

0066092

SEVERN  
TRENT

STL

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## ANALYTICAL REPORT

REVISED

*MW*  
*3-24-05*

PROJECT NO. 200-LW-1/LW-2

F03-025

Lot #: F4K100333

SDG #: W04380

Steve Trent

Fluor Hanford Inc  
MSIN A0-21  
PO Box 1000  
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.



*Marti Ward*

MARTI WARD  
Project Manager

March 24, 2005

**Case Narrative**  
**SDG: W04380**

This report contains the analytical results for the four samples received under chain of custody by STL St. Louis between November 10, 2004 and November 19, 2004. These samples are associated with your F03-025 SAF. The SDG was closed on 11/24/04.

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.

Samples were received at the laboratory after the holding time had expired for several of the requested tests.

The package is being re-submitted to incorporate changes requested by the client to target lists and flagging.

Volatiles

The LCS recoveries for batch 4317380 are outside QC limits for less than 10% of the compounds spiked. Laboratory QC practices, based on federal guidance documents, allow for up to 10% of the spike compounds to be outside QC criteria without necessitating re-preparation/re-analysis. Sample purge efficiency and compliance is demonstrated by the remaining acceptable LCS recoveries.

The MS/MSD recoveries are outside QC limits for less than 10% of the compounds spiked. Laboratory QC practices, based on federal guidance documents, allow for up to 10% of the spike compounds to be outside QC criteria without necessitating re-preparation/re-analysis. Sample purge efficiency and compliance is demonstrated by the remaining acceptable MS/MSD recoveries.

Case Narrative  
SDG: W04380

Anions

The MS recovery for Nitrite was outside the QC limits. The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery is attributed to matrix interference.

Nitrate

The MS recovery for Nitrate is outside the established QC limits. A matrix interference is physically evident in the sample. Method performance is demonstrated by acceptable LCS and LCS-Duplicate recoveries. No further action is required.

PCB

Due to its extremely high radiation readings, sample B19189 was analyzed at an initial ten fold dilution. The reporting limit has been adjusted for the dilution. Surrogates were diluted out.

The MS/MSD sample required at least a twenty fold dilution, making recoveries for the MS/MSD unreliable. There was no reportable data for the MS/MSD. LCS recoveries were acceptable.

Continuing Calibration Checks 200, 208 and 216 all failed low for Aroclor 1016 and 1260 on the confirmation channel (A). All recoveries were acceptable on Channel B, which is where these samples were reported from.

Mercury

Analysis of the sample designated for MS/MSD resulted in a sufficiently high concentration such that the MS/MSD are above the instrument's calibration range. MS/MSD results should be considered estimated values.

Semi-Volatiles

Due to sample matrix, limited volume and RAD levels, an MS/MSD was not run for method 8270 on a sample from this SDG.

There was insufficient volume of sample B19188 provided to perform the analysis at the method specified amount due to laboratory request to limit volume due to high RAD levels. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.

**Case Narrative**  
**SDG: W04380**

**Metals**

The MS/MSD recoveries for sample B19189 for Antimony, Chromium and Nickel are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

The MS/MSD recovery in sample B191F1 for Chromium, Copper and Lead is outside the established QC limits. The concentration of these metals in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. The MS/MSD recovery for Antimony, Nickel and Silver is outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

**SAMPLE SUMMARY**

W04380 : F4K100333

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
GWNAE	001	B193K1	10/26/04	09:41
GWNFG	002	B19189	10/26/04	09:41

**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.

(Continued on next page)

**SAMPLE SUMMARY**

W04380 : F4K120109

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
GWTXX	001	B19188	10/20/04	10:40

**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.

(Continued on next page)

**SAMPLE SUMMARY**

W04380 : F4K180368

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT</u>	<u>SAMPLE ID</u>	<u>SAMPLED</u>	<u>SAMP</u>
				<u>DATE</u>	<u>TIME</u>
GXCC5	001	B191F1		08/18/04	08:58

**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.

(Continued on next page)

**METHODS SUMMARY**

F4K100333

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Chloride	MCAWW 300.0A	MCAWW 300.0A
Extractable Petroleum Hydrocarbons	SW846 8015 MOD	SW846 3550
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Hexavalent Chromium	SW846 7196A	SW846 3060A
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrate-Nitrite	MCAWW 353.1	
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Oil & Grease (Gravimetric)	SW846 9071A	
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
PCBs by SW-846 8082	SW846 8082	SW846 3550B/366
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3550B
Soil and Waste pH	SW846 9045C	SW846 DI-LEACHA
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Sulfide	SW846 9030	
Total Cyanide	SW846 9010A	SW846 9010A
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826
Volatile Petroleum Hydrocarbons	SW846 8015 MOD	SW846 5030

**References:**

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

FLUOR Hanford Inc.		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST		F03-025-125	PAGE 1 OF 1
COLLECTOR Pope/Huber/Hughes/Wiberg	COMPANY CONTACT TRENT, STEVE	TELEPHONE NO. 373-5689	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION 216-T-28; 22.5R-25T	PROJECT DESIGNATION 200-LW-1/LW-2 Characterization - Soil	COA 119143ES10	SAF NO. F03-025	AIR QUALITY	
ICE CHEST NO. GRP-04-003	FIELD LOGBOOK NO. HNF-N-356 1		METHOD OF SHIPMENT Federal Express		
SHIPPED TO Severn Trent Incorporated, Richmond KY	OFFSITE PROPERTY NO. See Shipment # D020		BILL OF LADING/AIR BILL NO. See Shipment # D020		
Possible Sample Hazards/Remarks N/A	Preservation Cool 4C	None			
Matrix* A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Type of Container 9G	9G			
	No. of Container(s) 1	1			
	Volume 120 mL	60mL			
	Sample Analysis	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
	Special Handling and/or Storage Radioactive TLE to B91C7	SEE ITEM (2) IN SPECIAL INSTRUCTIONS			
Sample No. WB193K1	Matrix* SOIL	Sample Date 10-26-04	Sample Time 0941		
CHAIN OF POSSESSION					
RELINQUISHED BY/REMOVED FROM J Pope	DATE/TIME 10-26-04 1230	SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM Site	DATE/TIME 10-26-04 1230	RECEIVED BY/TITLED IN Site		DATE/TIME 10-26-04 1230	
RELINQUISHED BY/REMOVED FROM Site	DATE/TIME 11/01/04 950	RECEIVED BY/TITLED IN Greg Thomas, Doug Thomas		DATE/TIME 11/01/04 950	
RELINQUISHED BY/REMOVED FROM Greg Thomas, Doug Thomas	DATE/TIME 11/01/04 1135	RECEIVED BY/TITLED IN M-O 25, Fry #3		DATE/TIME 11/01/04 1135	
RELINQUISHED BY/REMOVED FROM M-O 25, Fry #3	DATE/TIME 11/01/04 0820	RECEIVED BY/TITLED IN Greg Thomas, Doug Thomas		DATE/TIME 11/01/04 0820	
RELINQUISHED BY/REMOVED FROM Greg Thomas, Doug Thomas	DATE/TIME 11/01/04 0835	RECEIVED BY/TITLED IN Fed Ex		DATE/TIME 11/01/04 0835	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/TITLED IN S-R		DATE/TIME 11/10/04 0900	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/TITLED IN		DATE/TIME	
LABORATORY SECTION J-R	RECEIVED BY J-R	TITLE 11/10/04 0900		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

COLLECTOR Poppe/Pfister/Wiberg/Tyra		COMPANY CONTACT TRENT, STEVE		TELEPHONE NO. 373-5689		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N		DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION 216-T-28; 22.5R-25T		PROJECT DESIGNATION 200-LW-1/LW-2 Characterization - Soil		SAF NO. F03-025		METHODOLOGY Government Vehicle		AIR QUALITY			
OFFICE CHEST NO. GFP-04-003		FIELD LOGBOOK NO. HNF-N-356-1		COA 119143ES10		METHOD OF SHIPMENT					
SHIPPED TO AT 11/01/04		OFFSITE PROPERTY NO. See Shipment # D1020		Cool 4C		BILL OF LADING/AIR BILL NO. None		None		Note	
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		PRESERVATION		Cool 4C		Cool 4C		Cool 4C		None	
MATRIX* A=Air D=Drum L=Liquids DS=Drum S=Solids L=Liquid O=Oil S=Soil SF=Sediment T=Tissue V=Vegetation W=Water WF=Water X=Other		TYPE OF CONTAINER 3		40mL		40mL		40mL		40mL	
SPECIAL HANDLING AND/OR STORAGE N/A		NO. OF CONTAINER(S)		1		1		1		1	
SPECIAL HANDLING AND/OR STORAGE N/A		VOLUME		120mL		120mL		250mL		120mL	
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		SEE ITEM (2) IN SPECIAL INSTRUCTIONS		SEE ITEM (3) IN SPECIAL INSTRUCTIONS		SEE ITEM (5) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. 19189		SAMPLE DATE		10-26-04		0941		X		X	
MATRIX*		SOIL		X		X		X		X	
CHAIN OF POSSESSION		SIGN/PRINT NAMES		RECEIVED BY/STORED IN		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		T.S. Gipe		10-26-04		1230		S. K. Frick		10-26-04	
RELINQUISHED BY/REMOVED FROM		S. K. Frick		11/01/04		0950		Greg Thomas		11/01/04	
RELINQUISHED BY/REMOVED FROM		Greg Thomas		11/01/04		1135		MO-026 Frig #3		11/01/04	
RELINQUISHED BY/REMOVED FROM		MO-026 Frig #3		11/09/04		0820		Greg Thomas		11/09/04	
RELINQUISHED BY/REMOVED FROM		Greg Thomas		11/09/04		0835		Fed Ex		11/09/04	
RELINQUISHED BY/REMOVED FROM		RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM		RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME	
LABORATORY SECTION		RECEIVED BY		11/10/04		0940		TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD						DISPOSED BY		DATE/TIME	

SPECIAL INSTRUCTIONS  
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

W04380





<b>COLLECTOR</b> Fluor Hanford Inc Pope/Pfister/Wiberg/Tyra		<b>COMPANY CONTACT</b> TRENT, STEVE TELEPHONE NO. 373-5689		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		PAGE 1 OF 2
<b>SAMPLING LOCATION</b> 216-T-28; 17.5F-20C		<b>PROJECT DESIGNATION</b> 200-LW-1/LW-2 Characterization - Soil		<b>PROJECT COORDINATOR</b> TRENT, SJ		PRICE CODE 8N AIR QUALITY <input type="checkbox"/>
<b>FIELD LOGBOOK NO.</b> HF-N-356-1		<b>COA</b> 119143ES10		<b>SAF NO.</b> F03-025		DATA TURNAROUND 45 Days / 45 Days
<b>SHIPPED TO</b> Waste Sampling & Characterization Seven Trent		<b>OFFSITE PROPERTY NO.</b> MSJT 11/10/04 See Shipment # D1021		<b>BILL OF LADING/AIR BILL NO.</b> MA 47 11/10/04 See Shipment # D1021		
<b>MATRIX*</b> N/A		<b>PRESERVATION</b> GS*		<b>Cool 4C</b> None		None
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> N/A		<b>TYPE OF CONTAINER</b> GS*		<b>Cool 4C</b> None		None
<b>SPECIAL HANDLING AND/OR STORAGE</b> N/A		<b>NO. OF CONTAINER(S)</b> 3		<b>Cool 4C</b> None		None
<b>RADIOMETRIC Tie To B19106</b>		<b>VOLUME</b> 40mL		<b>Cool 4C</b> None		None
<b>SAMPLE NO.</b> B19188		<b>SAMPLE DATE</b> 10-20-04		<b>Cool 4C</b> None		None
<b>MATRIX*</b> SOIL		<b>SAMPLE TIME</b> 1040		<b>Cool 4C</b> None		None
<b>CHAIN OF POSSESSION</b>		<b>SIGN/ PRINT NAMES</b>		<b>SPECIAL INSTRUCTIONS</b> SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM J-SPOFF/OSPW 10-20-04 1230		RECEIVED BY/STORED IN SITE RMA FRIDGE 10-20-04 1230		DATE/TIME		
RELINQUISHED BY/REMOVED FROM Site RMA Fridge 11/10/04 0810		RECEIVED BY/STORED IN City Thomas Dept James 11/10/04 0810		DATE/TIME		
RELINQUISHED BY/REMOVED FROM City Thomas Dept James 11/10/04 0815		RECEIVED BY/STORED IN Fed Ex		DATE/TIME		
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		DATE/TIME		
<b>LABORATORY SECTION</b> J		<b>RECEIVED BY</b> Jill Clark		<b>TITLE</b> 11.12.04 0940		DATE/TIME
<b>FINAL SAMPLE DISPOSITION</b> 0		<b>DISPOSAL METHOD</b>		<b>DISPOSED BY</b>		DATE/TIME

COLLECTOR Pope/Pfister/Wiberg/Tyra	FLUOR HANFORD INC.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F03-025-056	PAGE 2 OF 2
SAMPLING LOCATION D216-T-28; 17.5ft-20ft	COMPANY CONTACT TRENT, STEVE	TELEPHONE NO. 373-5689	PROJECT COORDINATOR TRENT, SI	PRICE CODE 2A	DATA TURNAROUND 24 HOURS
ICE CHEST NO. 04/04-010037	PROJECT DESIGNATION 200-LW-1/LW-2 Characterization - Soil	SAF NO. F03-025	METHOD OF SHIPMENT Government Vehicle	AIR QUALITY	
SHIPPED TO Waste Sampling & Characterization Severn Trent	FIELD LOGBOOK NO. HNF-N-356-1	COA 119149ES10	BILL OF LADING/AIR BILL NO. MS#T 11/10/04 See Shipment # D1021		

**SPECIAL INSTRUCTIONS**

The laboratory is to analyze pH within 24 hours of sample receipt. The laboratory is to report kerosene range organics from the WTPH-D analysis.

