0061939

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 216-B26 CHAR.

F03-020

Lot #: F3L310112
SDG #: W04141

Steve Trent

Fluor Hanford Inc
825 Jadwin Ave
Richland, WA 99352

RECEIVED
JUN 2 1 2004
EDMC

SEVERN TRENT LABORATORIES, INC.

MWard

MARTI WARD
Project Manager

000001

January 21, 2004

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

January 26, 2004

STL LOT NUMBER: **F3L310112**
SDG: **W04141**

Steve Trent
Fluor Hanford Inc
825 Jadwin Ave
Richland, WA 99352

Dear Steve Trent,

This report contains the analytical results for the sample received under chain of custody by Severn Trent Laboratories (STL) on December 30, 2003. This sample is associated with your F03-020 project.

All applicable quality control procedures met method-specified acceptance criteria except as noted on the following page.

This report shall not be reproduced except in full, without the written approval of the laboratory. This report is incomplete without the Case Narrative. Results are reported "as received" (i.e. wet weight) unless otherwise noted.

If you have any questions, please feel free to call me at (314) 298-8566.

Sincerely,

Marti Ward

Marti Ward
Project Manager

cc: Project File

Leaders in Environmental Testing

nelac
Severn Trent Laboratories, Inc.

SEVERN TRENT STL

STL St. Louis
13715 Rider Trail North
Earth City, MO 63045

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STL LOT NUMBER: **F3L310112**
SDG: **W04141**
Case Narrative:

Due to the high RAD levels of the samples and the limited volume received, matrix QC was not performed on the sample in this SDG for all parameters.

6010B Metals

The Iron, Aluminum and Manganese MS/MSD recoveries are outside the established QC limits. The concentrations of these metals in the original sample are greater than 4 times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Leaders in Environmental Testing

nelac

Severn Trent Laboratories, Inc.

SAMPLE SUMMARY

F3L310112

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F7GT6	001	B183L7	12/09/03	15:03

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.

000004

METHODS SUMMARY

F3L310112

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Non-Aqueous	SW846 9045A	
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 7196A/DI
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
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
Phosphate as P, Ortho	MCAWW 300.0A	MCAWW 300.0A
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3550B
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Total Cyanide	SW846 9010A	SW846 9010A
Total Organic Carbon	SW846 9060	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B

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.

000005

F3L310112 CLIENT ANALYSIS SUMMARY

Storage Loc: S173,VL3

Project Manager: MAW Quote #: 56414 SDG:

Project: 216-B26 CHAR. F03-020

PO#: MRC-SBB-A-19981 Report to: Steve Trent

Client: 108302 FLUOR HANFORD IC

Date Received: 2003-12-30

Analytical Due Date: 2004-01-27

Report Due Date: 2004-01-27

Report Type: B Standard Report

EDD Code: FEADII

#SMPS in LOT: 1

Anions/Metals: CRDL standard required +/-25% Batch Hanford samples by themselves correct results for moisture

Anions: CCV/CCB criteria +/-10% pH needs to be done within 24 hours of receipt VOA: look for Decane as a TIC

WTPH needs to include Kerosene & diesel range Report=R02 all raw data to reporting group!

SAMPLE #	CLIENT SAMPLE ID	DATE/TIME SAMPLED	WORKORDER	A
1	B183L7	2003-12-09 / 1503	F7GT6	SOLID

SAMPLE COMMENTS:

XX	HS	SW846	8015 MOD	Hydrocarbons, Extractable Petroleum (8015 MOD)	13	SONICATION - Low Level	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
HG	O9	SW846	7471A	Mercury (7471A, Cold Vapor) - Solids	70	METALS, TOTAL (Method Exclusive) - Solids	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
AG	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
PB	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
NI	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
NA	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
MO	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
MN	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
VX	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
KX	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
FE	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CU	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CR	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CD	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
CA	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
BI	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
AL	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
MG	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
ZN	QM	SW846	6010B	Inductively Coupled Plasma (6010B Trace)	46	METALS, TOTAL - Soils	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	QL	SW846	8270C	Base/Neutrals and Acids (8270C)	13	SONICATION - Low Level	01	STANDARD TEST SET	PROT: A	WRK LOC	06	TIC: Y	
XX	ZV		RAD SCREEN	RAD SCREEN	RB	CLIENT SUPPLIED RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	C8	MCAW W	300.0A	Fluoride (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	C9	MCAW W	300.0A	Nitrate as N (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	CX	MCAW W	300.0A	Chloride (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	CY	MCAW W	300.0A	Sulfate (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	DO	MCAW W	300.0A	Phosphate as P, Ortho (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	EA	SW846	7196A	Chromium, Hexavalent (7196A)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	FK	SW846	9045A	pH (9045) - Non-Aqueous	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	FM	SW846	9060	Carbon, Total Organic "TOC" (9060)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	GO	MCAW W	300.0A	Nitrite as N (300.0, Ion Chromatography)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	HN	MCAW W	353.1	Nitrate-Nitrite (353.1)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	RV	SW846	9010A	Cyanide, Total (9010)	06	DISTILLATION, MICRO/MIDI - Acid	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	82	LEACHATE, DI (Routine)	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	WM	MCAW W	160.3 MOD	Moisture, Percent (160.3)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		

F3L310112

CLIENT ANALYSIS SUMMARY

Storage Loc: **S173,VL3**

Date Received: 2003-12-30

Analytical Due Date: 2004-01-27

Report Due Date: 2004-01-27

Report Type: B Standard Report

EDD Code: FEADII

Project Manager: MAW Quote #: 56414 SDG:

Project: 216-B26 CHAR. F03-020

PO#: MRC-SBB-A-19981 Report to: Steve Trent

Client: 108302 FLUOR HANFORD IC

#SMPS in LOT: 1

Anions/Metals: CRDL standard required +/-25% Batch Hanford samples by themselves correct results for moisture

Anions: CCV/CCB criteria +/-10% pH needs to be done within 24 hours of receipt VOA: look for Decane as a TIC

WTPH needs to include Kerosene & diesel range Report=R02 all raw data to reporting group!

