0059404

SAF-B01-054

100 B/C Area Effluent Pipeline & Proximity Site Remediation Activities - Full Protocol

FINAL DATA PACKAGE

FAX RESULTS TO:

Dave Shea 373-1395 N/A
INITIAL/DATE

VERIFICATION OF CLIENT RECEIPT:

Phone or CC:Mail to Dave Shea N/A
INITIAL/DATE

COMPLETE COPY OF DATA PACKAGE TO:

Dave Shea X3-40 BS 4/17
INITIAL/DATE

Dean Strom X3-40 BS 4/17
INITIAL/DATE

Jeanette Duncan BS 4/17
INITIAL/DATE

COMMENTS: (PLEASE INCLUDE THE FOLLOWING ON THE FAX COVER SHEET)

SDG W04015 SAF-B01-054

Rad only Chem only X Rad & Chem

X Complete Partial

Waste Site/Sample Location: 1607-B-8 Septic System

RECEIVED
MAY 19 2003
EDMC

SEVERN TRENT STL

RECEIVED APR 2003

ANALYTICAL REPORT

PROJECT NO. 100B/C EFFLUENT

B01-054

Lot #: F3D020197
SDG #: W04015

Joan Kessner

Bechtel Hanford, Inc.
3190 George Washington Way
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.

MARTI WARD
Project Manager

April 9, 2003

Severn Trent Laboratories, Inc.
STL St. Louis • 13715 Rider Trail North, Earth City, MO 63045
Tel 314 298 8566 Fax 314 298 8757 • www.stl-inc.com

A part of Severn Trent plc

SEVERN TRENT STL

April 10, 2003

STL LOT NUMBER: **F3D020197**
SDG: W04015

Joan Kessner
Bechtel Hanford, Inc.
3190 George Washington Way
Richland, WA 99352

Dear Joan Kessner,

This report contains the analytical results for the sample received under chain of custody by Severn Trent Laboratories (STL) on April 2, 2003. This sample is associated with your B01-054 SAF.

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
Project Manager

cc: Project File

SEVERN TRENT STL

SDG: W04015

Nonconformance 06-18290

Affected Samples:
F3D020197 (1): J00KV2

Affected Methods:
6010B

Case Narrative:
The MS/MSD Silver recoveries are above the established QC limits. The RPD is within method acceptance criteria indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Corrective Action:
No further action is required.

Nonconformance 06-18315

Affected Samples:
F3D020197 (1): J00KV2

Affected Methods:
8082

Case Narrative:
The closing CCV recovery was outside the upper QC limit (greater than 15% RSD) for Aroclor 1016 and 1260 on the "A" channel indicating a potential high bias for those analytes in the samples associated with this CCV. These analytes were reported from the "B" channel and were not impacted by this non-conformance.

Corrective Action:
No further action is required.

SAMPLE SUMMARY

F3D020197

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FK64L	001	J00KV2	03/31/03	11:55

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.

METHODS SUMMARY

F3D020197

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Organochlorine Pesticides	SW846 8081A	SW846 3550
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
PCBs by SW-846 8082	SW846 8082	SW846 3550B/366
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 3550B
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.

Cur 6304

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B01-054-020	Page 1 of 1
Collector: D.Shea	Company Contact: D.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code: 8L; Data Turnaround: 7 ~~21~~ Days
Project Designation: 100 B/C Area Effluent Pipeline & Proximity Site Remediatio	Sampling Location: 100 BC, 1607-B-8 Septic system		SAF No.: B01-054	Air Quality: DWS 3/31/03
Ice Chest No.: TJ-9	Field Logbook No.: EL-1573	COA: R607B2F00	Method of Shipment: FED EX	
Shipped To: Severn Trent Incorporated, ~~Richland~~ ST LOUIS DRD 4/03	Offsite Property No.: A030201		Bill of Lading/Air Bill No.: SEE OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	
Type of Container	G/P	G/P	G/P	aG	aG	aG	G/P	G/P	G/P	
No. of Container(s)	1	1 ~~0~~	1	1	1	1	1	1	1	
Volume	120mL	120mL	60mL	250g	120g	60mL	60mL	20mL	500 mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions. *	ICP Metals - 6010A (Add-on) (Chromium, Lead); Mercury - 7471 - (CV)	Chromium Hex - 7196 DRD 4/03	Semi-VOA - 8270A (TCL) *	Pesticides - 8081 *	PCBs - 8082 *	Gross Alpha; Gross Beta DRD 4/03	Activity Scan	(2) item	