- (1)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol)
- (2)Semi-VOA - 8270A (TCL) (Phenol) Semi-VOA - 8270A (Add-On) (Tributyl phosphate) TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range) TPH-Gasoline Range - WTPH-G;
- (3)Alcohols, Glycols, & Ketones - 8015 (Ethylene glycol)
- (4)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Gamma Spec - Add-on (Antimony-125, Cesium-134) Isotopic Plutonium; Isotopic Uranium; Neptunium-237; Americium-241;
- (5)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Uranium), ICP Metals - 60.10A (Add-on) (Bismuth)
- (6)IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrogen in Nitrate, Nitrogen in Nitrate, Phosphorous in phosphate, Sulfate) Cations (IC) - 300.7 (Nitrogen in ammonium) Cyanide (Total) - 335.2; pH (Soil) - 9045;



STL

Lot No: F4K120104

Condition Upon Receipt Form  
St. Louis Laboratory

Client: Hanford Date: 11.11.04 Time: 0900  
 Quote No: 52392 Initiated by: [Signature]  
 Shipper/No: Fed Ex 84308636 3474 COC/RFA Numbers: F03-025-056

Condition/Variance (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition?	7.	<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	Sample received within 4-C ± 2-C* ?	8.	<input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers?
		Record <u>5</u>	9.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal received intact on cooler.?
3.	<input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Sample received with proper pII <sup>1</sup> ?	10.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal tamper evident on cooler.?
4.	<input type="radio"/> Y <input type="radio"/> N	If N/A - Was pII taken by original STL lab?	11.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal on bottles received intact?
5.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers?	12.	<input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal tamper evident on bottles?
6.	<input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis?	13.	<input type="radio"/> Y <input type="radio"/> N	Was CUR (equivalent) rec'd from original STL lab?

\* Temperature Variance Does Not Affect the Following Analyses: \_\_\_\_\_

<sup>1</sup>For DOE-AL (Pantex, LANL, Sandia) sites, verify pII all containers received, except for VOA, TOX, and soils.

Notes:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action:

- Client's Name: \_\_\_\_\_ Informed by: \_\_\_\_\_ By: \_\_\_\_\_
- Sample(s) processed "as is". \_\_\_\_\_
- Sample(s) on hold until: \_\_\_\_\_ If released, notify: \_\_\_\_\_

Project Management Review: [Signature] Date: 11.12.04

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED  
 IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR  
 INITIALS AND THE DATE NEXT TO THAT ITEM





OW 495

MO 11/17/04

FLUOR Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FO3-025-094		PAGE 1 OF 34	
COLLECTOR Pete/Phaser/Wiberg/Tyva		COMPANY CONTACT TRENT, STEVE		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N	
SAMPLING LOCATION 216-S-20; 24th Street 29.5' - 32.1'		PROJECT DESIGNATION 2004-W-1/W-2 Characterization - Sol		SAFE NO. FO3-025		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HW-N-356 1		METHOD OF SHIPMENT Government Vehicle		TURNAROUND 45 Days / 45 Days	
SHIPPED TO Wester Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A-Air DL-Drum L-Liquid DS-Drum S-Solid L-Liquid C-CO2 S-Scum T-Tissue V-Vegetation W-Water M-Mix X-Other		POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
SPECIAL HANDLING AND/OR STORAGE N/A		PRESERVATION		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
SAMPLE NO.		MATRIX*		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
B191F1		SOIL		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
SAMPLE DATE		SAMPLE TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
8-18-04		0858		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
SPECIAL INSTRUCTIONS		SPECIAL INSTRUCTIONS		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
J. S. H. 8/18/04		8:18 AM		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
S. C. H. 8/18/04		8:18 AM		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
S. C. H. 8-20-04		9:30 AM		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
S. C. H. 9-17-04		10:40 AM		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
M. O. 11/2/04		0730		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
M. O. 11-4-04		0738		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
M. O. 11-4-04		0738		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
REMOVED FROM		DATE/TIME		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	
M. O. 11-4-04		0738		Cool 4C Cool 4C Cool 4C Cool 4C		None None None None	

continued on page 3 of 3

NOV 11 11:10 AM

1, FLUOR Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PAGE 2 OF 34	
COLLECTOR Pope/Pister/Wiberg/Tyra	COMPANY CONTACT TRENT, STEVE	TELEPHONE NO. 373-5689	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 81N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-S-20; 220-S-21; 216-S-22	PROJECT DESIGNATION 200-LW-1/LW-2 Characterization - Sol		SAF NO. F03-025	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. 870-24	FIELD LOGBOOK NO. HNF-N-356 1	COA 119143ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OPPOSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS					
<p>The lab is to analyze pH within 24 hours of sample receipt. The lab is to report herbene range organics from the WTPH-D analysis. FH acknowledges that the analytical holding time for Nitrate, Nitrite and Phosphate by EPA Method 300.0 will not be met.</p> <p><i>8/30/04</i></p> <p>(1) VOA - 8260A (TC); VOA - 8260A (Acid-On) (1-BuTanol)                  (2) Semi-VOA - 8270A (TC) (Phenol) Semi-VOA - 8270A (Add-On) (Methyl phosphide) <i>8/1/04</i>                  Range - WTPH-D;                  (3) Volatiles - Glycols &amp; Ketones - 8015 (Chylene glycol) <i>8/1/04</i>                  (4) Semivolatile Spectroscopy - (Cadmium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Gamma Spec - Add-on (Addition 425 - Custom 1377) 1377001C Phosphoric; Isotopic Uranium; Neutronium-237; Technetium-99;                  (5) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Phosphate, Sulfate) Cations (IC) - 300.7 (Nitrogen in Ammonium) Cyanide (Total) - 335.2; pH (Soil) - 9045; HA 81 1/18-4/11 7/11                  Range - WTPH-D;                  (6) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Phosphate, Sulfate) Cations (IC) - 300.7 (Nitrogen in Ammonium) Cyanide (Total) - 335.2; pH (Soil) - 9045; HA 81 1/18-4/11 7/11</p>					

A-600-618(03/03)



STL

Lot No: F4K180368

Condition Upon Receipt Form  
St. Louis Laboratory

Client: Richland

Date: 11.18.04 Time: 0900

Quote No: \_\_\_\_\_

Initiated by: \_\_\_\_\_

Shipper/No: Fed X Below

COC/RFA Numbers: Below

Condition/Variance (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	<input checked="" type="radio"/> N	Sample received in undamaged condition?	7.	<input checked="" type="radio"/> N	Sample received with Chain of Custody?
2.	<input checked="" type="radio"/> N	Sample received within 4-C ± 2-C*? Record <u>2°, 2°, 2°, 3°</u>	8.	<input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers?
3.	<input checked="" type="radio"/> N N/A	Sample received with proper pH <sup>1</sup> ?	9.	<input checked="" type="radio"/> N N/A	Custody seal received intact on cooler.?
4.	Y N	If N/A - Was pH taken by original STL lab?	10.	<input checked="" type="radio"/> N N/A	Custody seal tamper evident on cooler.?
5.	<input checked="" type="radio"/> N	Sample received in proper containers?	11.	<input checked="" type="radio"/> N N/A	Custody seal on bottles received intact?
6.	<input checked="" type="radio"/> N ?	Sample volume sufficient for analysis?	12.	<input checked="" type="radio"/> N N/A	Custody seal tamper evident on bottles?
			13.	Y N	Was CUR (equivalent) rec'd from original STL lab?

*see below*

\* Temperature Variance Does Not Affect the Following Analyses: \_\_\_\_\_

<sup>1</sup>For DOE-AL (Pantex, LANL, Sandia) sites, verify pH all containers received, except for VOA, TOX, and soils. EN 11-18-04

Notes: 7927 8069 7109

181932  
C-O-C F03-025-094 - bottle  
have no custody seals

7908 3365 552

7908 3341 1054

7921 3949 4659

C-O-C F03-025-094 has only 1X250G  
that is only about 1/4 full.  
\* Only run metals. / client 11-19-04

7913 9119 9071

C-O-C's 181932, 505-010-144, 148, 146, 150 / 505-011-95, 93, 94,  
87, 81, / I05-005-117, 504-007-64 + FluorATED chains.

Corrective Action:

- Client's Name: \_\_\_\_\_ Informed by: \_\_\_\_\_ By: \_\_\_\_\_
- Sample(s) processed "as is". \_\_\_\_\_
- Sample(s) on hold until: \_\_\_\_\_ If released, notify: \_\_\_\_\_

Project Management Review: \_\_\_\_\_

Meward

Date: 11-19-04

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED  
IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR  
INITIALS AND THE DATE NEXT TO THAT ITEM

## FLUOR HANFORD IC

Client Sample ID: B19189

## GC/MS Volatiles

Lot-Sample #...: F4K100333-002    Work Order #...: GWNFG1CF    Matrix.....: SOLID  
 Date Sampled...: 10/26/04    Date Received...: 11/10/04  
 Prep Date.....: 11/11/04    Analysis Date...: 11/11/04  
 Prep Batch #...: 4317380  
 Dilution Factor: 1  
 \* Moisture.....: 6.6    Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	11	ug/kg	0.25
Bromomethane	ND	11	ug/kg	0.95
Chloroethane	ND	11	ug/kg	0.60
Acetone	ND	21	ug/kg	1.4
1,1-Dichloroethene	ND	5.4	ug/kg	0.73
Acetonitrile	ND	54	ug/kg	5.7
Methylene chloride	3.2 J	5.4	ug/kg	2.8
Carbon disulfide	ND	5.4	ug/kg	0.29
1,1-Dichloroethane	ND	5.4	ug/kg	0.22
2-Butanone	ND	21	ug/kg	1.2
1,2-Dichloroethene (total)	ND	11	ug/kg	0.65
Chloroform	ND	5.4	ug/kg	0.13
1,1,1-Trichloroethane	ND	5.4	ug/kg	0.12
Carbon tetrachloride	ND	5.4	ug/kg	0.15
1,2-Dichloroethane	ND	5.4	ug/kg	0.15
Benzene	ND	5.4	ug/kg	0.12
Trichloroethene	ND	5.4	ug/kg	0.064
1,2-Dichloropropane	ND	5.4	ug/kg	0.11
Bromodichloromethane	ND	5.4	ug/kg	0.075
4-Methyl-2-pentanone	ND	21	ug/kg	0.96
cis-1,3-Dichloropropene	ND	5.4	ug/kg	0.16
Toluene	ND	5.4	ug/kg	0.63
trans-1,3-Dichloropropene	ND	5.4	ug/kg	0.57
1,1,2-Trichloroethane	ND	5.4	ug/kg	0.82
2-Hexanone	ND	21	ug/kg	1.3
Tetrachloroethene	ND	5.4	ug/kg	0.21
Dibromochloromethane	ND	5.4	ug/kg	0.63
Chlorobenzene	ND	5.4	ug/kg	0.13
Ethylbenzene	ND	5.4	ug/kg	0.41
n-Butylbenzene	ND	5.4	ug/kg	0.80
Vinyl chloride	ND	5.4	ug/kg	0.68
Xylenes (total)	ND	11	ug/kg	0.88
Styrene	ND	5.4	ug/kg	0.21
Bromoform	ND	5.4	ug/kg	0.66
1,1,2,2-Tetrachloroethane	ND, N	5.4	ug/kg	0.78
1,2,4-Trimethylbenzene	ND	5.4	ug/kg	0.59
n-Hexane	ND	11	ug/kg	0.88

(Continued on next page)

MW  
 3.24.05

FLOOR HANFORD IC

Client Sample ID: B19189

GC/MS Volatiles

Lot-Sample #...: F4K100333-002 Work Order #...: GWNFG1CF Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
1-Butanol	ND	110	ug/kg	35

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	93	(80 - 130)
Dibromofluoromethane	83	(78 - 130)
1,2-Dichloroethane-d4	88	(72 - 134)
4-Bromofluorobenzene	75	(68 - 150)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.  
 J Estimated result. Result is less than RL.

