624
Toluene	20.0	20.0	ug/L	100	CFR136A 624
Bromodichloromethane	20.0	23.4	ug/L	117	CFR136A 624
Chloroform	20.0	21.2	ug/L	106	CFR136A 624
1,1-Dichloroethane	20.0	21.4	ug/L	107	CFR136A 624
Methylene chloride	20.0	21.5	ug/L	108	CFR136A 624
Tetrachloroethene	20.0	20.6	ug/L	103	CFR136A 624
1,1,1-Trichloroethane	20.0	20.7	ug/L	104	CFR136A 624

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1,2-Dichloroethane-d4	111	(76 - 116)
Toluene-d8	106	(81 - 122)
4-Bromofluorobenzene	100	(75 - 123)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F6J250274 Work Order #...: JG78L1AV-MS Matrix.....: WATER
 MS Lot-Sample #: F6J250274-001 JG78L1AW-MSD
 Date Sampled...: 10/24/06 Date Received...: 10/24/06
 Prep Date.....: 11/02/06 Analysis Date...: 11/02/06
 Prep Batch #...: 6306467
 Dilution Factor: 1

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Toluene	ND	20.0	19.8	ug/L	99		CFR136A 624
	ND	20.0	19.8	ug/L	99	0.10	CFR136A 624
Bromodichloromethane	0.21	20.0	23.1	ug/L	114		CFR136A 624
	0.21	20.0	23.1	ug/L	114	0.13	CFR136A 624
Chloroform	2.8	20.0	24.0	ug/L	106		CFR136A 624
	2.8	20.0	23.8	ug/L	105	0.83	CFR136A 624
1,1-Dichloroethane	ND	20.0	21.4	ug/L	107		CFR136A 624
	ND	20.0	21.2	ug/L	106	1.1	CFR136A 624
Methylene chloride	ND	20.0	20.0	ug/L	100		CFR136A 624
	ND	20.0	19.8	ug/L	99	1.2	CFR136A 624
Tetrachloroethene	ND	20.0	18.2	ug/L	91		CFR136A 624
	ND	20.0	17.9	ug/L	89	1.8	CFR136A 624
1,1,1-Trichloroethane	ND	20.0	21.1	ug/L	106		CFR136A 624
	ND	20.0	21.0	ug/L	105	0.71	CFR136A 624
Trichloroethene	ND	20.0	20.0	ug/L	100		CFR136A 624
	ND	20.0	19.7	ug/L	98	1.5	CFR136A 624

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
1,2-Dichloroethane-d4	107	(70 - 123)
	110	(70 - 123)
Toluene-d8	104	(75 - 126)
	105	(75 - 126)
4-Bromofluorobenzene	98	(72 - 124)
	100	(72 - 124)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

Fluor Hanford Inc

Client Sample ID: TEDF1024061

GC/MS Semivolatiles

Lot-Sample #...: F6J250274-001 Work Order #...: JG78L1AC Matrix.....: WATER
Date Sampled...: 10/24/06 Date Received...: 10/24/06
Prep Date.....: 10/27/06 Analysis Date...: 10/31/06
Prep Batch #...: 6300395
Dilution Factor: 1 Method.....: CFR136A 625

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	1.0

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	45 *	(48 - 83)
2-Fluorophenol	30	(24 - 48)
2,4,6-Tribromophenol	67	(52 - 102)
Nitrobenzene-d5	53 *	(54 - 86)
Phenol-d5	21	(19 - 34)
Terphenyl-d14	71	(48 - 94)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Fluor Hanford Inc

TEDF1024061

GC/MS Semivolatiles

Lot-Sample #: F6J250274-001

Work Order #: JG78L1AC

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

Fluor Hanford Inc

Client Sample ID: TEDF1024061

GC/MS Semivolatiles

Lot-Sample #...: F6J250274-001 Work Order #...: JG78L2AC Matrix.....: WATER
 Date Sampled...: 10/24/06 Date Received...: 10/24/06
 Prep Date.....: 11/01/06 Analysis Date...: 11/01/06
 Prep Batch #...: 6305219
 Dilution Factor: 1 Method.....: CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	52	(48 - 83)
2-Fluorophenol	31	(24 - 48)
2,4,6-Tribromophenol	54	(52 - 102)
Nitrobenzene-d5	59	(54 - 86)
Phenol-d5	21	(19 - 34)
Terphenyl-d14	51	(48 - 94)