W04015

* Recvd. in ST Louis

Sample No.	Matrix *	Sample Date	Sample Time									
J00KV2	SOIL	3/31/03	1155	✓	✓	✓	✓	✓	✓	✓	✓	✓

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Dwshea Dwshea	Date/Time: 3/31/03 1807	Received By/Stored In: Fridge 3A	Date/Time: 3/31/03 1807
Relinquished By/Removed From: REF 3A	Date/Time: 4/03 0800	Received By/Stored In: SJGALE [signature]	Date/Time: 4/03 0800
Relinquished By/Removed From: SJGALE [signature]	Date/Time: 4/03 0800	Received By/Stored In: FED EX	Date/Time:
Relinquished By/Removed From: FED Ex	Date/Time:	Received By/Stored In: [signature]	Date/Time: 4.2.03 0900
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010TR (Client List) (Arsenic, Barium, Cadmium, Selenium, Silver)

(2) Gamma spec Cs-137, Co-60, Eu 152, 154, & 155, Am-241, U238

Personnel not available to relinquish samples from the 3728 Ref # 31 on 4/1/03

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	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (03/01/2002)

STL ST

SEVERN TRENT SERVICES

Lot No.: F3D020197
W04015

Condition Upon Receipt Form
St. Louis Laboratory

Client: Richland
Quote No: 45892
Shipper/No: Fed X Ground

Date: 4.2.03 Time: 0900
Initiated by: SV
COC/RFA Numbers: below

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: 2°, 3°, 3°, 3°, 4°, 2°	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: 7915 6477 7400 W03-004-20, 29, 30, 14, 10, 16, 8, 4
7902 4810 7185 B01-054-020 ✓
7928 6102 4181
7915 6477 9351
7902 4810 7200
7922 2039 7020

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: [signature] Date: 4.2.03

Project Management Review: Mullard Date: 4.2.03

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

SEMI-VOLATILE ORGANICS

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

GC/MS Semivolatiles

Lot-Sample #...: F3D020197-001 **Work Order #...:** FK64L1AL **Matrix.....:** SOLID
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03
Prep Date.....: 04/04/03 **Analysis Date..:** 04/07/03
Prep Batch #...: 3094244
Dilution Factor: 1
% Moisture.....: 3.3 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	340	ug/kg	75
bis(2-Chloroethyl)-ether	ND	340	ug/kg	53
2-Chlorophenol	ND	340	ug/kg	71
1,3-Dichlorobenzene	ND	340	ug/kg	34
1,4-Dichlorobenzene	ND	340	ug/kg	31
1,2-Dichlorobenzene	ND	340	ug/kg	36
2-Methylphenol	ND	340	ug/kg	64
2,2'-oxybis(1-Chloropropane)	ND	340	ug/kg	66
4-Methylphenol	ND	680	ug/kg	52
N-Nitrosodi-n-propyl-amine	ND	340	ug/kg	72
Hexachloroethane	ND	340	ug/kg	30
Nitrobenzene	ND	340	ug/kg	60
Isophorone	ND	340	ug/kg	78
2-Nitrophenol	ND	340	ug/kg	47
2,4-Dimethylphenol	ND	340	ug/kg	69
bis(2-Chloroethoxy) methane	ND	340	ug/kg	74
2,4-Dichlorophenol	ND	340	ug/kg	74
1,2,4-Trichloro-benzene	ND	340	ug/kg	62
Naphthalene	ND	340	ug/kg	64
4-Chloroaniline	ND	340	ug/kg	67
Hexachlorobutadiene	ND	340	ug/kg	65
4-Chloro-3-methylphenol	ND	340	ug/kg	76
2-Methylnaphthalene	ND	340	ug/kg	77
Hexachlorocyclopenta-diene	ND	1700	ug/kg	23
2,4,6-Trichloro-phenol	ND	340	ug/kg	90
2,4,5-Trichloro-phenol	ND	340	ug/kg	96
2-Chloronaphthalene	ND	340	ug/kg	16
2-Nitroaniline	ND	1700	ug/kg	89
Dimethyl phthalate	ND	340	ug/kg	97
Acenaphthylene	ND	340	ug/kg	88
2,6-Dinitrotoluene	ND	340	ug/kg	64