FLUOR HANFORD IC

B19189

GC/MS Volatiles

Lot-Sample #: F4K100333-002

Work Order #: GWNFG1CF

Matrix: SOLID

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/kg

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: W04380      Work Order #....: GWNFG1EK-MS      Matrix.....: SOLID  
 MS Lot-Sample #: F4K100333-002      GWNFG1EL-MSD  
 Date Sampled....: 10/26/04      Date Received...: 11/10/04  
 Prep Date.....: 11/11/04      Analysis Date...: 11/11/04  
 Prep Batch #....: 4317380  
 Dilution Factor: 1      % Moisture.....: 6.6

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Chloromethane	ND	53.6	58.8	ug/kg	110		SW846 8260B
	ND	53.9	55.5	ug/kg	103	5.8	SW846 8260B
Bromomethane	ND	53.6	42.7	ug/kg	80		SW846 8260B
	ND	53.9	45.7	ug/kg	85	6.7	SW846 8260B
Chloroethane	ND	53.6	57.1	ug/kg	107		SW846 8260B
	ND	53.9	59.6	ug/kg	111	4.2	SW846 8260B
Acetone	ND	53.6	69.0	ug/kg	129		SW846 8260B
	ND	53.9	76.1	ug/kg	141	9.7	SW846 8260B
1,1-Dichloroethene	ND	53.6	54.5	ug/kg	102		SW846 8260B
	ND	53.9	55.0	ug/kg	102	0.89	SW846 8260B
Methylene chloride	3.2	53.6	40.9	ug/kg	70		SW846 8260B
	3.2	53.9	45.0	ug/kg	78	9.5	SW846 8260B
Carbon disulfide	ND	53.6	72.5	ug/kg	135		SW846 8260B
	ND	53.9	74.3	ug/kg	138	2.4	SW846 8260B
1,1-Dichloroethane	ND	53.6	51.6	ug/kg	96		SW846 8260B
	ND	53.9	51.4	ug/kg	95	0.35	SW846 8260B
2-Butanone	ND	53.6	59.0	ug/kg	110		SW846 8260B
	ND	53.9	60.9	ug/kg	113	3.1	SW846 8260B
1,2-Dichloroethene (total)	ND	107	112	ug/kg	105		SW846 8260B
	ND	108	112	ug/kg	103	0.66	SW846 8260B
Chloroform	ND	53.6	50.7	ug/kg	95		SW846 8260B
	ND	53.9	51.5	ug/kg	95	1.6	SW846 8260B
1,1,1-Trichloroethane	ND	53.6	51.3	ug/kg	96		SW846 8260B
	ND	53.9	53.8	ug/kg	100	4.8	SW846 8260B
Carbon tetrachloride	ND	53.6	51.1	ug/kg	95		SW846 8260B
	ND	53.9	54.0	ug/kg	100	5.5	SW846 8260B
1,2-Dichloroethane	ND	53.6	53.2	ug/kg	99		SW846 8260B
	ND	53.9	51.8	ug/kg	96	2.6	SW846 8260B
Benzene	ND	53.6	50.1	ug/kg	93		SW846 8260B
	ND	53.9	51.7	ug/kg	96	3.3	SW846 8260B
Trichloroethene	ND	53.6	69.7	ug/kg	130		SW846 8260B
	ND	53.9	78.4	ug/kg	145	12	SW846 8260B
1,2-Dichloropropane	ND	53.6	50.9	ug/kg	95		SW846 8260B
	ND	53.9	49.0	ug/kg	91	3.9	SW846 8260B
Bromodichloromethane	ND	53.6	49.7	ug/kg	93		SW846 8260B
	ND	53.9	47.7	ug/kg	88	4.2	SW846 8260B
4-Methyl-2-pentanone	ND	53.6	42.4	ug/kg	79		SW846 8260B
	ND	53.9	41.3	ug/kg	77	2.8	SW846 8260B

(Continued on next page)

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #...: W04380      Work Order #...: GWNFG1EK-MS      Matrix.....: SOLID  
 MS Lot-Sample #: F4K100333-002      GWNFG1EL-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT		METHOD
					RECVRY	RPD	
cis-1,3-Dichloropropene	ND	53.6	47.9	ug/kg	89		SW846 8260B
	ND	53.9	47.3	ug/kg	88	1.2	SW846 8260B
Toluene	ND	53.6	58.7	ug/kg	109		SW846 8260B
	ND	53.9	58.9	ug/kg	109	0.34	SW846 8260B
trans-1,3-Dichloropropene	ND	53.6	66.9	ug/kg	125		SW846 8260B
	ND	53.9	62.7	ug/kg	116	6.5	SW846 8260B
1,1,2-Trichloroethane	ND	53.6	56.9	ug/kg	106		SW846 8260B
	ND	53.9	55.5	ug/kg	103	2.6	SW846 8260B
2-Hexanone	ND	53.6	55.7	ug/kg	104		SW846 8260B
	ND	53.9	53.2	ug/kg	99	4.7	SW846 8260B
Tetrachloroethene	ND	53.6	47.7	ug/kg	89		SW846 8260B
	ND	53.9	48.4	ug/kg	90	1.5	SW846 8260B
Dibromochloromethane	ND	53.6	53.1	ug/kg	99		SW846 8260B
	ND	53.9	55.1	ug/kg	102	3.7	SW846 8260B
Chlorobenzene	ND	53.6	53.3	ug/kg	100		SW846 8260B
	ND	53.9	51.0	ug/kg	95	4.4	SW846 8260B
Ethylbenzene	ND	53.6	54.0	ug/kg	101		SW846 8260B
	ND	53.9	57.6	ug/kg	107	6.4	SW846 8260B
n-Butylbenzene	ND	53.6	49.7	ug/kg	93		SW846 8260B
	ND	53.9	57.0	ug/kg	106	14	SW846 8260B
Vinyl chloride	ND	53.6	59.4	ug/kg	111		SW846 8260B
	ND	53.9	60.9	ug/kg	113	2.6	SW846 8260B
Styrene	ND	53.6	44.0	ug/kg	82		SW846 8260B
	ND	53.9	54.9	ug/kg	102	22	SW846 8260B
Bromoform	ND	53.6	39.8	ug/kg	74		SW846 8260B
	ND	53.9	40.3	ug/kg	75	1.3	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	53.6	13.0	ug/kg	24 <sup>N</sup>		SW846 8260B
	ND	53.9	11.4	ug/kg	21 <sup>N</sup>	13	SW846 8260B
n-Hexane	ND	53.6	38.8	ug/kg	72		SW846 8260B
	ND	53.9	46.7	ug/kg	86	18	SW846 8260B

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Toluene-d8	112	(80 - 130)
	105	(80 - 130)
Dibromofluoromethane	81	(78 - 130)
	82	(78 - 130)
1,2-Dichloroethane-d4	94	(72 - 134)
	92	(72 - 134)
4-Bromofluorobenzene	78	(68 - 150)
	79	(68 - 150)

*MW*  
3-24-05

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: W04380      Work Order #...: GWNFG1EK-MS      Matrix.....: SOLID  
MS Lot-Sample #: F4K100333-002      GWNFG1EL-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
------------------	-----------------------------	----------------------------

NOTE(S):

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

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

N *x* Spiked analyte recovery is outside stated control limits.

*MAW*  
*3-24-05*

## FLUOR HANFORD IC

Client Sample ID: B19188

## GC/MS Volatiles

Lot-Sample #...: F4K120109-001    Work Order #...: GWTXX1AC    Matrix.....: SOLID  
 Date Sampled...: 10/20/04    Date Received...: 11/11/04  
 Prep Date.....: 11/22/04    Analysis Date...: 11/22/04  
 Prep Batch #...: 4329192  
 Dilution Factor: 1  
 % Moisture.....: 5.3    Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	11	ug/kg	0.24
Bromomethane	ND	11	ug/kg	0.94
Chloroethane	ND	11	ug/kg	0.59
Acetone	ND	21	ug/kg	1.4
1,1-Dichloroethene	ND	5.3	ug/kg	0.72
Acetonitrile	ND	53	ug/kg	5.6
Methylene chloride	3.7 J	5.3	ug/kg	2.8
Carbon disulfide	ND	5.3	ug/kg	0.28
1,1-Dichloroethane	ND	5.3	ug/kg	0.22
2-Butanone	ND	21	ug/kg	1.2
1,2-Dichloroethene (total)	ND	11	ug/kg	0.64
Chloroform	ND	5.3	ug/kg	0.13
1,1,1-Trichloroethane	ND	5.3	ug/kg	0.12
Carbon tetrachloride	ND	5.3	ug/kg	0.15
1,2-Dichloroethane	ND	5.3	ug/kg	0.15
Benzene	ND	5.3	ug/kg	0.12
Trichloroethene	ND	5.3	ug/kg	0.063
1,2-Dichloropropane	ND	5.3	ug/kg	0.11
Bromodichloromethane	ND	5.3	ug/kg	0.074
4-Methyl-2-pentanone	ND	21	ug/kg	0.95
cis-1,3-Dichloropropene	ND	5.3	ug/kg	0.16
Toluene	ND	5.3	ug/kg	0.62
trans-1,3-Dichloropropene	ND	5.3	ug/kg	0.56
1,1,2-Trichloroethane	ND	5.3	ug/kg	0.81
2-Hexanone	ND	21	ug/kg	1.3
Tetrachloroethene	ND	5.3	ug/kg	0.21
Dibromochloromethane	ND	5.3	ug/kg	0.62
Chlorobenzene	ND	5.3	ug/kg	0.13
Ethylbenzene	ND	5.3	ug/kg	0.40
Vinyl chloride	ND	5.3	ug/kg	0.68
Xylenes (total)	ND	11	ug/kg	0.87
Styrene	ND	5.3	ug/kg	0.21
Bromoform	ND	5.3	ug/kg	0.65
1,1,2,2-Tetrachloroethane	ND	5.3	ug/kg	0.77
1,2,4-Trimethylbenzene	ND	5.3	ug/kg	0.58
n-Hexane	ND	11	ug/kg	0.87
n-Butylbenzene	ND	5.3	ug/kg	0.79

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FLUOR HANFORD IC

Client Sample ID: B19188

GC/MS Volatiles

Lot-Sample #....: F4K120109-001 Work Order #....: GWTXX1AC Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
1-Butanol	ND	110	ug/kg	

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Toluene-d8	94	(80 - 130)
Dibromofluoromethane	99	(78 - 130)
1,2-Dichloroethane-d4	103	(72 - 134)
4-Bromofluorobenzene	92	(68 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

STL ST. LOUIS

FLUOR HANFORD IC

B19188

GC/MS Volatiles

Lot-Sample #: F4K120109-001

Work Order #: GWTXX1AC

Matrix: SOLID

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 organic acid		26	M 24.746	ug/kg
Unknown organic acid		11	M 25.843	ug/kg

NOTE(S) :

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

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: W04380  
 MB Lot-Sample #: F4K120000-380

Work Order #...: GWWKG1AA

Matrix.....: SOLID

Analysis Date...: 11/11/04  
 Dilution Factor: 1

Prep Date.....: 11/11/04

Prep Batch #...: 4317380

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

(Continued on next page)

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: W04380

Work Order #...: GWKGLAA

Matrix.....: SOLID

<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	110	(80 - 130)		
Dibromofluoromethane	91	(78 - 130)		
1,2-Dichloroethane-d4	96	(72 - 134)		
4-Bromofluorobenzene	78	(68 - 150)		

**NOTE(S):**

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

FLUOR HANFORD IC

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F4K120000-380 B Work Order #: GWWKG1AA Matrix: SOLID

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 C13H28		12	M 26.649	ug/kg
Unknown C13H28		7.3	M 27.328	ug/kg

NOTE(S) :

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

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: W04380

Work Order #...: GXQTW1AA

Matrix.....: SOLID

MB Lot-Sample #: F4K240000-192

Prep Date.....: 11/22/04

Analysis Date...: 11/22/04

Prep Batch #...: 4329192

Dilution Factor: 1

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

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: W04380

Work Order #...: GXQTW1AA

Matrix.....: SOLID

<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	95	(80 - 130)		
Dibromofluoromethane	105	(78 - 130)		
1,2-Dichloroethane-d4	102	(72 - 134)		
4-Bromofluorobenzene	91	(68 - 150)		

NOTE(S) :

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

FLUOR HANFORD IC

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F4K240000-192 B Work Order #: GXQW1AA Matrix: SOLID