S	**XX**	**VM**	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	**82**	LEACHATE. DI (Routine)	**01**	STANDARD TEST SET	PROT: A	**WRK LOC**	06
X	**XX**	**VM**	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	**82**	LEACHATE. DI (Routine)	**01**	STANDARD TEST SET	PROT: A	**WRK LOC**	06

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LOT # F3L310112

SDG # WO4141

STL ST. LOUIS

CUR 7973

*JT 12/29/03

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F03-020-061	Page 1 of 1
Collector: Pope/Hughes/Pfister	Company Contact: Steve Trent	Telephone No.: 373-5869	Project Coordinator: TRENT, SJ	Price Code: ~~8N~~ D * Data Turnaround: * 21 ~~45~~ Days
Project Designation: 216-B-26 Characterization Sampling - Soil Sampling	Sampling Location: C3245 (12.5 - 15 ft)		SAF No.: F03-020	Air Quality
Ice Chest No.: 2/03-050024	Field Logbook No.: HNF-N-	COA: 119142ES10	Method of Shipment: Federal Express	
Shipped To: Severn Trent Incorporated, Richland	Offsite Property No.		Bill of Lading/Air Bill No.	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	Cool 4C	None	None	Cool 4°C					
Type of Container	aG	aG	aG	aG	aG	AG					
No. of Container(s)	1	1	0	0	0	1					
Volume	120mL	120mL	120mL	120mL	120mL	+2.60 ml JT 12/29/03					
SAMPLE ANALYSIS	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Chromium Hex - 7196, NO2/NO3 - 353.1	See item (3) in Special Instructions	See item (4) in Special Instructions.						

WO4141

Sample No.	Matrix *	Sample Date	Sample Time										
B183L7	SOIL	12/9/03	1503	X	X	X	X	X	X				

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: Site Ref	Date/Time: 12/29/03 1300	Received By/Stored In: Greg Thomas Greg Thomas	Date/Time: 1300 12/29/03
Relinquished By/Removed From: Greg Thomas Greg Thomas	Date/Time: 1300 12/29/03	Received By/Stored In: Fed Ex	Date/Time:
Relinquished By/Removed From: FED Ex	Date/Time: 12-30-03 1800	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

** Please run all metals listed by 6010 supertrace method.

** Please review all SAF comments on the SAF/FSR document.

(1) Semi-VOA -- 8270A (Add-On) {Tributyl phosphate}; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(2) ICP Metals - 6010A (Supertrace) {Cadmium, Chromium, Lead, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Copper, Nickel}; Mercury - 7471 - (CV)
(3) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Ammonia - 350.1; Total Cyanide - 9010; pH (Soil) - 9045, TOC - 9060
(4) ICP Metals - 6010A (TAL) {Aluminum, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc}; ICP Metals - 6010A (Add-on) {Bismuth, Molybdenum}

60 ml Added for configuration and additional soil quantity for analysis. JT 12/29/03

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: E Wilson	Title: Sample Control	Date/Time: 123003 1000
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

A-6003-618(03/03)

8

LOT # F3L310112

SDG # WO4141

STL ST. LOUIS

CUR 7973

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F03-020-005	Page 1 of 1
Collector Pope/Hughes/Pfister	Company Contact Steve Trent	Telephone No. 373-5869	Project Coordinator TRENT, SJ	Price Code 8N Air Quality ☐
Project Designation 216-B-26 Characterization Sampling - Soil Sampling	Sampling Location C3245 ~~(12.5-15 ft)~~ 13'-15.5' 12/9/03		SAF No. F03-020	Data Turnaround 45 Days
Ice Chest No.	Field Logbook No. HNF-N-356-1	COA 119142ES10	Method of Shipment Govt. Vehicle	
Shipped To Waste Sampling & Characterization	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	Cool 4C	None	Cool 4C	Cool 4C	None				
Type of Container	P	aG	P	G/P	G	G/P				
No. of Container(s)	1	1	1	1	1	1				
Volume	20mL	60mL	120mL	120mL	60mL	120mL				
SAMPLE ANALYSIS	Activity Scan 12/9/03	See item (1) in Special Instructions.	See item (2) in Special Instructions.	See item (3) in Special Instructions	See item (4) in Special Instructions.	See item (5) in Special Instructions.				

Sample No.	Matrix *	Sample Date	Sample Time										
B183L7	SOIL	12/9/03	1503		X	X	X	X	X				

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From JS Pope / [signature]	Date/Time 12/9/03 1730	Received By/Stored In site fridge	Date/Time 12/9/03 1730
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

FH acknowledges that the analytical holding time for NO2, NO3, and PO4 by EPA Method 300.0 will not be met. The lab is to analyze pH within 24 hours of receipt. The laboratory is to report kerosene range organics from the WTPH-D analysis.

(1) Semi-VOA – 8270A (Add-On) {Tributyl phosphate}; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Antimony-125, Cesium-134, Tin-126}; Isotopic Plutonium; Isotopic Uranium; Neptunium-237; Americium-241
(3) ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Nickel, Silver}; ICP/MS - 200.8 (Add-on) {Lead, Mercury, Uranium}
(4) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Cations (IC) - 300.7 {Nitrogen in ammonium}; Cyanide (Total) - 335.2; pH (Soil) - 9045; TOC - 9060
(5) ICP Metals - 6010A (TAL) {Aluminum, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium, Vanadium, Zinc}; ICP Metals - 6010A (Add-on) {Bismuth, Molybdenum}

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By E Wilson	Title Sample Control	Date/Time 12/8/03 1000
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

A-6003-618(03/03)

000009

STL ST

Y

SEVERN TRENT **STL**

Lot No.: F3L310112
W04141

Condition Upon Receipt Form
St. Louis Laboratory

Client: Fluor Hanford

Date: 123003 Time: 1000

Quote No: 56414

Initiated by: EW

Shipper/No: Fed Ex 8409 0234 4212

COC/RFA Numbers: F03 020 005
F03 020 001

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1.	Y N	Sample received in undamaged condition.	5.	Y N	Sample volume sufficient for analysis.
2.	Y N	Sample received within 4°C ± 2°C*	6.	Y N	Sample received with Chain of Custody.
		Record temperature: 4°	7.	Y N	Chain of Custody matches sample IDs on containers.
3.	Y N N/A	Sample received with proper pH**.	8.	Y N	Custody seal received intact and tamper evident on cooler.
4.	Y N	Sample received in proper containers.	9.	Y N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes: pH, SVOA, WTPH, received out of hold.