(Continued on next page)

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

GC/MS Semivolatiles

Lot-Sample #...: F3D020197-001 Work Order #...: FK64L1AL Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	1700	ug/kg	100
Acenaphthene	ND	340	ug/kg	94
2,4-Dinitrophenol	ND	1700	ug/kg	55
4-Nitrophenol	ND	1700	ug/kg	71
Dibenzofuran	ND	340	ug/kg	110
Dibenzo(a,h)anthracene	ND	340	ug/kg	100
2,4-Dinitrotoluene	ND	340	ug/kg	75
Diethyl phthalate	ND	340	ug/kg	100
Fluorene	ND	340	ug/kg	91
4-Chlorophenyl phenyl ether	ND	340	ug/kg	100
4-Nitroaniline	ND	1700	ug/kg	92
4,6-Dinitro-2-methylphenol	ND	1700	ug/kg	28
N-Nitrosodiphenylamine	ND	340	ug/kg	98
Pyrene	ND	340	ug/kg	110
4-Bromophenyl phenyl ether	ND	340	ug/kg	100
Hexachlorobenzene	ND	340	ug/kg	110
Pentachlorophenol	ND	1700	ug/kg	63
Phenanthrene	ND	340	ug/kg	100
Anthracene	ND	340	ug/kg	89
Carbazole	ND	340	ug/kg	96
Di-n-butyl phthalate	ND	340	ug/kg	92
Fluoranthene	ND	340	ug/kg	91
Butyl benzyl phthalate	ND	340	ug/kg	83
Benzo(a)anthracene	ND	340	ug/kg	92
3,3'-Dichlorobenzidine	ND	1700	ug/kg	83
Chrysene	ND	340	ug/kg	110
bis(2-Ethylhexyl) phthalate	ND	340	ug/kg	73
Di-n-octyl phthalate	ND	340	ug/kg	72
Benzo(b)fluoranthene	ND	340	ug/kg	97
Benzo(k)fluoranthene	ND	340	ug/kg	120
Benzo(a)pyrene	ND	340	ug/kg	95
Indeno(1,2,3-cd)pyrene	ND	340	ug/kg	82
Benzo(ghi)perylene	ND	340	ug/kg	140

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(19 - 115)
Phenol-d5	65	(27 - 115)
Nitrobenzene-d5	69	(10 - 115)
2-Fluorobiphenyl	71	(10 - 115)
2,4,6-Tribromophenol	68	(19 - 115)
Terphenyl-d14	81	(10 - 115)

(Continued on next page)

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

GC/MS Semivolatiles

Lot-Sample #...: F3D020197-001 Work Order #...: FK64L1AL Matrix.....: SOLID

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

BECHTEL HANFORD, INC.

J00KV2

GC/MS Semivolatiles

Lot-Sample #: F3D020197-001 **Work Order #:** FK64L1AL **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		11000	M	4.088	ug/kg
Unknown organic acid		240	M	15.966	ug/kg
Friedelin	559-74-0	560	M	19.876	ug/kg
Unknown alkane		190	M	20.88	ug/kg
Unknown alkane		200	M	22.354	ug/kg
Unknown alkene		140	M	22.466	ug/kg

NOTE(S):

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

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1A8-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1A9-MSD
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03
Prep Date.....: 04/04/03 **Analysis Date..:** 04/07/03
Prep Batch #...: 3094244
Dilution Factor: 1 **% Moisture.....:** 3.3