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/kg

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #...: W04380      Work Order #...: GWWKG1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K120000-380  
 Prep Date.....: 11/11/04      Analysis Date...: 11/11/04  
 Prep Batch #...: 4317380  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Chloromethane	50.0	60.0	ug/kg	120	SW846 8260B
Bromomethane	50.0	42.6	ug/kg	85	SW846 8260B
Chloroethane	50.0	57.5	ug/kg	115	SW846 8260B
Acetone	50.0	54.6	ug/kg	109	SW846 8260B
1,1-Dichloroethene	50.0	52.6	ug/kg	105	SW846 8260B
Methylene chloride	50.0	42.9	ug/kg	86	SW846 8260B
Carbon disulfide	50.0	76.6 a	ug/kg	153	SW846 8260B
1,1-Dichloroethane	50.0	57.7	ug/kg	115	SW846 8260B
2-Butanone	50.0	55.6	ug/kg	111	SW846 8260B
1,2-Dichloroethene (total)	100	109	ug/kg	109	SW846 8260B
Chloroform	50.0	47.9	ug/kg	96	SW846 8260B
1,1,1-Trichloroethane	50.0	48.1	ug/kg	96	SW846 8260B
Carbon tetrachloride	50.0	48.6	ug/kg	97	SW846 8260B
1,2-Dichloroethane	50.0	48.8	ug/kg	98	SW846 8260B
Benzene	50.0	46.6	ug/kg	93	SW846 8260B
Trichloroethene	50.0	42.2	ug/kg	84	SW846 8260B
1,2-Dichloropropane	50.0	49.6	ug/kg	99	SW846 8260B
Bromodichloromethane	50.0	47.0	ug/kg	94	SW846 8260B
4-Methyl-2-pentanone	50.0	41.0	ug/kg	82	SW846 8260B
cis-1,3-Dichloropropene	50.0	46.3	ug/kg	93	SW846 8260B
Toluene	50.0	48.6	ug/kg	97	SW846 8260B
trans-1,3-Dichloropropene	50.0	57.0	ug/kg	114	SW846 8260B
1,1,2-Trichloroethane	50.0	48.4	ug/kg	97	SW846 8260B
2-Hexanone	50.0	47.1	ug/kg	94	SW846 8260B
Tetrachloroethene	50.0	41.8	ug/kg	84	SW846 8260B
Dibromochloromethane	50.0	49.8	ug/kg	100	SW846 8260B
Chlorobenzene	50.0	49.9	ug/kg	100	SW846 8260B
Ethylbenzene	50.0	52.2	ug/kg	104	SW846 8260B
n-Butylbenzene	50.0	53.9	ug/kg	108	SW846 8260B
Vinyl chloride	50.0	60.4	ug/kg	121	SW846 8260B
Styrene	50.0	38.1 a	ug/kg	76	SW846 8260B
Bromoform	50.0	35.6	ug/kg	71	SW846 8260B
1,1,2,2-Tetrachloroethane	50.0	33.2	ug/kg	66	SW846 8260B

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## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #...: W04380      Work Order #...: GWWKG1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K120000-380

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
<b>n-Hexane</b>	<b>50.0</b>	<b>48.6</b>	<b>ug/kg</b>	<b>97</b>	<b>SW846 8260B</b>
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8		104	(88 - 115)		
Dibromofluoromethane		95	(84 - 120)		
1,2-Dichloroethane-d4		96	(78 - 122)		
4-Bromofluorobenzene		90	(80 - 120)		

**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.

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #...: W04380      Work Order #...: GXQTW1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K240000-192  
 Prep Date.....: 11/22/04      Analysis Date...: 11/22/04  
 Prep Batch #...: 4329192  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Chloromethane	50.0	44.5	ug/kg	89	SW846 8260B
Bromomethane	50.0	36.2	ug/kg	72	SW846 8260B
Chloroethane	50.0	49.0	ug/kg	98	SW846 8260B
Acetone	50.0	39.8	ug/kg	80	SW846 8260B
1,1-Dichloroethene	50.0	47.9	ug/kg	96	SW846 8260B
Methylene chloride	50.0	39.2	ug/kg	78	SW846 8260B
Carbon disulfide	50.0	68.3	ug/kg	137	SW846 8260B
1,1-Dichloroethane	50.0	51.8	ug/kg	104	SW846 8260B
2-Butanone	50.0	50.1	ug/kg	100	SW846 8260B
1,2-Dichloroethene (total)	100	102	ug/kg	102	SW846 8260B
Chloroform	50.0	49.1	ug/kg	98	SW846 8260B
1,1,1-Trichloroethane	50.0	50.2	ug/kg	100	SW846 8260B
Carbon tetrachloride	50.0	50.1	ug/kg	100	SW846 8260B
1,2-Dichloroethane	50.0	49.1	ug/kg	98	SW846 8260B
Benzene	50.0	47.5	ug/kg	95	SW846 8260B
Trichloroethene	50.0	48.3	ug/kg	97	SW846 8260B
1,2-Dichloropropane	50.0	50.6	ug/kg	101	SW846 8260B
Bromodichloromethane	50.0	51.6	ug/kg	103	SW846 8260B
4-Methyl-2-pentanone	50.0	54.3	ug/kg	109	SW846 8260B
cis-1,3-Dichloropropene	50.0	53.1	ug/kg	106	SW846 8260B
Toluene	50.0	48.0	ug/kg	96	SW846 8260B
trans-1,3-Dichloropropene	50.0	58.9	ug/kg	118	SW846 8260B
1,1,2-Trichloroethane	50.0	50.0	ug/kg	100	SW846 8260B
2-Hexanone	50.0	57.0	ug/kg	114	SW846 8260B
Tetrachloroethene	50.0	35.9	ug/kg	72	SW846 8260B
Dibromochloromethane	50.0	51.3	ug/kg	103	SW846 8260B
Chlorobenzene	50.0	49.9	ug/kg	100	SW846 8260B
Ethylbenzene	50.0	49.4	ug/kg	99	SW846 8260B
Vinyl chloride	50.0	45.5	ug/kg	91	SW846 8260B
Styrene	50.0	51.5	ug/kg	103	SW846 8260B
Bromoform	50.0	56.3	ug/kg	113	SW846 8260B
1,1,2,2-Tetrachloroethane	50.0	54.8	ug/kg	110	SW846 8260B
n-Hexane	50.0	41.4	ug/kg	83	SW846 8260B

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## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: W04380      Work Order #....: GXQTWIAC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K240000-192

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
n-Butylbenzene	50.0	53.0	ug/kg	106	SW846 8260B
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Toluene-d8		96	(88 - 115)		
Dibromofluoromethane		98	(84 - 120)		
1,2-Dichloroethane-d4		101	(78 - 122)		
4-Bromofluorobenzene		102	(80 - 120)		

**NOTE(S) :**

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

Bold print denotes control parameters

FLUOR HANFORD IC

Client Sample ID: B19189

GC/MS Semivolatiles

Lot-Sample #...: F4K100333-002    Work Order #...: GWNFG1CG    Matrix.....: SOLID  
 Date Sampled...: 10/26/04    Date Received...: 11/10/04  
 Prep Date.....: 11/11/04    Analysis Date...: 11/18/04  
 Prep Batch #...: 4316202  
 Dilution Factor: 1  
 % Moisture.....: 6.6    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Phenol	ND	350	ug/kg	93
Tributyl phosphate	ND	350	ug/kg	350

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Fluorophenol	54	(40 - 103)
Phenol-d5	55	(36 - 105)
Nitrobenzene-d5	55	(45 - 114)
2-Fluorobiphenyl	56	(49 - 120)
2,4,6-Tribromophenol	48	(39 - 114)
Terphenyl-d14	50	(42 - 108)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

FLUOR HANFORD IC

Client Sample ID: B19188

GC/MS Semivolatiles

Lot-Sample #...: F4K120109-001    Work Order #...: GWTXX1AE    Matrix.....: SOLID  
 Date Sampled...: 10/20/04    Date Received...: 11/11/04  
 Prep Date.....: 11/15/04    Analysis Date...: 11/17/04  
 Prep Batch #...: 4320242  
 Dilution Factor: 1  
 % Moisture.....: 5.3    Method.....: SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	1000	ug/kg	92
Tributyl phosphate	ND	1000	ug/kg	350

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(40 - 103)
Phenol-d5	67	(36 - 105)
Nitrobenzene-d5	65	(45 - 114)
2-Fluorobiphenyl	70	(49 - 120)
2,4,6-Tribromophenol	65	(39 - 114)
Terphenyl-d14	70	(42 - 108)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: W04380                      Work Order #...: GWP121AA                      Matrix.....: SOLID  
 MB Lot-Sample #: F4K110000-202  
 Analysis Date...: 11/17/04                      Prep Date.....: 11/11/04  
 Dilution Factor: 1                                  Prep Batch #...: 4316202

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Phenol	ND	330	ug/kg	SW846 8270C
Tributyl phosphate	ND	330	ug/kg	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	67	(40 - 103)
Phenol-d5	69	(36 - 105)
Nitrobenzene-d5	67	(45 - 114)
2-Fluorobiphenyl	71	(49 - 120)
2,4,6-Tribromophenol	59	(39 - 114)
Terphenyl-d14	63	(42 - 108)

**NOTE(S) :**

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

## METHOD BLANK REPORT

## GC/MS Semivolatiles

Client Lot #...: W04380      Work Order #...: GW1K71AA      Matrix.....: SOLID  
 MB Lot-Sample #: F4K150000-242  
 Analysis Date...: 11/17/04      Prep Date.....: 11/15/04  
 Dilution Factor: 1      Prep Batch #...: 4320242

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Phenol	ND	990	ug/kg	SW846 8270C
Tributyl phosphate	ND	990	ug/kg	SW846 8270C

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	71	(40 - 103)
Phenol-d5	71	(36 - 105)
Nitrobenzene-d5	70	(45 - 114)
2-Fluorobiphenyl	75	(49 - 120)
2,4,6-Tribromophenol	69	(39 - 114)
Terphenyl-d14	74	(42 - 108)

**NOTE (S) :**

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

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Semivolatiles

Client Lot #....: W04380      Work Order #....: GWP121AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K110000-202  
 Prep Date.....: 11/11/04      Analysis Date...: 11/17/04  
 Prep Batch #....: 4316202  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Phenol	3330	2050	ug/kg	62	SW846 8270C
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
2-Fluorophenol		64	(50 - 98)		
Phenol-d5		64	(51 - 95)		
Nitrobenzene-d5		65	(50 - 111)		
2-Fluorobiphenyl		70	(57 - 117)		
2,4,6-Tribromophenol		69	(53 - 108)		
Terphenyl-d14		66	(49 - 107)		

**NOTE(S) :**

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: W04380      Work Order #....: GW1K71AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K150000-242  
 Prep Date.....: 11/15/04      Analysis Date...: 11/17/04  
 Prep Batch #...: 4320242  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Phenol	3330	2140	ug/kg	64	SW846 8270C
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
2-Fluorophenol		66	(50 - 98)		
Phenol-d5		66	(51 - 95)		
Nitrobenzene-d5		65	(50 - 111)		
2-Fluorobiphenyl		74	(57 - 117)		
2,4,6-Tribromophenol		79	(53 - 108)		
Terphenyl-d14		72	(49 - 107)		

**NOTE (S) :**

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

## FLUOR HANFORD IC

Client Sample ID: B19189

## GC Semivolatiles

Lot-Sample #...: F4K100333-002    Work Order #...: GWNFG1CL    Matrix.....: SOLID  
 Date Sampled...: 10/26/04    Date Received...: 11/10/04  
 Prep Date.....: 11/11/04    Analysis Date...: 11/16/04  
 Prep Batch #...: 4316300  
 Dilution Factor: 10  
 % Moisture.....: 6.6    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Aroclor 1016	ND	350	ug/kg	68
Aroclor 1221	ND	350	ug/kg	76
Aroclor 1232	ND	350	ug/kg	86
Aroclor 1242	ND	350	ug/kg	81
Aroclor 1248	ND	350	ug/kg	100
Aroclor 1254	ND	350	ug/kg	85
Aroclor 1260	ND	350	ug/kg	80
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS		
Decachlorobiphenyl	0.0 DIL, *	(10 - 150)		

**NOTE (S) :**

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

\* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

FLUOR HANFORD IC

Client Sample ID: B19188

GC Semivolatiles

Lot-Sample #....: F4K120109-001    Work Order #....: GMTXX1AD    Matrix.....: SOLID  
 Date Sampled....: 10/20/04    Date Received...: 11/11/04  
 Prep Date.....: 11/15/04    Analysis Date...: 11/16/04  
 Prep Batch #....: 4320270  
 Dilution Factor: 1  
 % Moisture.....: 5.3    Method.....: SW846 8082

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Aroclor 1016	ND	170	ug/kg	6.7
Aroclor 1221	ND	170	ug/kg	7.5
Aroclor 1232	ND	170	ug/kg	8.5
Aroclor 1242	ND	170	ug/kg	8.0
Aroclor 1248	ND	170	ug/kg	10
Aroclor 1254	240	170	ug/kg	8.3
Aroclor 1260	ND	170	ug/kg	7.9