Corrective Action:

- ☐ Client's Name: _____ Informed verbally on: _____ By: _____
- ☐ Client's Name: _____ Informed in writing on: _____ By: _____
- ☐ Sample(s) processed "as is". _____
- ☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: Sullivan Date: 123003 1000

Project Management Review: MWard Date: 12·31·03

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
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

7973

SL-ADMIN-0004, Revised 6/5/03
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SEMI-VOLATILE ORGANICS

FLUOR HANFORD IC

Client Sample ID: B183L7

GC/MS Semivolatiles

Lot-Sample #...: F3L310112-001 **Work Order #...:** F7GT61AW **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03
Prep Date.....: 01/05/04 **Analysis Date..:** 01/07/04
Prep Batch #...: 4005312
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Tributyl phosphate	ND	430	ug/kg	430

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	49	(19 - 115)
Phenol-d5	45	(27 - 115)
Nitrobenzene-d5	53	(10 - 115)
2-Fluorobiphenyl	54	(10 - 115)
2,4,6-Tribromophenol	40	(19 - 115)
Terphenyl-d14	54	(10 - 115)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

000011

FLUOR HANFORD IC

B183L7

GC/MS Semivolatiles

Lot-Sample #: F3L310112-001 **Work Order #:** F7GT61AW **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		13000	M	2.794	ug/kg

NOTE(S):

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

000012

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: F3L310112 **Work Order #...:** F7KFQ1AD **Matrix.....:** SOLID
MB Lot-Sample #: F4A050000-312

Prep Date.....: 01/05/04
Analysis Date..: 01/07/04 **Prep Batch #...:** 4005312
Dilution Factor: 1

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

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	52	(19 - 115)
Phenol-d5	47	(27 - 115)
Nitrobenzene-d5	54	(10 - 115)
2-Fluorobiphenyl	55	(10 - 115)
2,4,6-Tribromophenol	41	(19 - 115)
Terphenyl-d14	59	(10 - 115)

NOTE(S):

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

000013

FLUOR HANFORD IC

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F4A050000-312 B **Work Order #:** F7KFQ1AD **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		10000	M	2.794	ug/kg

NOTE(S):

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

000014

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3L310112 Work Order #...: F7KFQ1AC Matrix.....: SOLID
LCS Lot-Sample#: F4A050000-312
Prep Date.....: 01/05/04 Analysis Date..: 01/06/04
Prep Batch #...: 4005312
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	3330	1990	ug/kg	60	SW846 8270C
bis(2-Chloroethyl)-ether	3330	1960	ug/kg	59	SW846 8270C
2-Chlorophenol	3330	1940	ug/kg	58	SW846 8270C
2-Methylphenol	3330	1970	ug/kg	59	SW846 8270C
2,2'-oxybis(1-Chloropropa	3330	2140	ug/kg	64	SW846 8270C
3-Methylphenol & 4-Methylphenol	3330	2070	ug/kg	62	SW846 8270C
N-Nitrosodi-n-propyl-amine	3330	2280	ug/kg	68	SW846 8270C
Hexachloroethane	3330	2100	ug/kg	63	SW846 8270C
Nitrobenzene	3330	2090	ug/kg	63	SW846 8270C
Isophorone	3330	2270	ug/kg	68	SW846 8270C
2-Nitrophenol	3330	1970	ug/kg	59	SW846 8270C
2,4-Dimethylphenol	3330	1950	ug/kg	59	SW846 8270C
bis(2-Chloroethoxy) methane	3330	2140	ug/kg	64	SW846 8270C
2,4-Dichlorophenol	3330	1970	ug/kg	59	SW846 8270C
1,2,4-Trichloro-benzene	3330	1980	ug/kg	60	SW846 8270C
Naphthalene	3330	2100	ug/kg	63	SW846 8270C
4-Chloroaniline	3330	1230	ug/kg	37	SW846 8270C
Hexachlorobutadiene	3330	2010	ug/kg	60	SW846 8270C
4-Chloro-3-methylphenol	3330	2140	ug/kg	64	SW846 8270C
2-Methylnaphthalene	3330	2040	ug/kg	61	SW846 8270C
Hexachlorocyclopenta-diene	3330	2090	ug/kg	63	SW846 8270C
2,4,6-Trichloro-phenol	3330	2020	ug/kg	61	SW846 8270C
2,4,5-Trichloro-phenol	3330	2150	ug/kg	65	SW846 8270C
2-Nitroaniline	3330	2340	ug/kg	70	SW846 8270C
Dimethyl phthalate	3330	2240	ug/kg	67	SW846 8270C
Acenaphthylene	3330	2250	ug/kg	67	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3L310112 **Work Order #...:** F7KFQ1AC **Matrix.....:** SOLID
LCS Lot-Sample#: F4A050000-312