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	3440	2360	ug/kg	68		SW846 8270C
	ND	3440	2090	ug/kg	61	12	SW846 8270C
bis(2-Chloroethyl)-ether	ND	3440	2260	ug/kg	66		SW846 8270C
	ND	3440	2040	ug/kg	59	10	SW846 8270C
2-Chlorophenol	ND	3440	2340	ug/kg	68		SW846 8270C
	ND	3440	2080	ug/kg	60	12	SW846 8270C
2-Methylphenol	ND	3440	2320	ug/kg	67		SW846 8270C
	ND	3440	2030	ug/kg	59	13	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	3440	2280	ug/kg	66		SW846 8270C
	ND	3440	2040	ug/kg	59	11	SW846 8270C
4-Methylphenol	ND	3440	2390	ug/kg	69		SW846 8270C
	ND	3440	2120	ug/kg	62	12	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	3440	2760	ug/kg	80		SW846 8270C
	ND	3440	2470	ug/kg	72	11	SW846 8270C
Hexachloroethane	ND	3440	2280	ug/kg	66		SW846 8270C
	ND	3440	2070	ug/kg	60	9.6	SW846 8270C
Nitrobenzene	ND	3440	2580	ug/kg	75		SW846 8270C
	ND	3440	2290	ug/kg	67	12	SW846 8270C
Isophorone	ND	3440	2890	ug/kg	84		SW846 8270C
	ND	3440	2570	ug/kg	75	12	SW846 8270C
2-Nitrophenol	ND	3440	2500	ug/kg	73		SW846 8270C
	ND	3440	2230	ug/kg	65	12	SW846 8270C
2,4-Dimethylphenol	ND	3440	2470	ug/kg	72		SW846 8270C
	ND	3440	2160	ug/kg	63	14	SW846 8270C
bis(2-Chloroethoxy) methane	ND	3440	2580	ug/kg	75		SW846 8270C
	ND	3440	2260	ug/kg	66	13	SW846 8270C
2,4-Dichlorophenol	ND	3440	2510	ug/kg	73		SW846 8270C
	ND	3440	2230	ug/kg	65	12	SW846 8270C
1,2,4-Trichloro-benzene	ND	3440	2640	ug/kg	77		SW846 8270C
	ND	3440	2360	ug/kg	69	11	SW846 8270C
Naphthalene	ND	3440	2620	ug/kg	76		SW846 8270C
	ND	3440	2320	ug/kg	67	12	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1A8-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1A9-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Chloroaniline	ND	3440	1490	ug/kg	43		SW846 8270C
	ND	3440	1240	ug/kg	36	18	SW846 8270C
Hexachlorobutadiene	ND	3440	2680	ug/kg	78		SW846 8270C
	ND	3440	2360	ug/kg	68	13	SW846 8270C
4-Chloro-3-methylphenol	ND	3440	2530	ug/kg	73		SW846 8270C
	ND	3440	2260	ug/kg	66	11	SW846 8270C
2-Methylnaphthalene	ND	3440	2610	ug/kg	76		SW846 8270C
	ND	3440	2310	ug/kg	67	12	SW846 8270C
Hexachlorocyclopenta-diene	ND	3440	2280	ug/kg	66		SW846 8270C
	ND	3440	1830	ug/kg	53	22	SW846 8270C
2,4,6-Trichloro-phenol	ND	3440	2450	ug/kg	71		SW846 8270C
	ND	3440	2180	ug/kg	63	11	SW846 8270C
2,4,5-Trichloro-phenol	ND	3440	2460	ug/kg	71		SW846 8270C
	ND	3440	2200	ug/kg	64	11	SW846 8270C
2-Nitroaniline	ND	3440	2560	ug/kg	74		SW846 8270C
	ND	3440	2300	ug/kg	67	11	SW846 8270C
Dimethyl phthalate	ND	3440	2670	ug/kg	78		SW846 8270C
	ND	3440	2390	ug/kg	69	11	SW846 8270C
Acenaphthylene	ND	3440	2680	ug/kg	78		SW846 8270C
	ND	3440	2370	ug/kg	69	12	SW846 8270C
2,6-Dinitrotoluene	ND	3440	2750	ug/kg	80		SW846 8270C
	ND	3440	2460	ug/kg	71	11	SW846 8270C
3-Nitroaniline	ND	3440	1990	ug/kg	58		SW846 8270C
	ND	3440	1780	ug/kg	52	12	SW846 8270C
Acenaphthene	ND	3440	2710	ug/kg	79		SW846 8270C
	ND	3440	2410	ug/kg	70	12	SW846 8270C
2,4-Dinitrophenol	ND	3440	1420	ug/kg	41		SW846 8270C
	ND	3440	1330	ug/kg	39	6.5	SW846 8270C
4-Nitrophenol	ND	3440	2710	ug/kg	79		SW846 8270C
	ND	3440	2430	ug/kg	71	11	SW846 8270C
Dibenzofuran	ND	3440	2650	ug/kg	77		SW846 8270C
	ND	3440	2350	ug/kg	68	12	SW846 8270C
Dibenzo(a,h)anthracene	ND	3440	2880	ug/kg	84		SW846 8270C
	ND	3440	2540	ug/kg	74	13	SW846 8270C
2,4-Dinitrotoluene	ND	3440	2870	ug/kg	83		SW846 8270C