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Decachlorobiphenyl	114	(10 - 150)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: W04380                      Work Order #...: GWQNG1AA                      Matrix.....: SOLID  
 MB Lot-Sample #: F4K110000-300  
 Analysis Date...: 11/15/04                      Prep Date.....: 11/11/04  
 Dilution Factor: 1                                  Prep Batch #...: 4316300

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Decachlorobiphenyl	101	(10 - 150)

**NOTE (S) :**

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

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: W04380      Work Order #...: GW1NA1AA      Matrix.....: SOLID  
 MB Lot-Sample #: F4K150000-270  
 Analysis Date...: 11/16/04      Prep Date.....: 11/15/04  
 Dilution Factor: 1      Prep Batch #...: 4320270

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Aroclor 1016	ND	160	ug/kg	SW846 8082
Aroclor 1221	ND	160	ug/kg	SW846 8082
Aroclor 1232	ND	160	ug/kg	SW846 8082
Aroclor 1242	ND	160	ug/kg	SW846 8082
Aroclor 1248	ND	160	ug/kg	SW846 8082
Aroclor 1254	ND	160	ug/kg	SW846 8082
Aroclor 1260	ND	160	ug/kg	SW846 8082

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Decachlorobiphenyl	122	(10 - 150)

**NOTE(S):**

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: W04380      Work Order #...: GWQNG1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K110000-300  
 Prep Date.....: 11/11/04      Analysis Date...: 11/15/04  
 Prep Batch #...: 4316300  
 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>
Aroclor 1016	167	158	ug/kg	95	SW846 8082
Aroclor 1260	167	156	ug/kg	94	SW846 8082
<u>SURROGATE</u>		<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
Decachlorobiphenyl		108	(68 - 150)		

**NOTE (S) :**

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: W04380      Work Order #...: GW1NA1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K150000-270  
 Prep Date.....: 11/15/04      Analysis Date...: 11/16/04  
 Prep Batch #...: 4320270  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Aroclor 1016	167	197	ug/kg	118	SW846 8082
Aroclor 1260	167	192	ug/kg	115	SW846 8082
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
Decachlorobiphenyl		122	(68 - 150)		

**NOTE (S) :**

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

FLOOR HAMFORD IC

Client Sample ID: B19188

GC Volatiles

Lot-Sample #...: F4K120109-001    Work Order #...: GWTXX1AF    Matrix.....: SOLID  
 Date Sampled...: 10/20/04    Date Received...: 11/11/04  
 Prep Date.....: 12/10/04    Analysis Date...: 12/10/04  
 Prep Batch #...: 4348103  
 Dilution Factor: 1  
 % Moisture.....: 5.3    Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Volatile Petroleum Hydrocarbons	ND	0.11	mg/kg	0.021

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Trifluorotoluene	81	(28 - 124)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

FLUOR HANFORD IC

Client Sample ID: B19189

GC Volatiles

Lot-Sample #...: F4K100333-002    Work Order #...: GWNFG1CK    Matrix.....: SOLID  
 Date Sampled...: 10/26/04    Date Received...: 11/10/04  
 Prep Date.....: 11/29/04    Analysis Date...: 11/29/04  
 Prep Batch #...: 4335264  
 Dilution Factor: 1  
 % Moisture.....: 6.6    Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Volatile Petroleum Hydrocarbons	ND	0.11	mg/kg	0.021

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Trifluorotoluene	79	(28 - 124)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: W04380                      Work Order #...: GWNFG1ET-MS                      Matrix.....: SOLID  
 MS Lot-Sample #: F4K100333-002                      GWNFG1EU-MSD  
 Date Sampled...: 10/26/04                      Date Received...: 11/10/04  
 Prep Date.....: 11/29/04                      Analysis Date...: 11/29/04  
 Prep Batch #...: 4335264  
 Dilution Factor: 1                      % Moisture.....: 6.6

<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>
Volatile Petroleum Hydrocarbons	ND	1.07	0.877	mg/kg	82		SW846 8015 MOD
	ND	1.07	0.991	mg/kg	93	12	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Trifluorotoluene	91	(28 - 124)
	98	(28 - 124)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters  
 Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Volatiles

Client Lot #...: W04380                      Work Order #....: GOWDJ1AA                      Matrix.....: SOLID  
MB Lot-Sample #: F4L130000-103  
Analysis Date...: 12/10/04                      Prep Date.....: 12/10/04  
Dilution Factor: 1                                  Prep Batch #...: 4348103

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Volatile Petroleum Hydrocarbons	ND	0.10	mg/kg	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Trifluorotoluene	87	(28 - 124)

**NOTE (S):**

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

## METHOD BLANK REPORT

## GC Volatiles

Client Lot #...: W04380      Work Order #...: GXX3L1AA      Matrix.....: SOLID  
MB Lot-Sample #: F4K300000-264      Prep Date.....: 11/29/04  
Analysis Date...: 11/29/04      Prep Batch #...: 4335264  
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Volatile Petroleum Hydrocarbons	ND	0.10	mg/kg	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Trifluorotoluene	85	(28 - 124)

**NOTE (S) :**

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: W04380      Work Order #...: GOWDJ1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4L130000-103  
 Prep Date.....: 12/10/04      Analysis Date...: 12/10/04  
 Prep Batch #...: 4348103  
 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>
Volatile Petroleum Hydrocarbons	1.00	0.974	mg/kg	97	SW846 8015 MO

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Trifluorotoluene	105	(85 - 108)

**NOTE (S) :**

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: W04380      Work Order #...: GXK3L1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K300000-264  
 Prep Date.....: 11/29/04      Analysis Date...: 11/29/04  
 Prep Batch #...: 4335264  
 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>
Volatile Petroleum Hydrocarbons	1.00	0.875	mg/kg	87	SW846 8015 MO

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
Trifluorotoluene	98	(85 - 108)

**NOTE (S) :**

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

FLUOR HANFORD IC

Client Sample ID: B19189

GC Semivolatiles

Lot-Sample #....: F4K100333-002    Work Order #....: GWNFG1CE    Matrix.....: SOLID  
 Date Sampled....: 10/26/04    Date Received...: 11/10/04  
 Prep Date.....: 11/16/04    Analysis Date...: 11/16/04  
 Prep Batch #....: 4321201  
 Dilution Factor: 1  
 % Moisture.....: 6.6    Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Kerosene	ND	27	mg/kg	27
TPH (as Diesel)	ND	27	mg/kg	2.0

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
o-Terphenyl	43	(10 - 150)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #....: W04380                      Work Order #....: GWNFG1EH-MS                      Matrix.....: SOLID  
 MS Lot-Sample #: F4K100333-002                      GWNFG1EJ-MSD  
 Date Sampled...: 10/26/04                      Date Received...: 11/10/04  
 Prep Date.....: 11/16/04                      Analysis Date...: 11/16/04  
 Prep Batch #....: 4321201  
 Dilution Factor: 1                      ‡ Moisture.....: 6.6

<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>
TPH (as Diesel)	ND	88.6	68.4	mg/kg	77		SW846 8015 MOD
	ND	102	82.3	mg/kg	81	18	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	61	(10 - 150)
	67	(10 - 150)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters  
 Results and reporting limits have been adjusted for dry weight.

## FLUOR HANFORD IC

Client Sample ID: B19188

## GC Semivolatiles

Lot-Sample #....: F4K120109-001    Work Order #....: GWTXX1AA    Matrix.....: SOLID  
 Date Sampled....: 10/20/04    Date Received...: 11/11/04  
 Prep Date.....: 11/16/04    Analysis Date...: 11/16/04  
 Prep Batch #....: 4321201  
 Dilution Factor: 1  
 % Moisture.....: 5.3    Method.....: SW846 8015 MOD

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Kerosene	ND	13	mg/kg	26
TPH (as Diesel)	ND	13	mg/kg	2.0
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
o-Terphenyl	45	(10 - 150)		

**NOTE (S) :**


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Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: W04380      Work Order #...: GW3GW1AA      Matrix.....: SOLID  
 MB Lot-Sample #: F4K160000-201  
 Analysis Date...: 11/16/04      Prep Date.....: 11/16/04  
 Dilution Factor: 1      Prep Batch #...: 4321201

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Kerosene	ND	25	mg/kg	SW846 8015 MOD
TPH (as Diesel)	ND	25	mg/kg	SW846 8015 MOD

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
o-Terphenyl	84	(10 - 150)

**NOTE(S):**

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: W04380                      Work Order #...: GW3GW1AC                      Matrix.....: SOLID  
 LCS Lot-Sample#: F4K160000-201  
 Prep Date.....: 11/16/04                      Analysis Date...: 11/16/04  
 Prep Batch #...: 4321201  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
TPH (as Diesel)	83.3	65.9	mg/kg	79	SW846 8015 MO
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>		
o-Terphenyl		135	(78 - 150)		

NOTE(S) :

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

## PLUOR HANFORD IC

Client Sample ID: B19189

## TOTAL Metals

Lot-Sample #...: F4K100333-002

Matrix.....: SOLID

Date Sampled...: 10/26/04

Date Received...: 11/10/04

% Moisture.....: 6.6

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...	4322056					
Bismuth	202	21.4	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AC
		Dilution Factor: 1		MDL.....: 2.1		
Antimony	1.4, N	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AH
		Dilution Factor: 1		MDL.....: 0.21		
Arsenic	1.2	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AJ
		Dilution Factor: 1		MDL.....: 0.19		
Barium	87.3	21.4	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AK
		Dilution Factor: 1		MDL.....: 0.047		
Beryllium	0.27 B	0.54	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AL
		Dilution Factor: 1		MDL.....: 0.041		
Cadmium	ND	0.54	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AM
		Dilution Factor: 1		MDL.....: 0.024		
Chromium	81.7, N	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AP
		Dilution Factor: 1		MDL.....: 0.60		
Copper	19.7	2.7	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AR
		Dilution Factor: 1		MDL.....: 0.40		
Lead	4.3	0.54	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AU
		Dilution Factor: 1		MDL.....: 0.21		
Nickel	52.7, N	4.3	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AX
		Dilution Factor: 1		MDL.....: 0.14		
Selenium	ND	0.54	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AO
		Dilution Factor: 1		MDL.....: 0.32		
Silver	2.0	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1AL
		Dilution Factor: 1		MDL.....: 0.62		
Uranium	104	53.5	mg/kg	SW846 6010B	11/17-11/18/04	GWNFG1EG
		Dilution Factor: 1		MDL.....: 14.9		
Prep Batch #...	4322095					
Mercury	5.1, N	0.36	mg/kg	SW846 7471A	11/17/04	GWNFG1CJ
		Dilution Factor: 10		MDL.....: 0.077		

MW  
324.05

(Continued on next page)

STL ST. LOUIS

FLUOR HANFORD IC

Client Sample ID: B19189

TOTAL Metals

Lot-Sample #....: F4K100333-002

Matrix.....: SOLID

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

- C Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- B Estimated result. Result is less than RL.

MW  
3.2405

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

Date Sampled...: 10/26/04

Date Received...: 11/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: F4K100333-002 Prep Batch #...: 4322056

‡ Moisture.....: 6.6

Bismuth

202	214	372	mg/kg	79			SW846 6010B	11/17-11/18/04	GWNFG1C5
202	214	377	mg/kg	82	1.4		SW846 6010B	11/17-11/18/04	GWNFG1C6

Dilution Factor: 1

Antimony

1.4	53.5	31.8 N	mg/kg	57			SW846 6010B	11/17-11/18/04	GWNFG1DG
1.4	53.5	30.8 N	mg/kg	55	3.3		SW846 6010B	11/17-11/18/04	GWNFG1DH

Dilution Factor: 1

Arsenic

1.2	214	210	mg/kg	97			SW846 6010B	11/17-11/18/04	GWNFG1DJ
1.2	214	211	mg/kg	98	0.61		SW846 6010B	11/17-11/18/04	GWNFG1DK

Dilution Factor: 1

Barium

87.3	214	301	mg/kg	100			SW846 6010B	11/17-11/18/04	GWNFG1DL
87.3	214	325	mg/kg	111	7.9		SW846 6010B	11/17-11/18/04	GWNFG1DM

Dilution Factor: 1

Beryllium

0.27	5.35	5.64	mg/kg	100			SW846 6010B	11/17-11/18/04	GWNFG1DN
0.27	5.35	5.70	mg/kg	101	0.98		SW846 6010B	11/17-11/18/04	GWNFG1DP

Dilution Factor: 1

Cadmium

ND	5.35	4.10	mg/kg	77			SW846 6010B	11/17-11/18/04	GWNFG1DQ
ND	5.35	4.11	mg/kg	77	0.36		SW846 6010B	11/17-11/18/04	GWNFG1DR

Dilution Factor: 1

Chromium

81.7	21.4	38.5 N	mg/kg	0.0			SW846 6010B	11/17-11/18/04	GWNFG1DV
81.7	21.4	34.0 N	mg/kg	0.0	0.0		SW846 6010B	11/17-11/18/04	GWNFG1DW