Fluor Hanford Inc

TEDF1024061

GC/MS Semivolatiles

Lot-Sample #: F6J250274-001

Work Order #: JG78L2AC

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>
Unknown		7.2	M 2.8476	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 #...: F6J250274
MB Lot-Sample #: F6J270000-395

Work Order #...: JHETA1AA

Matrix.....: WATER

Analysis Date...: 10/31/06
Dilution Factor: 1

Prep Date.....: 10/27/06
Prep Batch #...: 6300395

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	40 *	(48 - 83)
2-Fluorophenol	27	(24 - 48)
2,4,6-Tribromophenol	64	(52 - 102)
Nitrobenzene-d5	48 *	(54 - 86)
Phenol-d5	19	(19 - 34)
Terphenyl-d14	70	(48 - 94)

NOTE(S) :

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

* Surrogate recovery is outside stated control limits.

Fluor Hanford Inc
Method Blank Report
GC/MS Semivolatiles

Lot-Sample #: F6J270000-395 B Work Order #: JHETA1AA 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 Semivolatiles

Client Lot #...: F6J250274
MB Lot-Sample #: F6K010000-219

Work Order #...: JHNNH41AA

Matrix.....: WATER

Analysis Date...: 11/01/06
Dilution Factor: 1

Prep Date.....: 11/01/06
Prep Batch #...: 6305219

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	53	(48 - 83)
2-Fluorophenol	32	(24 - 48)
2,4,6-Tribromophenol	54	(52 - 102)
Nitrobenzene-d5	59	(54 - 86)
Phenol-d5	22	(19 - 34)
Terphenyl-d14	51	(48 - 94)

NOTE(S) :

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

Fluor Hanford Inc
Method Blank Report
GC/MS Semivolatiles

Lot-Sample #: F6K010000-219 B Work Order #: JHNH41AA 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>
Toluene	108-88-3	4.5	M 2.8442	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 #...: F6J250274 Work Order #...: JHETA1AC Matrix.....: WATER
 LCS Lot-Sample#: F6J270000-395
 Prep Date.....: 10/27/06 Analysis Date...: 10/31/06
 Prep Batch #...: 6300395
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
bis(2-Ethylhexyl) phthalate	100	84.3	ug/L	84	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	45	(45 - 87)
2-Fluorophenol	28	(28 - 49)
2,4,6-Tribromophenol	72	(61 - 96)
Nitrobenzene-d5	50 *	(55 - 85)
Phenol-d5	24	(22 - 35)
Terphenyl-d14	65	(60 - 86)

NOTE(S) :

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

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F6J250274 Work Order #...: JHNH41AC-LCS Matrix.....: WATER
 LCS Lot-Sample#: F6K010000-219 JHNH41AD-LCSD
 Prep Date.....: 11/01/06 Analysis Date...: 11/01/06
 Prep Batch #...: 6305219
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>RPD</u>	<u>METHOD</u>
bis(2-Ethylhexyl) phthalate	100	66.1	ug/L	66		CFR136A 625
	100	75.3	ug/L	75	13	CFR136A 625

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorobiphenyl	63	(45 - 87)
2-Fluorophenol	69	(45 - 87)
	37	(28 - 49)
	41	(28 - 49)
2,4,6-Tribromophenol	63	(61 - 96)
	69	(61 - 96)
Nitrobenzene-d5	65	(55 - 85)
	72	(55 - 85)
Phenol-d5	26	(22 - 35)
	28	(22 - 35)
Terphenyl-d14	55 *	(60 - 86)
	60	(60 - 86)

NOTE(S) :