	ND	3440	2570	ug/kg	75	11	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1A8-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1A9-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diethyl phthalate	ND	3440	2770	ug/kg	80		SW846 8270C
	ND	3440	2460	ug/kg	71	12	SW846 8270C
Fluorene	ND	3440	2750	ug/kg	80		SW846 8270C
	ND	3440	2430	ug/kg	71	12	SW846 8270C
4-Chlorophenyl phenyl ether	ND	3440	2700	ug/kg	78		SW846 8270C
	ND	3440	2410	ug/kg	70	11	SW846 8270C
4-Nitroaniline	ND	3440	2360	ug/kg	68		SW846 8270C
	ND	3440	2100	ug/kg	61	12	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	3440	1870	ug/kg	54		SW846 8270C
	ND	3440	1730	ug/kg	50	7.6	SW846 8270C
N-Nitrosodiphenylamine	ND	3440	2780	ug/kg	81		SW846 8270C
	ND	3440	2490	ug/kg	72	11	SW846 8270C
Pyrene	ND	3440	2780	ug/kg	81		SW846 8270C
	ND	3440	2470	ug/kg	72	12	SW846 8270C
4-Bromophenyl phenyl ether	ND	3440	2640	ug/kg	77		SW846 8270C
	ND	3440	2320	ug/kg	67	13	SW846 8270C
Hexachlorobenzene	ND	3440	2840	ug/kg	83		SW846 8270C
	ND	3440	2500	ug/kg	73	13	SW846 8270C
Pentachlorophenol	ND	3440	1330	ug/kg	39		SW846 8270C
	ND	3440	1420	ug/kg	41	6.5	SW846 8270C
Phenanthrene	ND	3440	2750	ug/kg	80		SW846 8270C
	ND	3440	2440	ug/kg	71	12	SW846 8270C
Anthracene	ND	3440	2630	ug/kg	76		SW846 8270C
	ND	3440	2320	ug/kg	67	13	SW846 8270C
Carbazole	ND	3440	2540	ug/kg	74		SW846 8270C
	ND	3440	2250	ug/kg	65	12	SW846 8270C
Di-n-butyl phthalate	ND	3440	2680	ug/kg	78		SW846 8270C
	ND	3440	2370	ug/kg	69	12	SW846 8270C
Fluoranthene	ND	3440	2710	ug/kg	79		SW846 8270C
	ND	3440	2400	ug/kg	70	12	SW846 8270C
Butyl benzyl phthalate	ND	3440	2950	ug/kg	86		SW846 8270C
	ND	3440	2580	ug/kg	75	14	SW846 8270C
Benzo(a)anthracene	ND	3440	2810	ug/kg	82		SW846 8270C
	ND	3440	2490	ug/kg	72	12	SW846 8270C
3,3'-Dichlorobenzidine	ND	3440	1920	ug/kg	56		SW846 8270C
	ND	3440	1710	ug/kg	50	12	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1A8-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1A9-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chrysene	**ND**	**3440**	**2790**	**ug/kg**	**81**		**SW846 8270C**
	ND	**3440**	**2490**	**ug/kg**	**72**	**11**	**SW846 8270C**
bis(2-Ethylhexyl) phthalate	**ND**	**3440**	**2760**	**ug/kg**	**80**		**SW846 8270C**
	ND	**3440**	**2460**	**ug/kg**	**71**	**12**	**SW846 8270C**
Di-n-octyl phthalate	**ND**	**3440**	**2640**	**ug/kg**	**76**		**SW846 8270C**
	ND	**3440**	**2290**	**ug/kg**	**67**	**14**	**SW846 8270C**
Benzo(b)fluoranthene	**ND**	**3440**	**2760**	**ug/kg**	**80**		**SW846 8270C**
	ND	**3440**	**2300**	**ug/kg**	**67**	**18**	**SW846 8270C**
Benzo(k)fluoranthene	**ND**	**3440**	**3060**	**ug/kg**	**89**		**SW846 8270C**
	ND	**3440**	**2780**	**ug/kg**	**81**	**9.5**	**SW846 8270C**
Benzo(a)pyrene	**ND**	**3440**	**2710**	**ug/kg**	**79**		**SW846 8270C**
	ND	**3440**	**2360**	**ug/kg**	**68**	**14**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**ND**	**3440**	**2860**	**ug/kg**	**83**		**SW846 8270C**
	ND	**3440**	**2600**	**ug/kg**	**75**	**9.5**	**SW846 8270C**
Benzo(ghi)perylene	**ND**	**3440**	**3370**	**ug/kg**	**98**		**SW846 8270C**
	ND	**3440**	**2990**	**ug/kg**	**87**	**12**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(19 - 115)
	62	(19 - 115)
Phenol-d5	69	(27 - 115)
	62	(27 - 115)
Nitrobenzene-d5	76	(10 - 115)
	68	(10 - 115)
2-Fluorobiphenyl	81	(10 - 115)
	71	(10 - 115)
2,4,6-Tribromophenol	77	(19 - 115)
	69	(19 - 115)
Terphenyl-d14	77	(10 - 115)
	69	(10 - 115)