Dilution Factor: 1

Copper

19.7	26.8	45.5	mg/kg	96			SW846 6010B	11/17-11/18/04	GWNFG1D1
19.7	26.8	47.4	mg/kg	104	4.1		SW846 6010B	11/17-11/18/04	GWNFG1D2

Dilution Factor: 1

(Continued on next page)

## MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #....: W04380

Matrix.....: SOLID

Date Sampled...: 10/26/04

Date Received...: 11/10/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Lead									
	4.3	53.5	56.6	mg/kg	98		SW846 6010B	11/17-11/18/04	GWNFG1D5
	4.3	53.5	57.4	mg/kg	99	1.6	SW846 6010B	11/17-11/18/04	GWNFG1D6
Dilution Factor: 1									
Nickel									
	52.7	53.5	67.7 N	mg/kg	28		SW846 6010B	11/17-11/18/04	GWNFG1EC
	52.7	53.5	65.7 N	mg/kg	24	3.0	SW846 6010B	11/17-11/18/04	GWNFG1ED
Dilution Factor: 1									
Selenium									
	ND	214	208	mg/kg	97		SW846 6010B	11/17-11/18/04	GWNFG1CM
	ND	214	209	mg/kg	97	0.33	SW846 6010B	11/17-11/18/04	GWNFG1CN
Dilution Factor: 1									
Silver									
	2.0	5.35	7.20	mg/kg	98		SW846 6010B	11/17-11/18/04	GWNFG1CP
	2.0	5.35	7.58	mg/kg	105	5.2	SW846 6010B	11/17-11/18/04	GWNFG1CQ
Dilution Factor: 1									
Uranium									
	104	214	314	mg/kg	98		SW846 6010B	11/17-11/18/04	GWNFG1E7
	104	214	325	mg/kg	103	3.6	SW846 6010B	11/17-11/18/04	GWNFG1E8
Dilution Factor: 1									

MS Lot-Sample #: F4K100333-002 Prep Batch #....: 4322095

% Moisture.....: 6.6

## Mercury

	5.1	0.178	5.35	mg/kg	140		SW846 7471A	11/17/04	GWNFG1EQ
	5.1	0.178	4.23 N	mg/kg	0.0	0.0	SW846 7471A	11/17/04	GWNFG1ER
Dilution Factor: 1									

**NOTE(S):**

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

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

FLUOR HANFORD IC

Client Sample ID: B19188

TOTAL Metals

Lot-Sample #...: F4K120109-001

Matrix.....: SOLID

Date Sampled...: 10/20/04

Date Received...: 11/11/04

% Moisture.....: 5.3

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4322056						
Bismuth	156	21.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AH
		Dilution Factor: 1		MDL.....: 2.1		
Antimony	0.60 B, N	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AN
		Dilution Factor: 1		MDL.....: 0.21		
Arsenic	0.74 B	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AP
		Dilution Factor: 1		MDL.....: 0.19		
Barium	98.4	21.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AQ
		Dilution Factor: 1		MDL.....: 0.046		
Beryllium	0.23 B	0.53	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AR
		Dilution Factor: 1		MDL.....: 0.040		
Cadmium	ND	0.53	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AT
		Dilution Factor: 1		MDL.....: 0.023		
Chromium	6.1, N	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AV
		Dilution Factor: 1		MDL.....: 0.59		
Copper	15.1	2.6	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AX
		Dilution Factor: 1		MDL.....: 0.39		
Lead	16.7	0.53	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AL
		Dilution Factor: 1		MDL.....: 0.21		
Nickel	8.9, N	4.2	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1AA
		Dilution Factor: 1		MDL.....: 0.14		
Selenium	ND	0.53	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1A5
		Dilution Factor: 1		MDL.....: 0.32		
Silver	1.3	1.1	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1A6
		Dilution Factor: 1		MDL.....: 0.61		
Uranium	34.7 B	52.8	mg/kg	SW846 6010B	11/17-11/18/04	GWTXX1CM
		Dilution Factor: 1		MDL.....: 14.7		
Prep Batch #...: 4322095						
Mercury	6.5, N	0.35	mg/kg	SW846 7471A	11/17/04	GWTXX1AG
		Dilution Factor: 10		MDL.....: 0.076		

MW  
3-24-05

(Continued on next page)

STL ST. LOUIS

FLUOR HANFORD IC

Client Sample ID: B19188

TOTAL Metals

Lot-Sample #....: F4K120109-001

Matrix.....: SOLID

**NOTE(S) :**

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Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

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

*MW*  
*3-24-05*

## FLUOR HANFORD IC

Client Sample ID: B191F1

## TOTAL Metals

Lot-Sample #...: F4K180368-001

Date Sampled...: 08/18/04

% Moisture.....: 6.9

Date Received...: 11/18/04

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			PREPARATION- ANALYSIS DATE	WORK ORDER #
		LIMIT	UNITS	METHOD		
Prep Batch #...: 4336050						
Antimony	2.9 <i>N</i>	1.1	mg/kg	SW846 6010B	12/01/04	GXCC51AD
		Dilution Factor: 1		MDL.....: 0.21		
Arsenic	1.2	1.1	mg/kg	SW846 6010B	12/01/04	GXCC51AB
		Dilution Factor: 1		MDL.....: 0.19		
Barium	127	21.5	mg/kg	SW846 6010B	12/01/04	GXCC51AF
		Dilution Factor: 1		MDL.....: 0.047		
Beryllium	0.27 B	0.54	mg/kg	SW846 6010B	12/01/04	GXCC51AG
		Dilution Factor: 1		MDL.....: 0.041		
Cadmium	0.28 B	0.54	mg/kg	SW846 6010B	12/01/04	GXCC51AH
		Dilution Factor: 1		MDL.....: 0.024		
Chromium	259 <i>N</i>	1.1	mg/kg	SW846 6010B	12/01/04	GXCC51AJ
		Dilution Factor: 1		MDL.....: 0.60		
Copper	122 <i>N</i>	2.7	mg/kg	SW846 6010B	12/01/04	GXCC51AK
		Dilution Factor: 1		MDL.....: 0.40		
Lead	489 <i>N</i>	0.54	mg/kg	SW846 6010B	12/01/04	GXCC51AL
		Dilution Factor: 1		MDL.....: 0.21		
Nickel	55.0 <i>N</i>	4.3	mg/kg	SW846 6010B	12/01/04	GXCC51AM
		Dilution Factor: 1		MDL.....: 0.14		
Selenium	ND	0.54	mg/kg	SW846 6010B	12/01/04	GXCC51AN
		Dilution Factor: 1		MDL.....: 0.32		
Silver	6.0 <i>N</i>	1.1	mg/kg	SW846 6010B	12/01/04	GXCC51AP
		Dilution Factor: 1		MDL.....: 0.62		
Bismuth	202	21.5	mg/kg	SW846 6010B	12/01/04	GXCC51AQ
		Dilution Factor: 1		MDL.....: 2.2		
Boron	13.5 B <i>C</i>	21.5	mg/kg	SW846 6010B	12/01/04	GXCC51CP
		Dilution Factor: 1		MDL.....: 0.61		
Prep Batch #...: 4348439						
Mercury	69.2 <i>N</i>	1.8	mg/kg	SW846 7471A	12/13-12/14/04	GXCC51AC
		Dilution Factor: 50		MDL.....: 0.39		

(Continued on next page)

*MW*  
*3-24-05*

STL ST. LOUIS

FLUOR HANFORD IC

Client Sample ID: B191F1

TOTAL Metals

Lot-Sample #...: F4K180368-001

Matrix.....: SOLID

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

- C / Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- B Estimated result. Result is less than RL.

*mw*  
*3.24.05*

## MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

Date Sampled...: 08/18/04

Date Received...: 11/18/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: F4K180368-001 Prep Batch #....: 4336050

% Moisture.....: 6.9

## Antimony

2.9	53.7	29.1 N	mg/kg	49			SW846 6010B	12/01/04	GXCC51AU
2.9	53.7	29.8 N	mg/kg	50	2.3		SW846 6010B	12/01/04	GXCC51AV

Dilution Factor: 1

## Arsenic

1.2	215	209	mg/kg	97			SW846 6010B	12/01/04	GXCC51AW
1.2	215	209	mg/kg	97	0.01		SW846 6010B	12/01/04	GXCC51AX

Dilution Factor: 1

## Barium

127	215	336	mg/kg	97			SW846 6010B	12/01/04	GXCC51A0
127	215	364	mg/kg	110	8.0		SW846 6010B	12/01/04	GXCC51A1

Dilution Factor: 1

## Beryllium

0.27	5.37	5.67	mg/kg	100			SW846 6010B	12/01/04	GXCC51A2
0.27	5.37	5.67	mg/kg	101	0.01		SW846 6010B	12/01/04	GXCC51A3

Dilution Factor: 1

## Cadmium

0.28	5.37	5.84	mg/kg	103			SW846 6010B	12/01/04	GXCC51A4
0.28	5.37	5.70	mg/kg	101	2.4		SW846 6010B	12/01/04	GXCC51A5

Dilution Factor: 1

## Chromium

259	21.5	308 N	mg/kg	227			SW846 6010B	12/01/04	GXCC51A6
259	21.5	273 N	mg/kg	66	12		SW846 6010B	12/01/04	GXCC51A7

Dilution Factor: 1

## Copper

122	26.9	174 N	mg/kg	195			SW846 6010B	12/01/04	GXCC51A8
122	26.9	161 N	mg/kg	146	7.8		SW846 6010B	12/01/04	GXCC51A9

Dilution Factor: 1

## Lead

489	53.7	773 N	mg/kg	527			SW846 6010B	12/01/04	GXCC51CA
489	53.7	715 N	mg/kg	420	7.8		SW846 6010B	12/01/04	GXCC51CC

Dilution Factor: 1

(Continued on next page)

## MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #....: W04380

Matrix.....: SOLID

Date Sampled....: 08/18/04

Date Received...: 11/18/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Nickel									
	55.0	53.7	92.7 N	mg/kg	70		SW846 6010B	12/01/04	GXCC51CD
	55.0	53.7	88.4 N	mg/kg	62	4.7	SW846 6010B	12/01/04	GXCC51CE
Dilution Factor: 1									
Selenium									
	ND	215	207	mg/kg	97		SW846 6010B	12/01/04	GXCC51CF
	ND	215	206	mg/kg	96	0.47	SW846 6010B	12/01/04	GXCC51CG
Dilution Factor: 1									
Silver									
	6.0	5.37	13.2 N	mg/kg	134		SW846 6010B	12/01/04	GXCC51CH
	6.0	5.37	13.1 N	mg/kg	131	0.99	SW846 6010B	12/01/04	GXCC51CJ
Dilution Factor: 1									
Bismuth									
	202	215	383	mg/kg	84		SW846 6010B	12/01/04	GXCC51CK
	202	215	396	mg/kg	90	3.4	SW846 6010B	12/01/04	GXCC51CL
Dilution Factor: 1									
Boron									
	13.5	215	214	mg/kg	93		SW846 6010B	12/01/04	GXCC51CQ
	13.5	215	215	mg/kg	94	0.27	SW846 6010B	12/01/04	GXCC51CR
Dilution Factor: 1									

MS Lot-Sample #: F4K180368-001 Prep Batch #....: 4348439

\* Moisture.....: 6.9

Mercury									
	69.2	0.179	27.6 N	mg/kg	0.0		SW846 7471A	12/13-12/14/04	GXCC51CM
	69.2	0.179	28.3 N	mg/kg	0.0	0.0	SW846 7471A	12/13-12/14/04	GXCC51CN
Dilution Factor: 1									

**NOTE(S):**

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

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

<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>
<b>MB Lot-Sample #: F4K170000-056 Prep Batch #...: 4322056</b>						
Bismuth	ND	20.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AA
		Dilution Factor: 1				
Antimony	ND	1.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AC
		Dilution Factor: 1				
Arsenic	ND	1.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AD
		Dilution Factor: 1				
Barium	0.050 B	20.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AE
		Dilution Factor: 1				
Beryllium	ND	0.50	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AF
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AG
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AH
		Dilution Factor: 1				
Copper	ND	2.5	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AJ
		Dilution Factor: 1				
Lead	ND	0.50	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AK
		Dilution Factor: 1				
Nickel	ND	4.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AL
		Dilution Factor: 1				
Selenium	ND	0.50	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AM
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AN
		Dilution Factor: 1				
Uranium	ND	50.0	mg/kg	SW846 6010B	11/17-11/18/04	GW5CF1AP
		Dilution Factor: 1				

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## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