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

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F6J250274 Work Order #...: JG78L1AQ-MS Matrix.....: WATER
 MS Lot-Sample #: F6J250274-001 JG78L1AR-MSD
 Date Sampled...: 10/24/06 Date Received...: 10/24/06
 Prep Date.....: 10/27/06 Analysis Date...: 10/31/06
 Prep Batch #...: 6300395
 Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
bis(2-Ethylhexyl) phthalate	ND	96.5	86.0	ug/L	89		CFR136A 625
	ND	96.0	86.9	ug/L	91	1.1	CFR136A 625

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	57	(48 - 83)
	51	(48 - 83)
2-Fluorophenol	34	(24 - 48)
	33	(24 - 48)
2,4,6-Tribromophenol	81	(52 - 102)
	82	(52 - 102)
Nitrobenzene-d5	61	(54 - 86)
	58	(54 - 86)
Phenol-d5	29	(19 - 34)
	28	(19 - 34)
Terphenyl-d14	68	(48 - 94)
	68	(48 - 94)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.
 Bold print denotes control parameters

Fluor Hanford Inc

Client Sample ID: TEDF1024061

TOTAL Metals

Lot-Sample #...: F6J250274-001

Matrix.....: WATER

Date Sampled...: 10/24/06

Date Received...: 10/24/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
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Prep Batch #...: 6299247

Iron	ND	100	ug/L	MCAWW 200.7	10/26-11/01/06	JG78L1AF
		Dilution Factor: 1		MDL.....: 25.0		

Prep Batch #...: 6300225

Mercury	ND	0.20	ug/L	MCAWW 245.2	10/27/06	JG78L1AG
		Dilution Factor: 1		MDL.....: 0.046		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F6J250274

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
MB Lot-Sample #: F6J260000-247				Prep Batch #...: 6299247		
Iron	ND	100	ug/L	MCAWW 200.7	10/26-11/01/06	JG9441AA
		Dilution Factor: 1				

MB Lot-Sample #: F6J270000-225				Prep Batch #...: 6300225		
Mercury	ND	0.20	ug/L	MCAWW 245.2	10/27/06	JHDW41AA
		Dilution Factor: 1				

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F6J250274

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
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LCS Lot-Sample#: F6J260000-247 Prep Batch #...: 6299247							
Iron	500	525	ug/L	105	MCAWW 200.7	10/26-11/01/06	JG9441AC
Dilution Factor: 1							

LCS Lot-Sample#: F6J270000-225 Prep Batch #...: 6300225							
Mercury	1.00	0.930	ug/L	93	MCAWW 245.2	10/27/06	JHDW41AC
Dilution Factor: 1							

NOTE(S) :

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

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F6J250274
 Date Sampled...: 10/24/06

Date Received...: 10/24/06

Matrix.....: WATER

<u>PARAMETER</u>	<u>SAMPLE AMOUNT</u>	<u>SPIKE AMT</u>	<u>MEASRD AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
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MS Lot-Sample #: F6J250274-001 Prep Batch #...: 6299247

Iron

ND	500	530	ug/L	106			MCAWW 200.7	10/26-11/01/06	JG78L1AJ
ND	500	539	ug/L	108	1.6		MCAWW 200.7	10/26-11/01/06	JG78L1AK

Dilution Factor: 1

MS Lot-Sample #: F6J250274-001 Prep Batch #...: 6300225

Mercury

ND	1.00	0.942	ug/L	94			MCAWW 245.2	10/27/06	JG78L1AN
ND	1.00	1.06	ug/L	106	12		MCAWW 245.2	10/27/06	JG78L1AP

Dilution Factor: 1

NOTE(S) :

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

Fluor Hanford Inc

Client Sample ID: TEDF1024061

General Chemistry

Lot-Sample #...: F6J250274-001 Work Order #...: JG78L Matrix.....: WATER
Date Sampled...: 10/24/06 Date Received...: 10/24/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrite as N	ND	50.0	ug/L	MCAWW 354.1	10/25/06	6299359
		Dilution Factor: 1		MDL.....: 14.3		
Nitrogen, as Ammonia	ND	50.0	ug/L	MCAWW 350.1	10/27/06	6303221
		Dilution Factor: 1		MDL.....: 5.5		