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,6-Dinitrotoluene	3330	2250	ug/kg	67	SW846 8270C
3-Nitroaniline	3330	1620	ug/kg	49	SW846 8270C
Acenaphthene	3330	2200	ug/kg	66	SW846 8270C
2,4-Dinitrophenol	3330	1240	ug/kg	37	SW846 8270C
4-Nitrophenol	3330	2150	ug/kg	65	SW846 8270C
Dibenzofuran	3330	2180	ug/kg	65	SW846 8270C
2,4-Dinitrotoluene	3330	2430	ug/kg	73	SW846 8270C
Diethyl phthalate	3330	2420	ug/kg	73	SW846 8270C
4-Chlorophenyl phenyl ether	3330	2210	ug/kg	66	SW846 8270C
Fluorene	3330	2240	ug/kg	67	SW846 8270C
4-Nitroaniline	3330	2220	ug/kg	66	SW846 8270C
4,6-Dinitro-2-methylphenol	3330	1660	ug/kg	50	SW846 8270C
N-Nitrosodiphenylamine	3330	2510	ug/kg	75	SW846 8270C
4-Bromophenyl phenyl ether	3330	2140	ug/kg	64	SW846 8270C
Hexachlorobenzene	3330	2260	ug/kg	68	SW846 8270C
Pentachlorophenol	3330	1690	ug/kg	51	SW846 8270C
Phenanthrene	3330	2280	ug/kg	68	SW846 8270C
Anthracene	3330	2260	ug/kg	68	SW846 8270C
Carbazole	3330	2340	ug/kg	70	SW846 8270C
Di-n-butyl phthalate	3330	2340	ug/kg	70	SW846 8270C
Fluoranthene	3330	2170	ug/kg	65	SW846 8270C
Pyrene	3330	2460	ug/kg	74	SW846 8270C
Butyl benzyl phthalate	3330	2470	ug/kg	74	SW846 8270C
3,3'-Dichlorobenzidine	3330	1530	ug/kg	46	SW846 8270C
Benzo(a)anthracene	3330	2380	ug/kg	71	SW846 8270C
Chrysene	3330	2500	ug/kg	75	SW846 8270C
bis(2-Ethylhexyl) phthalate	3330	2420	ug/kg	73	SW846 8270C
Di-n-octyl phthalate	3330	2330	ug/kg	70	SW846 8270C
Benzo(b)fluoranthene	3330	2380	ug/kg	72	SW846 8270C
Benzo(k)fluoranthene	3330	2480	ug/kg	74	SW846 8270C
Benzo(a)pyrene	3330	2320	ug/kg	69	SW846 8270C
Indeno(1,2,3-cd)pyrene	3330	2570	ug/kg	77	SW846 8270C
Dibenz(a,h)anthracene	3330	2480	ug/kg	74	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3L310112 **Work Order #...:** F7KFQ1AC **Matrix.....:** SOLID
LCS Lot-Sample#: F4A050000-312

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzo(ghi)perylene	**3330**	**2530**	**ug/kg**	**76**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	66	(30 - 115)
Phenol-d5	65	(41 - 115)
Nitrobenzene-d5	69	(20 - 115)
2-Fluorobiphenyl	70	(23 - 123)
2,4,6-Tribromophenol	70	(41 - 119)
Terphenyl-d14	74	(17 - 120)

NOTE(S):

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

Bold print denotes control parameters

000017

FLUOR HANFORD IC

Client Sample ID: B183L7

GC Semivolatiles

Lot-Sample #...: F3L310112-001 **Work Order #...:** F7GT61AX **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03
Prep Date.....: 01/06/04 **Analysis Date..:** 01/08/04
Prep Batch #...: 4006269
Dilution Factor: 1
% Moisture.....: 23 **Method.....:** SW846 8015 MOD

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Kerosene	ND	33	mg/kg	33
TPH - Diesel Range - WTPH-D	ND	33	mg/kg	2.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	41	(10 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

000018

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F3L310112
MB Lot-Sample #: F4A060000-269
Work Order #...: F7LEC1AA
Matrix.....: SOLID
Prep Date.....: 01/06/04
Analysis Date..: 01/08/04
Prep Batch #...: 4006269
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Kerosene	ND	25	mg/kg	SW846 8015 MOD
TPH - Diesel Range - WTPH	ND	25	mg/kg	SW846 8015 MOD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	79	(75 - 150)

NOTE(S):

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

000019

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F3L310112 **Work Order #...:** F7LEC1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: F4A060000-269 F7LEC1AD-LCSD
Prep Date.....: 01/06/04 **Analysis Date..:** 01/08/04
Prep Batch #...: 4006269
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
TPH - Diesel Range - WTPH-	**83.3**	**69.7**	**mg/kg**	**84**		**SW846 8015 MOD**
	83.3	**68.2**	**mg/kg**	**82**	**2.2**	**SW846 8015 MOD**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	132	(75 - 150)
	127	(75 - 150)

NOTE(S):

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

Bold print denotes control parameters

000020

METALS

FLUOR HANFORD IC

Client Sample ID: B183L7

TOTAL Metals

Lot-Sample #...: F3L310112-001 **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03
% Moisture.....: 23

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4005144						
Mercury	**0.070**	**0.043**	**mg/kg**	**SW846 7471A**	**01/05/04**	**F7GT61A3**
		Dilution Factor: 1		MDL.....: 0.022		
Prep Batch #...: 4005171						
Bismuth	**233**	**26.0**	**mg/kg**	**SW846 6010B**	**01/05/04**	**F7GT61A6**
		Dilution Factor: 1		MDL.....: 3.9		
Potassium	**784**	**650**	**mg/kg**	**SW846 6010B**	**01/05/04**	**F7GT61A5**
		Dilution Factor: 1		MDL.....: 95.9		
Sodium	**898**	**650**	**mg/kg**	**SW846 6010B**	**01/05/04**	**F7GT61A7**
		Dilution Factor: 1		MDL.....: 18.2		
Aluminum	**7110**	**26.0**	**mg/kg**	**SW846 6010B**	**01/05/04**	**F7GT61A8**
		Dilution Factor: 1		MDL.....: 3.2		
Cadmium	ND	0.65	mg/kg	SW846 6010B	01/05-01/08/04	F7GT61A9
		Dilution Factor: 1		MDL.....: 0.048		
Calcium	**8980**	**650**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AH**
		Dilution Factor: 1		MDL.....: 15.4		
Chromium	**7.1 J**	**1.3**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AJ**
		Dilution Factor: 1		MDL.....: 0.073		
Copper	**19.6**	**3.3**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AK**
		Dilution Factor: 1		MDL.....: 0.065		
Iron	**37900**	**13.0**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AL**
		Dilution Factor: 1		MDL.....: 2.9		
Lead	**4.3**	**0.65**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AM**
		Dilution Factor: 1		MDL.....: 0.18		
Magnesium	**6080**	**650**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AN**
		Dilution Factor: 1		MDL.....: 16.5		
Manganese	**641**	**2.0**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AP**
		Dilution Factor: 1		MDL.....: 0.23		