<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>
<b>MB Lot-Sample #: F4K170000-095 Prep Batch #...: 4322095</b>						
Mercury	ND	0.033	mg/kg	SW846 7471A	11/17/04	GW5E61AA
		Dilution Factor: 1				
<b>MB Lot-Sample #: F4L010000-050 Prep Batch #...: 4336050</b>						
Antimony	ND	1.0	mg/kg	SW846 6010B	12/01/04	GX1K01AA
		Dilution Factor: 1				
Arsenic	ND	1.0	mg/kg	SW846 6010B	12/01/04	GX1K01AC
		Dilution Factor: 1				
Barium	0.079 B	20.0	mg/kg	SW846 6010B	12/01/04	GX1K01AD
		Dilution Factor: 1				
Beryllium	ND	0.50	mg/kg	SW846 6010B	12/01/04	GX1K01AE
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	12/01/04	GX1K01AF
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	12/01/04	GX1K01AG
		Dilution Factor: 1				
Copper	ND	2.5	mg/kg	SW846 6010B	12/01/04	GX1K01AH
		Dilution Factor: 1				
Lead	ND	0.50	mg/kg	SW846 6010B	12/01/04	GX1K01AJ
		Dilution Factor: 1				
Nickel	ND	4.0	mg/kg	SW846 6010B	12/01/04	GX1K01AK
		Dilution Factor: 1				
Selenium	ND	0.50	mg/kg	SW846 6010B	12/01/04	GX1K01AL
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	12/01/04	GX1K01AM
		Dilution Factor: 1				
Bismuth	ND	20.0	mg/kg	SW846 6010B	12/01/04	GX1K01AN
		Dilution Factor: 1				
Boron	2.6 B	20.0	mg/kg	SW846 6010B	12/01/04	GX1K01AA
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

<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 #: F4L130000-439 Prep Batch #...: 4348439						
Mercury	ND	0.033	mg/kg	SW846 7471A	12/13-12/14/04	G0XJW1AA
		Dilution Factor: 1				

NOTE(S):

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

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: F4K170000-056 Prep Batch #...: 4322056							
Bismuth	200	197	mg/kg	99	SW846 6010B	11/17-11/18/04	GW5CF1AQ
			Dilution Factor: 1				
Antimony	60.9	43.6	mg/kg	72	SW846 6010B	11/17-11/18/04	GW5CF1AR
			Dilution Factor: 1				
Arsenic	161	168	mg/kg	104	SW846 6010B	11/17-11/18/04	GW5CF1AT
			Dilution Factor: 1				
Barium	252	258	mg/kg	102	SW846 6010B	11/17-11/18/04	GW5CF1AU
			Dilution Factor: 1				
Beryllium	94.4	98.8	mg/kg	105	SW846 6010B	11/17-11/18/04	GW5CF1AV
			Dilution Factor: 1				
Cadmium	128	132	mg/kg	103	SW846 6010B	11/17-11/18/04	GW5CF1AW
			Dilution Factor: 1				
Chromium	69.5	70.1	mg/kg	101	SW846 6010B	11/17-11/18/04	GW5CF1AX
			Dilution Factor: 1				
Copper	148	162	mg/kg	110	SW846 6010B	11/17-11/18/04	GW5CF1A0
			Dilution Factor: 1				
Lead	142	146	mg/kg	103	SW846 6010B	11/17-11/18/04	GW5CF1A1
			Dilution Factor: 1				
Nickel	147	157	mg/kg	107	SW846 6010B	11/17-11/18/04	GW5CF1A2
			Dilution Factor: 1				
Selenium	64.2	66.1	mg/kg	103	SW846 6010B	11/17-11/18/04	GW5CF1A3
			Dilution Factor: 1				
Silver	130	148	mg/kg	114	SW846 6010B	11/17-11/18/04	GW5CF1A4
			Dilution Factor: 1				
Uranium	200	193	mg/kg	96	SW846 6010B	11/17-11/18/04	GW5CF1A5
			Dilution Factor: 1				

(Continued on next page)

## LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #	
LCS Lot-Sample#: F4K170000-095 Prep Batch #...: 4322095								
Mercury	4.04	4.12	mg/kg	102	SW846 7471A	11/17/04	GW5E61AC	
			Dilution Factor: 5					
LCS Lot-Sample#: F4L010000-050 Prep Batch #...: 4336050								
Antimony	60.9	51.3	mg/kg	84	SW846 6010B	12/01/04	GX1K01AP	
			Dilution Factor: 1					
Arsenic	161	171	mg/kg	106	SW846 6010B	12/01/04	GX1K01AQ	
			Dilution Factor: 1					
Barium	252	267	mg/kg	106	SW846 6010B	12/01/04	GX1K01AR	
			Dilution Factor: 1					
Beryllium	94.4	99.8	mg/kg	106	SW846 6010B	12/01/04	GX1K01AT	
			Dilution Factor: 1					
Cadmium	128	133	mg/kg	104	SW846 6010B	12/01/04	GX1K01AU	
			Dilution Factor: 1					
Chromium	69.5	72.2	mg/kg	104	SW846 6010B	12/01/04	GX1K01AV	
			Dilution Factor: 1					
Copper	148	159	mg/kg	108	SW846 6010B	12/01/04	GX1K01AW	
			Dilution Factor: 1					
Lead	142	155	mg/kg	109	SW846 6010B	12/01/04	GX1K01AX	
			Dilution Factor: 1					
Nickel	147	157	mg/kg	107	SW846 6010B	12/01/04	GX1K01A0	
			Dilution Factor: 1					
Selenium	64.2	68.0	mg/kg	106	SW846 6010B	12/01/04	GX1K01A1	
			Dilution Factor: 1					
Silver	130	153	mg/kg	117	SW846 6010B	12/01/04	GX1K01A2	
			Dilution Factor: 1					
Bismuth	200	199	mg/kg	100	SW846 6010B	12/01/04	GX1K01A3	
			Dilution Factor: 1					
Boron	97.4	104	mg/kg	107	SW846 6010B	12/01/04	GX1K01A5	
			Dilution Factor: 1					

(Continued on next page)

## LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: W04380

Matrix.....: SOLID

<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>WORK</u> <u>ORDER #</u>
LCS Lot-Sample#:	F4L130000-439	Prep Batch #...	4348439				
Mercury	4.04	4.05	mg/kg	100	SW846 7471A	12/13-12/14/04	G0XJWLAC

Dilution Factor: 5

**NOTE(S):**

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

FLUOR HANFORD IC

Client Sample ID: B193K1

General Chemistry

Lot-Sample #...: F4K100333-001    Work Order #...: GWNAE    Matrix.....: SOLID  
 Date Sampled...: 10/26/04    Date Received...: 11/10/04  
 % Moisture.....: 4.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.40	mg/kg	SW846 7196A	11/11/04	4317200
				Dilution Factor: 1    MDL.....: 0.25		
Nitrate/Nitrite as N	24.9, N	0.50	mg/kg	MCAW 353.1	11/15/04	4320217
				Dilution Factor: 1    MDL.....: 0.036		
Oil and Grease (Gravimetric)	ND	419	mg/kg	SW846 9071A	11/23-11/24/04	4328355
				Dilution Factor: 2    MDL.....: 173		
Percent Moisture	4.5	0.10	%	MCAW 160.3 MOD	11/17-11/18/04	4322080
				Dilution Factor: 1    MDL.....:		
Total Sulfide	ND	10.5	mg/kg	SW846 9030	11/24/04	4334155
				Dilution Factor: 1    MDL.....: 7.6		

**NOTE (S):**

RL Reporting Limit  
 Results and reporting limits have been adjusted for dry weight.

*MW*  
 3.24.05

FLUOR HANFORD IC

Client Sample ID: B19189

General Chemistry

Lot-Sample #....: F4K100333-002      Work Order #....: GWNFG      Matrix.....: SOLID  
 Date Sampled....: 10/26/04      Date Received...: 11/10/04  
 % Moisture.....: 6.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	36.6	5.4	mg/kg	MCAWW 300.0A	11/10/04	4316163
				Dilution Factor: 1      MDL.....: 0.54		
pH (solid)	10.2	0.10	No Units	SW846 9045C	11/16/04	4321162
				Dilution Factor: 1      MDL.....:		
Chloride	1.8 B	2.1	mg/kg	MCAWW 300.0A	11/10/04	4316165
				Dilution Factor: 1      MDL.....: 0.47		
Fluoride	3.4 <i>✓ C</i>	1.1	mg/kg	MCAWW 300.0A	11/10/04	4316160
				Dilution Factor: 1      MDL.....: 0.11		
Nitrate	7.8	0.21	mg/kg	MCAWW 300.0A	11/10/04	4316161
				Dilution Factor: 1      MDL.....: 0.042		
Nitrite	0.44 <i>, N</i>	0.21	mg/kg	MCAWW 300.0A	11/10/04	4316162
				Dilution Factor: 1      MDL.....: 0.043		
Nitrogen, as Ammonia	ND	0.54	mg/kg	MCAWW 350.1	11/11/04	4316531
				Dilution Factor: 1      MDL.....: 0.23		
Percent Moisture	6.6	0.10	%	MCAWW 160.3 MOD	11/17-11/18/04	4322080
				Dilution Factor: 1      MDL.....:		
Sulfate	12.6	5.4	mg/kg	MCAWW 300.0A	11/10/04	4316164
				Dilution Factor: 1      MDL.....: 0.40		
Total Cyanide	ND	0.54	mg/kg	SW846 9010A	11/22/04	4327472
				Dilution Factor: 1      MDL.....: 0.13		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

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

*new*  
3.24.05

FLOOR HANFORD IC

Client Sample ID: B19188

General Chemistry

Lot-Sample #...: F4K120109-001    Work Order #...: GWTXX    Matrix.....: SOLID  
 Date Sampled...: 10/20/04    Date Received...: 11/11/04  
 % Moisture.....: 5.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	25.2	5.3	mg/kg	MCAWW 300.0A	11/16/04	4322164
				Dilution Factor: 1    MDL.....: 0.53		
pH (solid)	10.1	0.10	No Units	SW846 9045C	11/16/04	4321162
				Dilution Factor: 1    MDL.....:		
Chloride	2.5	2.1	mg/kg	MCAWW 300.0A	11/16/04	4322160
				Dilution Factor: 1    MDL.....: 0.46		
Fluoride	2.3	1.1	mg/kg	MCAWW 300.0A	11/16/04	4322161
				Dilution Factor: 1    MDL.....: 0.11		
Nitrate	3.8	0.21	mg/kg	MCAWW 300.0A	11/16/04	4322162
				Dilution Factor: 1    MDL.....: 0.042		
Nitrite	0.77	0.21	mg/kg	MCAWW 300.0A	11/16/04	4322163
				Dilution Factor: 1    MDL.....: 0.042		
Nitrogen, as Ammonia	ND	0.53	mg/kg	MCAWW 350.1	11/16/04	4321483
				Dilution Factor: 1    MDL.....: 0.061		
Percent Moisture	5.3	0.10	%	MCAWW 160.3 MOD	11/17-11/18/04	4322080
				Dilution Factor: 1    MDL.....:		
Sulfate	9.6	5.3	mg/kg	MCAWW 300.0A	11/16/04	4322165
				Dilution Factor: 1    MDL.....: 0.39		
Total Cyanide	ND	0.53	mg/kg	SW846 9010A	11/22/04	4327472
				Dilution Factor: 1    MDL.....: 0.13		

**NOTE(S):**

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

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

*MW*  
3.24.05

## MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #...: W04380

Matrix.....: SOLID

Date Sampled...: 10/26/04

Date Received...: 11/10/04

Percent Moisture: 3.4

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	1.8	21.4	22.0	mg/kg	95	MCAWW 300.0A	11/10/04	4316165
			Work Order #...: GWNFG1FD				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 1					
Fluoride	3.4	21.4	25.0	mg/kg	101	MCAWW 300.0A	11/10/04	4316160
			Work Order #...: GWNFG1C1				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 1					
Hexavalent Chromium	ND	40.0	35.8	mg/kg	89	SW846 7196A	11/11-11/12/04	4317200
			Work Order #...: GWNAE1AH				MS Lot-Sample #: F4K100333-001	
			Dilution Factor: 1					
Nitrate	7.8	42.8	48.2	mg/kg	95	MCAWW 300.0A	11/10/04	4316161
			Work Order #...: GWNFG1C2				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 10					
Nitrate/Nitrite as N	24.9	25.0	43.8 N	mg/kg	76	MCAWW 353.1	11/15/04	4320217
			Work Order #...: GWNAE1AG				MS Lot-Sample #: F4K100333-001	
			Dilution Factor: 1					
Nitrate/Nitrite as N	22.6	25.0	44.6 N	mg/kg	88	MCAWW 353.1	11/15/04	4320217
			Work Order #...: GWVD81AK				MS Lot-Sample #: F4K120155-001	
			Dilution Factor: 1					
Nitrite	0.44	1.07	1.91 N	mg/kg	137	MCAWW 300.0A	11/10/04	4316162
			Work Order #...: GWNFG1C3				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 1					
Nitrogen, as Ammonia	ND	2.14	1.94	mg/kg	90	MCAWW 350.1	11/11/04	4316531
			Work Order #...: GWNFG1EF				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 1					
Oil and Grease (Gravimetric)	ND	6980	6080	mg/kg	87	SW846 9071A	11/23-11/24/04	4328355
			Work Order #...: GWNAE1AK				MS Lot-Sample #: F4K100333-001	
			Dilution Factor: 2					
Phosphate as P, Ortho	36.6	42.8	73.1	mg/kg	85	MCAWW 300.0A	11/10/04	4316163
			Work Order #...: GWNFG1C4				MS Lot-Sample #: F4K100333-002	
			Dilution Factor: 1					

(Continued on next page)

## MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #...: W04380

Matrix.....: SOLID

Date Sampled...: 10/26/04

Date Received...: 11/10/04

PARAMETER	SAMPLE SPIKE		MEASURED		PERCENT	METHOD	PREPARATION-	PREP
	AMOUNT	AMT	AMOUNT	UNITS	RECOVERY		ANALYSIS DATE	BATCH #
Sulfate	12.6	42.8	50.6	mg/kg	89	MCAWW 300.0A	11/10/04	4316164
			Work Order #...: GWNFG1EE MS Lot-Sample #: F4K100333-002					
			Dilution Factor: 1					
Total Cyanide	ND	5.35	5.32	mg/kg	99	SW846 9010A	11/22/04	4327472
			Work Order #...: GWNFG1EG MS Lot-Sample #: F4K100333-002					
			Dilution Factor: 1					
Total Sulfide	ND	100	94.0	mg/kg	94	SW846 9030	11/24/04	4334155
			Work Order #...: GWVD81AQ MS Lot-Sample #: F4K120155-001					
			Dilution Factor: 1					

**NOTE(S) :**

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

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.