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F6J250274

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrite as N	ND	Work Order #: JHAPE1AA 50.0	ug/L	MB Lot-Sample #: MCAWW 354.1	F6J260000-359 10/25/06	6299359
		Dilution Factor: 1				
Nitrogen, as Ammonia	ND	Work Order #: JHH351AA 50.0	ug/L	MB Lot-Sample #: MCAWW 350.1	F6J300000-221 10/27/06	6303221
		Dilution Factor: 1				

NOTE(S) :

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F6J250274

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>	
Nitrite as N									
	400	408	ug/L	102		MCAWW 354.1	10/25/06	6299359	
	400	434	ug/L	108	6.2	MCAWW 354.1	10/25/06	6299359	
				Dilution Factor: 1					

NOTE(S) :

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F6J250274

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCNT</u> <u>RECVRY</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrogen, as Ammonia	500	526	ug/L	105	MCAWW 350.1	10/27/06	6303221
				Work Order #: JHH351AE LCS Lot-Sample#: F6J300000-221			
			Dilution Factor: 1				

NOTE(S) :

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F6J250274

Matrix.....: WATER

Date Sampled...: 10/24/06

Date Received...: 10/24/06

<u>PARAMETER</u>	<u>SAMPLE AMOUNT</u>	<u>SPIKE AMT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrite as N	ND	400	389	ug/L	97	MCAWW 354.1	10/25/06	6299359
			Dilution Factor: 1					
Nitrogen, as Ammonia	ND	500	482	ug/L	96	MCAWW 350.1	10/27/06	6303221
			Dilution Factor: 1					

NOTE(S) :

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F6J250274

Work Order #...: JG78L-SMP
JG78L-DUP

Matrix.....: WATER

Date Sampled...: 10/24/06

Date Received...: 10/24/06

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrogen, as Ammonia	ND	ND	ug/L	0	(0-20)	SD Lot-Sample #: F6J250274-001 MCAWW 350.1	10/27/06	6303221
			Dilution Factor: 1					
Nitrite as N	ND	ND	ug/L	0	(0-20)	SD Lot-Sample #: F6J250274-001 MCAWW 354.1	10/25/06	6299359
			Dilution Factor: 1					

CR4773

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. No. N/A
 Page 1 of 1

Collector R. A. WOKAL	Contact/Requestor DALE L. HALGREN	Telephone No. 376-9988	MSIN L6-05	FAX 376-6423
SAF No. R06-001	Sample Origin TW-V-582 310 TEDF 300 AREA	Purchase Order/Charge Code 118810 / CA40		
Project Title 300 AREA TEDF NPDES COMPLIANCE SAMPLES	Logbook No. N/A	Ice Chest No. N/A	Temp. COOL TO 4 degrees C.	
Shipped To (Lab) SEVERN TRENT	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A		
Protocol CLEAN WATER ACT	Data Turnaround 15 DAYS PRIORITY	Offsite Property No. N/A		

Sample No.	Lab ID	*	Date	Time	No./Type Container	Sample Analysis	Preservative
TEDF1024061		W	10-24-06	0629	4/aGs 40mL	PURGEABLES EPA624	HCl pH<2
TEDF1024061		W		0633	4/aG 1L	BASE/ NEUTRALS AND ACIDS EPA625	Cool 4Deg C
TEDF1024061		W		0637	1/POLY 500mL	METALS Fe EPA 200.7	HNO3 pH <2
TEDF1024061		W		0638	1/POLY 250mL	NITRITE 353.1M	COOL 4DEG C
TEDF1024061		W		0639	1/POLY 500mL	AMMONIA EPA350.1	H2SO4 pH <2
TEDF1024061		W		0640	1/POLY 1L	GROSS ALPHA & BETA GA GB	HNO3 pH <2
TEDF1024061		W		0641	1/POLY 2L	TOTAL RADIUM TOTAL/Ra	HNO3 pH <2
TEDF1024061		W		0642	1/POLY 1L	METALS Hg EPA 245.2 (CV)	HNO3 pH <2
TEDF1024061		W		0643	1/POLY 20mL	ACTIVITY SCAN	NONE