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FLUOR HANFORD IC

Client Sample ID: B183L7

TOTAL Metals

Lot-Sample #...: F3L310112-001 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**11.2 J**	**5.2**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AQ**
		Dilution Factor: 1		MDL.....: 0.16		
Silver	**0.24 B**	**1.3**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AR**
		Dilution Factor: 1		MDL.....: 0.051		
Vanadium	**101**	**6.5**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AT**
		Dilution Factor: 1		MDL.....: 0.40		
Zinc	**64.6**	**2.6**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7GT61AU**
		Dilution Factor: 1		MDL.....: 0.56		
Molybdenum	ND	5.2	mg/kg	SW846 6010B	01/05-01/08/04	F7GT61AV
		Dilution Factor: 1		MDL.....: 0.11		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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

B Estimated result. Result is less than RL.

000022

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F3L310112-001 **Prep Batch #...:** 4005144									
								% Moisture.....: 23	
Mercury									
	0.070	0.217	0.336	mg/kg	123		SW846 7471A	01/05/04	F7GT61DD
	0.070	0.217	0.284	mg/kg	99	17	SW846 7471A	01/05/04	F7GT61DE
			Dilution Factor: 1						
MS Lot-Sample #: F3L310112-001 **Prep Batch #...:** 4005171									
								% Moisture.....: 23	
Bismuth									
	233	260	467	mg/kg	90		SW846 6010B	01/05/04	F7GT61EA
	233	260	460	mg/kg	87	1.6	SW846 6010B	01/05/04	F7GT61EC
			Dilution Factor: 1						
Potassium									
	784	6500	7330	mg/kg	101		SW846 6010B	01/05/04	F7GT61D8
	784	6500	7500	mg/kg	103	2.3	SW846 6010B	01/05/04	F7GT61D9
			Dilution Factor: 1						
Sodium									
	898	6500	7400	mg/kg	100		SW846 6010B	01/05/04	F7GT61ED
	898	6500	7330	mg/kg	99	0.95	SW846 6010B	01/05/04	F7GT61EE
			Dilution Factor: 1						
Aluminum									
	7110	260	7990 N	mg/kg	340		SW846 6010B	01/05/04	F7GT61EF
	7110	260	8520 N	mg/kg	542	6.4	SW846 6010B	01/05/04	F7GT61EG
			Dilution Factor: 1						
Cadmium									
	ND	6.50	5.34	mg/kg	82		SW846 6010B	01/05-01/08/04	F7GT61EH
	ND	6.50	5.23	mg/kg	80	2.1	SW846 6010B	01/05-01/08/04	F7GT61EJ
			Dilution Factor: 1						
Calcium									
	8980	6500	14000	mg/kg	77		SW846 6010B	01/05-01/08/04	F7GT61DF
	8980	6500	14200	mg/kg	81	1.7	SW846 6010B	01/05-01/08/04	F7GT61DG
			Dilution Factor: 1						
Chromium									
	7.1	26.0	30.8	mg/kg	91		SW846 6010B	01/05-01/08/04	F7GT61DH
	7.1	26.0	31.5	mg/kg	94	2.4	SW846 6010B	01/05-01/08/04	F7GT61DJ
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3L310112
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03
Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper									
	19.6	32.5	48.2	mg/kg	88		SW846 6010B	01/05-01/08/04	F7GT61DK
	19.6	32.5	47.7	mg/kg	87	1.0	SW846 6010B	01/05-01/08/04	F7GT61DL
			Dilution Factor: 1						
Iron									
	37900	130	35800 N	mg/kg	0.0		SW846 6010B	01/05-01/08/04	F7GT61DM
	37900	130	35000 N	mg/kg	0.0	0.0	SW846 6010B	01/05-01/08/04	F7GT61DN
			Dilution Factor: 1						
Lead									
	4.3	65.0	61.4	mg/kg	88		SW846 6010B	01/05-01/08/04	F7GT61DP
	4.3	65.0	61.1	mg/kg	87	0.55	SW846 6010B	01/05-01/08/04	F7GT61DQ
			Dilution Factor: 1						
Magnesium									
	6080	6500	11600	mg/kg	84		SW846 6010B	01/05-01/08/04	F7GT61DR
	6080	6500	11500	mg/kg	84	0.16	SW846 6010B	01/05-01/08/04	F7GT61DT
			Dilution Factor: 1						
Manganese									
	641	65.0	479 N	mg/kg	0.0		SW846 6010B	01/05-01/08/04	F7GT61DU
	641	65.0	476 N	mg/kg	0.0	0.0	SW846 6010B	01/05-01/08/04	F7GT61DV
			Dilution Factor: 1						
Nickel									
	11.2	65.0	66.8	mg/kg	85		SW846 6010B	01/05-01/08/04	F7GT61DW
	11.2	65.0	67.0	mg/kg	86	0.27	SW846 6010B	01/05-01/08/04	F7GT61DX
			Dilution Factor: 1						
Silver									
	0.24	6.50	7.58	mg/kg	113		SW846 6010B	01/05-01/08/04	F7GT61D0
	0.24	6.50	7.50	mg/kg	112	0.98	SW846 6010B	01/05-01/08/04	F7GT61D1
			Dilution Factor: 1						
Vanadium									
	101	65.0	161	mg/kg	92		SW846 6010B	01/05-01/08/04	F7GT61D2
	101	65.0	160	mg/kg	90	0.93	SW846 6010B	01/05-01/08/04	F7GT61D3
			Dilution Factor: 1						
Zinc									
	64.6	65.0	122	mg/kg	89		SW846 6010B	01/05-01/08/04	F7GT61D4
	64.6	65.0	122	mg/kg	89	0.08	SW846 6010B	01/05-01/08/04	F7GT61D5
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum									
	ND	130	120	mg/kg	92		SW846 6010B	01/05-01/08/04	F7GT61D6
	ND	130	119	mg/kg	91	0.97	SW846 6010B	01/05-01/08/04	F7GT61D7

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.