## METHOD BLANK REPORT

## General Chemistry

Client Lot #...: W04380

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	0.59 B	2.0	mg/kg	Work Order #: GWP6J1AA MCAWW 300.0A	MB Lot-Sample #: F4K110000-165 11/10/04	4316165
				Dilution Factor: 1		
Chloride	0.61 B	2.0	mg/kg	Work Order #: GW5J01AA MCAWW 300.0A	MB Lot-Sample #: F4K170000-160 11/16/04	4322160
				Dilution Factor: 1		
Fluoride	0.20 B	1.0	mg/kg	Work Order #: GWP5W1AA MCAWW 300.0A	MB Lot-Sample #: F4K110000-160 11/10/04	4316160
				Dilution Factor: 1		
Fluoride	ND	1.0	mg/kg	Work Order #: GW5J41AA MCAWW 300.0A	MB Lot-Sample #: F4K170000-161 11/16/04	4322161
				Dilution Factor: 1		
Hexavalent Chromium	ND	0.40	mg/kg	Work Order #: GWVQJ1AA SW846 7196A	MB Lot-Sample #: F4K120000-200 11/11/04	4317200
				Dilution Factor: 1		
Nitrate	ND	0.20	mg/kg	Work Order #: GWP531AA MCAWW 300.0A	MB Lot-Sample #: F4K110000-161 11/10/04	4316161
				Dilution Factor: 1		
Nitrate	ND	0.20	mg/kg	Work Order #: GW5J81AA MCAWW 300.0A	MB Lot-Sample #: F4K170000-162 11/16/04	4322162
				Dilution Factor: 1		
Nitrate/Nitrite as N	ND	0.50	mg/kg	Work Order #: GW1GX1AA MCAWW 353.1	MB Lot-Sample #: F4K150000-217 11/15/04	4320217
				Dilution Factor: 1		
Nitrite	ND	0.20	mg/kg	Work Order #: GWP541AA MCAWW 300.0A	MB Lot-Sample #: F4K110000-162 11/10/04	4316162
				Dilution Factor: 1		
Nitrite	ND	0.20	mg/kg	Work Order #: GW5KG1AA MCAWW 300.0A	MB Lot-Sample #: F4K170000-163 11/16/04	4322163
				Dilution Factor: 1		
Nitrogen, as Ammonia	ND	0.50	mg/kg	Work Order #: GWR6M1AA MCAWW 350.1	MB Lot-Sample #: F4K110000-531 11/11/04	4316531
				Dilution Factor: 1		

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## METHOD BLANK REPORT

## General Chemistry

Client Lot #...: W04380

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrogen, as Ammonia	ND	Work Order #: GW4L41AA 0.50	mg/kg	MB Lot-Sample #: F4K160000-483 MCAWW 350.1	11/16/04	4321483
		Dilution Factor: 1				
Oil and Grease (Gravimetric)	ND	Work Order #: GXQET1AA 200	mg/kg	MB Lot-Sample #: F4K230000-355 SW846 9071A	11/23-11/24/04	4328355
		Dilution Factor: 1				
Phosphate as P, Ortho	ND	Work Order #: GWP561AA 5.0	mg/kg	MB Lot-Sample #: F4K110000-163 MCAWW 300.0A	11/10/04	4316163
		Dilution Factor: 1				
Phosphate as P, Ortho	ND	Work Order #: GW5KN1AA 5.0	mg/kg	MB Lot-Sample #: F4K170000-164 MCAWW 300.0A	11/16/04	4322164
		Dilution Factor: 1				
Sulfate	ND	Work Order #: GWP6E1AA 5.0	mg/kg	MB Lot-Sample #: F4K110000-164 MCAWW 300.0A	11/10/04	4316164
		Dilution Factor: 1				
Sulfate	ND	Work Order #: GW5KW1AA 5.0	mg/kg	MB Lot-Sample #: F4K170000-165 MCAWW 300.0A	11/16/04	4322165
		Dilution Factor: 1				
Total Cyanide	ND	Work Order #: GXLDD1AA 0.50	mg/kg	MB Lot-Sample #: F4K220000-472 SW846 9010A	11/22/04	4327472
		Dilution Factor: 1				
Total Sulfide	ND	Work Order #: GXV791AA 10.0	mg/kg	MB Lot-Sample #: F4K290000-155 SW846 9030	11/24/04	4334155
		Dilution Factor: 1				

**NOTE (S) :**

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

B Estimated result. Result is less than RL.

## LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Lot-Sample #...: W04380

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride							WO#:GWP6J1AC-LCS/GWP6J1AD-LCSD LCS Lot-Sample#: F4K110000-165	
	10.0	9.04	mg/kg	90		MCAWW 300.0A	11/10/04	4316165
	10.0	9.69	mg/kg	97	6.9	MCAWW 300.0A	11/10/04	4316165
							Dilution Factor: 1	
Chloride							WO#:GW5J01AC-LCS/GW5J01AD-LCSD LCS Lot-Sample#: F4K170000-160	
	10.0	9.63	mg/kg	96		MCAWW 300.0A	11/16/04	4322160
	10.0	9.70	mg/kg	97	0.69	MCAWW 300.0A	11/16/04	4322160
							Dilution Factor: 1	
Fluoride							WO#:GWP5W1AC-LCS/GWP5W1AD-LCSD LCS Lot-Sample#: F4K110000-160	
	5.00	5.18	mg/kg	104		MCAWW 300.0A	11/10/04	4316160
	5.00	5.19	mg/kg	104	0.14	MCAWW 300.0A	11/10/04	4316160
							Dilution Factor: 1	
Fluoride							WO#:GW5J41AC-LCS/GW5J41AD-LCSD LCS Lot-Sample#: F4K170000-161	
	5.00	4.79	mg/kg	96		MCAWW 300.0A	11/16/04	4322161
	5.00	4.72	mg/kg	94	1.5	MCAWW 300.0A	11/16/04	4322161
							Dilution Factor: 1	
Nitrate							WO#:GWP531AC-LCS/GWP531AD-LCSD LCS Lot-Sample#: F4K110000-161	
	1.60	1.85	mg/kg	116		MCAWW 300.0A	11/10/04	4316161
	1.60	1.87	mg/kg	117	0.94	MCAWW 300.0A	11/10/04	4316161
							Dilution Factor: 1	
Nitrate							WO#:GW5J81AC-LCS/GW5J81AD-LCSD LCS Lot-Sample#: F4K170000-162	
	2.00	1.85	mg/kg	92		MCAWW 300.0A	11/16/04	4322162
	2.00	1.83	mg/kg	91	1.0	MCAWW 300.0A	11/16/04	4322162
							Dilution Factor: 1	
Nitrate/Nitrite as N							WO#:GW1GX1AC-LCS/GW1GX1AD-LCSD LCS Lot-Sample#: F4K150000-217	
	4.00	3.90	mg/kg	98		MCAWW 353.1	11/15/04	4320217
	4.00	3.89	mg/kg	97	0.25	MCAWW 353.1	11/15/04	4320217
							Dilution Factor: 1	
Nitrite							WO#:GWP541AC-LCS/GWP541AD-LCSD LCS Lot-Sample#: F4K110000-162	
	0.800	0.871	mg/kg	109		MCAWW 300.0A	11/10/04	4316162
	0.800	0.871	mg/kg	109	0.05	MCAWW 300.0A	11/10/04	4316162
							Dilution Factor: 1	

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: W04380

Matrix.....: SOLID

PARAMETER	SPIKE	MEASURED	UNITS	PERCENT		METHOD	PREPARATION-	PREP
	AMOUNT	AMOUNT		RECVRY	RPD		ANALYSIS DATE	BATCH #
Nitrite				WO#:GW5KG1AC-LCS/GW5KG1AD-LCSD		LCS Lot-Sample#:	F4K170000-163	
	0.800	0.866	mg/kg	108		MCAWW 300.0A	11/16/04	4322163
	0.800	0.860	mg/kg	107	0.70	MCAWW 300.0A	11/16/04	4322163
	Dilution Factor: 1							
Nitrogen, as Ammonia				WO#:GWR6M1AC-LCS/GWR6M1AD-LCSD		LCS Lot-Sample#:	F4K110000-531	
	40.0	39.0	mg/kg	98		MCAWW 350.1	11/11/04	4316531
	40.0	40.9	mg/kg	102	4.8	MCAWW 350.1	11/11/04	4316531
	Dilution Factor: 1							
Nitrogen, as Ammonia				WO#:GW4L41AC-LCS/GW4L41AD-LCSD		LCS Lot-Sample#:	F4K160000-483	
	4.00	3.70	mg/kg	92		MCAWW 350.1	11/16/04	4321483
	4.00	3.72	mg/kg	93	0.53	MCAWW 350.1	11/16/04	4321483
	Dilution Factor: 1							
Oil and Grease (Gravimetric)				WO#:GXQET1AC-LCS/GXQET1AD-LCSD		LCS Lot-Sample#:	F4K230000-355	
	3330	2700	mg/kg	81		SW846 9071A	11/23-11/24/04	4328355
	3330	2700	mg/kg	81	0.0	SW846 9071A	11/23-11/24/04	4328355
	Dilution Factor: 1							
Phosphate as P, Ortho				WO#:GWP561AC-LCS/GWP561AD-LCSD		LCS Lot-Sample#:	F4K110000-163	
	40.0	38.5	mg/kg	96		MCAWW 300.0A	11/10/04	4316163
	40.0	38.7	mg/kg	97	0.72	MCAWW 300.0A	11/10/04	4316163
	Dilution Factor: 1							
Phosphate as P, Ortho				WO#:GWSKN1AC-LCS/GWSKN1AD-LCSD		LCS Lot-Sample#:	F4K170000-164	
	40.0	39.0	mg/kg	98		MCAWW 300.0A	11/16/04	4322164
	40.0	39.5	mg/kg	99	1.3	MCAWW 300.0A	11/16/04	4322164
	Dilution Factor: 1							
Sulfate				WO#:GWP6E1AC-LCS/GWP6E1AD-LCSD		LCS Lot-Sample#:	F4K110000-164	
	40.0	37.0	mg/kg	92		MCAWW 300.0A	11/10/04	4316164
	40.0	37.0	mg/kg	93	0.18	MCAWW 300.0A	11/10/04	4316164
	Dilution Factor: 1							

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: W04380

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Sulfate								
	40.0	36.5	mg/kg	91		MCAWW 300.0A	11/16/04	4322165
	40.0	36.9	mg/kg	92	1.2	MCAWW 300.0A	11/16/04	4322165

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 #...: W04380

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PRBP BATCH #
pH (solid)	7.00	7.01	No Units	100	SW846 9045C	11/16/04	4321162
Work Order #: GW3HW1AA LCS Lot-Sample#: F4K160000-162 Dilution Factor: 1							
Hexavalent Chromium	2.00	1.87	mg/kg	94	SW846 7196A	11/11/04	4317200
Work Order #: GWVQJ1AC LCS Lot-Sample#: F4K120000-200 Dilution Factor: 1							
Total Cyanide	5.00	5.20	mg/kg	104	SW846 9010A	11/22/04	4327472
Work Order #: GXLDD1AC LCS Lot-Sample#: F4K220000-472 Dilution Factor: 1							
Total Sulfide	100	96.0	mg/kg	96	SW846 9030	11/24/04	4334155
Work Order #: GXV791AC LCS Lot-Sample#: F4K290000-155 Dilution Factor: 1							

**NOTE (S):**

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