POSSIBLE SAMPLE HAZARDS/REMARKS (List all known wastes) MSDS <input type="radio"/> Yes <input checked="" type="radio"/> No THESE SAMPLES CONTAIN RADIOACTIVE MATERIAL AT CONCENTRATIONS THAT ARE NOT REGULATED FOR TRANSPORTATION PER 49 CFR 173.403 BUT ARE NOT RELEASABLE PER DOE ORDER 5400.5	SPECIAL INSTRUCTIONS Enhanced detection limits agreed to by R.L. Merrell 10/18/94 required. Exception: Chloroform PQL 5 ug/L. Contact JE Trechter ASAP if sample results are =>than enhanced detection limits. 15/45 summary (CAT 4,DB)	Hold Time
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Relinquished By <i>RAWOKAL</i>	Print <i>RAWOKAL</i>	Sign <i>RAWOKAL</i>	Date/Time 10-24-06 0700	Received By <i>Refrige</i>	Print <i>Refrige</i>	Sign <i>Refrige</i>	Date/Time 10-24-06 0700	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
Relinquished By <i>Refrige</i>			10-24-06 1230	Received By <i>RAWOKAL</i>			10-24-06 1230	
Relinquished By <i>RAWOKAL</i>			10-24-06 1300	Received By <i>DAVID HARBINSON</i>			10/24/06 1300	
Relinquished By <i>DAVID HARBINSON</i>			10/24/06 1300	Received By <i>Conla Breh</i>			10-26-06 900AM	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time	

Condition Upon Receipt Form

Client: RA WOK4L COC/RFA No: _____ Date: 10-25-06
 Quote No: 42925 Initiated By: cat Time: 9:00AM

Shipping Information

Shipper Name: FEDEX Multiple Packages Y N N/A
 Shipping # (s):* _____ Sample Temperature (s):**
 1. 7901 0050 9310 6. _____ 1. 2°C 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.	<input checked="" type="radio"/> Y <input checked="" type="radio"/> N	Was sample received broken?	8.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?
2.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Was sample received with proper pH ¹ ? (If not, make note below)	9.	<input type="radio"/> Y <input checked="" type="radio"/> N	Chain of Custody matches sample ID's on container(s)?
3.	<input type="radio"/> Y <input type="radio"/> N	If N/A-Was pH taken by original STL Lab?	10.	<input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on cooler?
4.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?	11.	<input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on cooler appear to be tampered with?
5.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis?	12.	<input checked="" type="radio"/> Y <input type="radio"/> N	Are there custody seals present on bottles?
6.	<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)	13.	<input type="radio"/> Y <input checked="" type="radio"/> N <input type="radio"/> N/A	Do custody seals on bottles appear to be tampered with?
7.	<input checked="" type="radio"/> Y <input type="radio"/> N	Were contents of the cooler frisked after opening	14.	<input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> 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 and soils.

Notes: did not receive gross alpha, beta or gamma and total radium total/RA
stays in Richland. SW 10-25-06

Corrective Action:
 Client Contact Name: _____ Informed by: _____
 Sample(s) processed "as is"
 Sample(s) on hold until: _____ If released, notify: _____
 Project Management Review: K.C. Date: 10-31-06

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.

F6J250274

CLIENT ANALYSIS SUMMARY

Storage Loc: 3-157&160

Project Manager: MLH Quote #: 47975 SDG: R06-001
Project: 300 AREA TEDF R06-001
PO#: 615 Report to: John Trechter
Client: 108302 Fluor Hanford Inc

Date Received: 2006-10-24
Analytical Due Date: 2006-11-03
Report Due Date: 2006-11-03
Report Type: B Standard Report
EDD Code: FEAD1

#SMPS in LOT: 0

Sample Contort: Log in QC Received date is date received in Richland.
SDG should be assigned by Richland, check w/ PM.
Nitrite has short hold time. Notify PM if exceeded. VOA: notify PM if Chloroform >= 10 ug/l. Re-inject.
Notify PM if any parameter exceeds the CRDL. Do NOT dilute Nitrite to bring spike in control