000025

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F4A050000-144 **Prep Batch #...:** 4005144						
Mercury	ND	0.033	mg/kg	SW846 7471A	01/05/04	F7J4Q1AA
		Dilution Factor: 1				
MB Lot-Sample #: F4A050000-171 **Prep Batch #...:** 4005171						
Bismuth	ND	20.0	mg/kg	SW846 6010B	01/05/04	F7J5R1AQ
		Dilution Factor: 1				
Potassium	ND	500	mg/kg	SW846 6010B	01/05/04	F7J5R1AP
		Dilution Factor: 1				
Sodium	ND	500	mg/kg	SW846 6010B	01/05/04	F7J5R1AR
		Dilution Factor: 1				
Aluminum	ND	20.0	mg/kg	SW846 6010B	01/05/04	F7J5R1AT
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AU
		Dilution Factor: 1				
Calcium	ND	500	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AA
		Dilution Factor: 1				
Chromium	**0.057 B**	**1.0**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7J5R1AC**
		Dilution Factor: 1				
Copper	ND	2.5	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AD
		Dilution Factor: 1				
Iron	ND	10.0	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AF
		Dilution Factor: 1				
Magnesium	ND	500	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AG
		Dilution Factor: 1				
Manganese	ND	1.5	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AH
		Dilution Factor: 1				
Nickel	**0.30 B**	**4.0**	**mg/kg**	**SW846 6010B**	**01/05-01/08/04**	**F7J5R1AJ**
		Dilution Factor: 1				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Silver	ND	1.0	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AK
		Dilution Factor: 1				
Vanadium	ND	5.0	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AL
		Dilution Factor: 1				
Zinc	ND	2.0	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AM
		Dilution Factor: 1				
Molybdenum	ND	4.0	mg/kg	SW846 6010B	01/05-01/08/04	F7J5R1AN
		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.

000027

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F4A050000-144 **Prep Batch #...:** 4005144							
Mercury	37.7	38.0	mg/kg	101	SW846 7471A	01/05/04	F7J4Q1AC
			Dilution Factor: 50				
LCS Lot-Sample#: F4A050000-171 **Prep Batch #...:** 4005171							
Potassium	1930	1930	mg/kg	100	SW846 6010B	01/05/04	F7J5R1A9
			Dilution Factor: 1				
Bismuth	200	181	mg/kg	90	SW846 6010B	01/05-01/20/04	F7J5R1CA
			Dilution Factor: 1				
Sodium	452	450	mg/kg	100	SW846 6010B	01/05/04	F7J5R1CC
			Dilution Factor: 1				
Aluminum	6360	5930	mg/kg	93	SW846 6010B	01/05/04	F7J5R1CD
			Dilution Factor: 1				
Cadmium	101	106	mg/kg	105	SW846 6010B	01/05-01/08/04	F7J5R1CE
			Dilution Factor: 1				
Calcium	3320	3310	mg/kg	100	SW846 6010B	01/05-01/08/04	F7J5R1AV
			Dilution Factor: 1				
Chromium	167	171	mg/kg	102	SW846 6010B	01/05-01/08/04	F7J5R1AW
			Dilution Factor: 1				
Copper	118	121	mg/kg	103	SW846 6010B	01/05-01/08/04	F7J5R1AX
			Dilution Factor: 1				
Iron	11400	11800	mg/kg	103	SW846 6010B	01/05-01/08/04	F7J5R1A0
			Dilution Factor: 1				
Lead	102	104	mg/kg	102	SW846 6010B	01/05-01/08/04	F7J5R1A1
			Dilution Factor: 1				
Magnesium	1980	1970	mg/kg	100	SW846 6010B	01/05-01/08/04	F7J5R1A2
			Dilution Factor: 1				
Manganese	534	532	mg/kg	100	SW846 6010B	01/05-01/08/04	F7J5R1A3
			Dilution Factor: 1				

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	127	130	mg/kg	103	SW846 6010B	01/05-01/08/04	F7J5R1A4
			Dilution Factor: 1				
Silver	82.9	82.6	mg/kg	100	SW846 6010B	01/05-01/08/04	F7J5R1A5
			Dilution Factor: 1				
Vanadium	118	126	mg/kg	107	SW846 6010B	01/05-01/08/04	F7J5R1A6
			Dilution Factor: 1				
Zinc	193	196	mg/kg	102	SW846 6010B	01/05-01/08/04	F7J5R1A7
			Dilution Factor: 1				
Molybdenum	45.5	48.6	mg/kg	107	SW846 6010B	01/05-01/08/04	F7J5R1A8
			Dilution Factor: 1				

NOTE(S):

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

WET CHEMISTRY

FLUOR HANFORD IC

Client Sample ID: B183L7

General Chemistry

Lot-Sample #...: F3L310112-001 **Work Order #...:** F7GT6 **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03
% Moisture.....: 23

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Phosphate as P, Ortho	**19.0**	**5.0**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016429**
		Dilution Factor: 1		MDL.....: 2.6		
pH (solid)	**9.6**		**No Units**	**SW846 9045A**	**01/15/04**	**4015303**
		Dilution Factor: 1		MDL.....:		
Chloride	**0.55 B**	**2.0**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016425**
		Dilution Factor: 1		MDL.....: 0.45		
Fluoride	**0.45 B,J**	**1.0**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016426**
		Dilution Factor: 1		MDL.....: 0.40		
Hexavalent Chromium	**0.61**	**0.40**	**mg/kg**	**SW846 7196A**	**01/06/04**	**4006381**
		Dilution Factor: 1		MDL.....: 0.054		
Nitrate	**1.6**	**0.20**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016427**
		Dilution Factor: 1		MDL.....: 0.11		
Nitrate/Nitrite as N	**4.9**	**0.50**	**mg/kg**	**MCAWW 353.1**	**01/02/04**	**4002297**
		Dilution Factor: 1		MDL.....: 0.036		
Nitrite	**0.097 B**	**0.20**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016428**
		Dilution Factor: 1		MDL.....: 0.074		
Nitrogen, as Ammonia	ND	0.50	mg/kg	MCAWW 350.1	12/31/03	3365326
		Dilution Factor: 1		MDL.....: 0.22		
Percent Moisture	**23.1**	**0.10**	**%**	**MCAWW 160.3 MOD**	**01/05-01/06/04**	**4005166**
		Dilution Factor: 1		MDL.....:		
Sulfate	**5.1**	**5.0**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016430**
		Dilution Factor: 1		MDL.....: 0.54		
Total Cyanide	ND	0.50	mg/kg	SW846 9010A	01/02/04	4002257
		Dilution Factor: 1		MDL.....: 0.13		
Total Organic Carbon	**895**	**25.0**	**mg/kg**	**SW846 9060**	**01/16/04**	**4016447**
		Dilution Factor: 1		MDL.....: 19.8		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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

000031

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F3L310112 **Matrix.....:** SOLID
Date Sampled...: 12/09/03 **Date Received..:** 12/30/03

Percnt Moisture: 24

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #...:		F65E01CE		MS Lot-Sample #:	F3L190375-001
	0.79	20.0	20.9	mg/kg	100	MCAWW 300.0A	01/15-01/16/04	4016425
			Dilution Factor: 1					
Fluoride			Work Order #...:		F65E01CF		MS Lot-Sample #:	F3L190375-001
	0.47	20.0	20.7	mg/kg	101	MCAWW 300.0A	01/15-01/16/04	4016426
			Dilution Factor: 1					
Nitrate			Work Order #...:		F65E01CG		MS Lot-Sample #:	F3L190375-001
	4.1	4.00	8.25	mg/kg	104	MCAWW 300.0A	01/15-01/16/04	4016427
			Dilution Factor: 1					
Nitrate/Nitrite as N			Work Order #...:		F7GT61DA		MS Lot-Sample #:	F3L310112-001
	4.9	5.00	9.46	mg/kg	91	MCAWW 353.1	01/02/04	4002297
			Dilution Factor: 1					
Nitrite			Work Order #...:		F65E01CH		MS Lot-Sample #:	F3L190375-001
	0.13	1.00	1.13	mg/kg	101	MCAWW 300.0A	01/15-01/16/04	4016428
			Dilution Factor: 1					
Nitrogen, as Ammonia			Work Order #...:		F7GT61C2		MS Lot-Sample #:	F3L310112-001
	ND	5.00	5.00	mg/kg	100	MCAWW 350.1	12/31/03	3365326
			Dilution Factor: 1					
Phosphate as P, Ortho			Work Order #...:		F65E01CJ		MS Lot-Sample #:	F3L190375-001
	44.0	40.0	84.5	mg/kg	101	MCAWW 300.0A	01/15-01/16/04	4016429
			Dilution Factor: 1					
Sulfate			Work Order #...:		F65E01CK		MS Lot-Sample #:	F3L190375-001
	9.7	40.0	50.0	mg/kg	101	MCAWW 300.0A	01/15-01/16/04	4016430
			Dilution Factor: 1					

NOTE(S):

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

000032

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F3L310112 **Work Order #...:** F7GT6-SMP F7GT6-DUP **Matrix.....:** SOLID

Date Sampled...: 12/09/03 **Date Received..:** 12/30/03

% Moisture.....: 23

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate/Nitrite as N						SD Lot-Sample #:	F3L310112-001	
	4.9	4.9	mg/kg	0.41	(0-20)	MCAWW 353.1	01/02/04	4002297
			Dilution Factor: 1					
Nitrogen, as Ammonia						SD Lot-Sample #:	F3L310112-001	
	ND	ND	mg/kg	0	(0-30)	MCAWW 350.1	12/31/03	3365326
			Dilution Factor: 1					
pH (solid)						SD Lot-Sample #:	F3L310112-001	
	9.6	9.6	No Units	0.31	(0-30)	SW846 9045A	01/15/04	4015303
			Dilution Factor: 1					