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	I
1	TEDF1024061			2006-10-24 / 629	JG78L	WATER
SAMPLE COMMENTS:						
FE JI	MCAW 200.7 W	Inductively Coupled Plasma (200.7 Trace)	05 METALS, TOTAL - Waters	01 STANDARD TEST SET	PROT: A	WRK LOC 06
HG W9	MCAW 245.2 W	Mercury (245.2. Cold Vapor)	19 METALS, TOTAL (Method exclusive) - Waters	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX DP	CFR13 625 6A	Base/Neutrals and Acids (625)	49 LIQ/LIQ. CONT (A/B/N) - Acid- >Base	01 STANDARD TEST SET	PROT: A	WRK LOC 06 TIC: Y
XX DN	CFR13 624 6A	Volatile Organics, GC/MS (624) - preserved	25 PURGE AND TRAP - 25 mL purge (Waters)	01 STANDARD TEST SET	PROT: A	WRK LOC 06 TIC: Y
XX ZV	RAD SCREEN	RAD SCREEN	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A	WRK LOC 06
XX CP	MCAW 354.1 W	Nitrite (354.1)	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	51 CLIENT: HANFORD	PROT: A	WRK LOC 06
XX VM	MCAW 350.1 W	Nitrogen, Ammonia (350.1, Automated)	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A	WRK LOC 06

F6J250274

CLIENT COMMENTS SUMMARY

Project Manager: MLH Quote #: 47975 SDG: R06-001
Project: 300 AREA TEDF R06-001
PO#: 615 Report to: John Trechter
Client: 108302 Fluor Hanford Inc

Storage Loc: **3-157&160**
Date Received: 2006-10-24
Analytical Due Date: 2006-11-03
Report Due Date: 2006-11-03
Report Type: B Standard Report
EDD Code: FEAD1

#SMPS in LOT: 0

Sample Contortl:
Log in QC
Received date is date received in Richland.
SDG should be assigned by Richland, check w/ PM.

Nitrite has short hold time. Notify PM if exceeded.
VOA: notify PM if Chloroform \geq 10 ug/l. Re-inject.

Notify PM if any parameter exceeds the CRDL.

Do NOT dilute Nitrite to bring spike in control

Hanford samples should be batched by themselves

From: Origin ID: (509)375-3131
 Shipping Dept.
 SEVERN TRENT LABORATORIES
 2800 GEORGE WASHINGTON WAY
 RICHLAND, WA 99354



CLS 100 306/19/23

Ship Date: 24OCT06
 ActWgt: 43 LB
 System#: 1033413/INET2500
 Account#: S *****

REF:



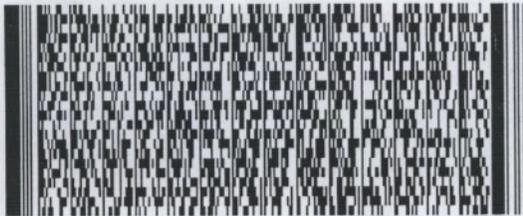
Delivery Address Bar Code

SHIP TO: (314)298-8566

BILL RECIPIENT

Sample Control
 STL St. Louis
 13715 N. Rider Trail

Earth City, MO 63045



PRIORITY OVERNIGHT

WED

Deliver By:
 25OCT06

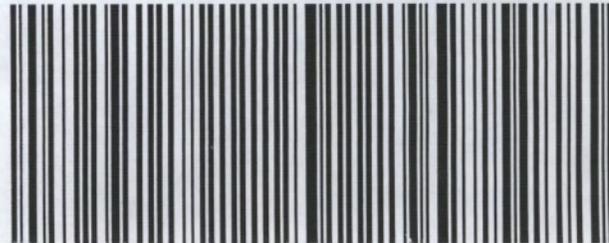
TRK# 7901 0050 9310

FORM
 0201

STL A1

63045 -MO-US

XX ALNA



Shipping Label: Your shipment is complete

1. Use the 'Print' feature from your browser to send this page to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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