000033

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: F759H1AA		MB Lot-Sample #:	F4A160000-425	
	ND	2.0	mg/kg	MCAWW 300.0A	01/15-01/16/04	4016425
		Dilution Factor: 1				
Fluoride		Work Order #: F759L1AA		MB Lot-Sample #:	F4A160000-426	
	0.59 B	**1.0**	**mg/kg**	**MCAWW 300.0A**	**01/15-01/16/04**	**4016426**
		Dilution Factor: 1				
Hexavalent Chromium		Work Order #: F7LXW1AA		MB Lot-Sample #:	F4A060000-381	
	ND	0.40	mg/kg	SW846 7196A	01/06/04	4006381
		Dilution Factor: 1				
Nitrate		Work Order #: F759V1AA		MB Lot-Sample #:	F4A160000-427	
	ND	0.20	mg/kg	MCAWW 300.0A	01/15-01/16/04	4016427
		Dilution Factor: 1				
Nitrate/Nitrite as N		Work Order #: F7JD21AA		MB Lot-Sample #:	F4A020000-297	
	ND	0.50	mg/kg	MCAWW 353.1	01/02/04	4002297
		Dilution Factor: 1				
Nitrite		Work Order #: F75911AA		MB Lot-Sample #:	F4A160000-428	
	ND	0.20	mg/kg	MCAWW 300.0A	01/15-01/16/04	4016428
		Dilution Factor: 1				
Nitrogen, as Ammonia		Work Order #: F7HFF1AA		MB Lot-Sample #:	F3L310000-326	
	ND	0.50	mg/kg	MCAWW 350.1	12/31/03	3365326
		Dilution Factor: 1				
Phosphate as P, Ortho		Work Order #: F75921AA		MB Lot-Sample #:	F4A160000-429	
	ND	5.0	mg/kg	MCAWW 300.0A	01/15-01/16/04	4016429
		Dilution Factor: 1				
Sulfate		Work Order #: F75941AA		MB Lot-Sample #:	F4A160000-430	
	ND	5.0	mg/kg	MCAWW 300.0A	01/15-01/16/04	4016430
		Dilution Factor: 1				
Total Cyanide		Work Order #: F7H9H1AA		MB Lot-Sample #:	F4A020000-257	
	ND	0.50	mg/kg	SW846 9010A	01/02/04	4002257
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F76EV1AA		MB Lot-Sample #:	F4A160000-447	
	ND	25.0	mg/kg	SW846 9060	01/16/04	4016447
		Dilution Factor: 1				

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000034

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F3L310112 **Matrix.....:** SOLID

NOTE(S):

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

B Estimated result. Result is less than RL.

000035

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#:F759H1AC-LCS/F759H1AD-LCSD				LCS Lot-Sample#: F4A160000-425	
	10.0	10.3	mg/kg	103		MCAWW 300.0A	01/15-01/16/04	4016425
	10.0	9.39	mg/kg	94	9.0	MCAWW 300.0A	01/15-01/16/04	4016425
			Dilution Factor: 1					
Fluoride			WO#:F759L1AC-LCS/F759L1AD-LCSD				LCS Lot-Sample#: F4A160000-426	
	5.00	4.81	mg/kg	96		MCAWW 300.0A	01/15-01/16/04	4016426
	5.00	4.68	mg/kg	94	2.8	MCAWW 300.0A	01/15-01/16/04	4016426
			Dilution Factor: 1					
Nitrate			WO#:F759V1AC-LCS/F759V1AD-LCSD				LCS Lot-Sample#: F4A160000-427	
	2.00	2.03	mg/kg	101		MCAWW 300.0A	01/15-01/16/04	4016427
	2.00	1.91	mg/kg	96	5.8	MCAWW 300.0A	01/15-01/16/04	4016427
			Dilution Factor: 1					
Nitrate/Nitrite as N			WO#:F7JD21AC-LCS/F7JD21AD-LCSD				LCS Lot-Sample#: F4A020000-297	
	4.00	4.30	mg/kg	108		MCAWW 353.1	01/02/04	4002297
	4.00	4.35	mg/kg	109	1.2	MCAWW 353.1	01/02/04	4002297
			Dilution Factor: 1					
Nitrite			WO#:F75911AC-LCS/F75911AD-LCSD				LCS Lot-Sample#: F4A160000-428	
	0.800	0.834	mg/kg	104		MCAWW 300.0A	01/15-01/16/04	4016428
	0.800	0.790	mg/kg	99	5.4	MCAWW 300.0A	01/15-01/16/04	4016428
			Dilution Factor: 1					
Nitrogen, as Ammonia			WO#:F7HFF1AC-LCS/F7HFF1AD-LCSD				LCS Lot-Sample#: F3L310000-326	
	20.0	19.3	mg/kg	96		MCAWW 350.1	12/31/03	3365326
	20.0	19.6	mg/kg	98	1.3	MCAWW 350.1	12/31/03	3365326
			Dilution Factor: 1					
Phosphate as P, Ortho			WO#:F75921AC-LCS/F75921AD-LCSD				LCS Lot-Sample#: F4A160000-429	
	40.0	40.7	mg/kg	102		MCAWW 300.0A	01/15-01/16/04	4016429
	40.0	39.1	mg/kg	98	3.8	MCAWW 300.0A	01/15-01/16/04	4016429
			Dilution Factor: 1					
Sulfate			WO#:F75941AC-LCS/F75941AD-LCSD				LCS Lot-Sample#: F4A160000-430	
	40.0	40.4	mg/kg	101		MCAWW 300.0A	01/15-01/16/04	4016430
	40.0	38.7	mg/kg	97	4.1	MCAWW 300.0A	01/15-01/16/04	4016430
			Dilution Factor: 1					

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000036

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Cyanide		WO#:F7H9H1AC-LCS/F7H9H1AD-LCSD LCS Lot-Sample#: F4A020000-257						
	5.00	5.10	mg/kg	102		SW846 9010A	01/02/04	4002257
	5.00	5.10	mg/kg	102	0.0	SW846 9010A	01/02/04	4002257
		Dilution Factor: 1						
Total Organic Carbon		WO#:F76EV1AC-LCS/F76EV1AD-LCSD LCS Lot-Sample#: F4A160000-447						
	600	623	mg/kg	104		SW846 9060	01/16/04	4016447
	600	647	mg/kg	108	3.8	SW846 9060	01/16/04	4016447
		Dilution Factor: 1						

NOTE(S):

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

000037

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F3L310112 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
pH (solid)			Work Order #: F72X21AA		LCS Lot-Sample#: F4A150000-303		
	7.00	7.02	No Units	100	SW846 9045A	01/15/04	4015303
			Dilution Factor: 1				
Hexavalent Chromium			Work Order #: F7LXW1AC		LCS Lot-Sample#: F4A060000-381		
	2.00	1.96	mg/kg	98	SW846 7196A	01/06/04	4006381
			Dilution Factor: 1				

NOTE(S):

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

000038