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/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLCH21AA **Matrix.....:** SOLID
MB Lot-Sample #: F3D040000-244

Prep Date.....: 04/04/03
Analysis Date..: 04/07/03 **Prep Batch #...:** 3094244
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethyl)-ether	ND	330	ug/kg	SW846 8270C
2-Chlorophenol	ND	330	ug/kg	SW846 8270C
1,3-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,4-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,2-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
2-Methylphenol	ND	330	ug/kg	SW846 8270C
2,2'-oxybis(1-Chloropropa	ND	330	ug/kg	SW846 8270C
4-Methylphenol	ND	660	ug/kg	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	330	ug/kg	SW846 8270C
Hexachloroethane	ND	330	ug/kg	SW846 8270C
Nitrobenzene	ND	330	ug/kg	SW846 8270C
Isophorone	ND	330	ug/kg	SW846 8270C
2-Nitrophenol	ND	330	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	330	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C
1,2,4-Trichloro-benzene	ND	330	ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 8270C
4-Chloroaniline	ND	330	ug/kg	SW846 8270C
Hexachlorobutadiene	ND	330	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	330	ug/kg	SW846 8270C
2-Methylnaphthalene	ND	330	ug/kg	SW846 8270C
Hexachlorocyclopenta-diene	ND	1600	ug/kg	SW846 8270C
2,4,6-Trichloro-phenol	ND	330	ug/kg	SW846 8270C
2,4,5-Trichloro-phenol	ND	330	ug/kg	SW846 8270C
2-Chloronaphthalene	ND	330	ug/kg	SW846 8270C
2-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Dimethyl phthalate	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
2,6-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
3-Nitroaniline	ND	1600	ug/kg	SW846 8270C
Acenaphthene	ND	330	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	1600	ug/kg	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLCH21AA **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
4-Nitrophenol	ND	1600	ug/kg	SW846 8270C
Dibenzofuran	ND	330	ug/kg	SW846 8270C
Dibenzo(a,h)anthracene	ND	330	ug/kg	SW846 8270C
2,4-Dinitrotoluene	ND	330	ug/kg	SW846 8270C
Diethyl phthalate	ND	330	ug/kg	SW846 8270C
Fluorene	ND	330	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
4-Nitroaniline	ND	1600	ug/kg	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	SW846 8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846 8270C
Pyrene	ND	330	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Hexachlorobenzene	ND	330	ug/kg	SW846 8270C
Pentachlorophenol	ND	1600	ug/kg	SW846 8270C
Phenanthrene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Carbazole	ND	330	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	330	ug/kg	SW846 8270C
Benzo(a)anthracene	ND	330	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	1600	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	SW846 8270C
Di-n-octyl phthalate	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	61	(19 - 115)
Phenol-d5	62	(27 - 115)
Nitrobenzene-d5	60	(10 - 115)
2-Fluorobiphenyl	63	(10 - 115)
2,4,6-Tribromophenol	55	(19 - 115)
Terphenyl-d14	65	(10 - 115)

NOTE(S):

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

BECHTEL HANFORD, INC.

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F3D040000-244 B **Work Order #:** FLCH21AA **Matrix:** SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol contensate		10000	M	4.058	ug/kg

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLCH21AC **Matrix.....:** SOLID
LCS Lot-Sample#: F3D040000-244
Prep Date.....: 04/04/03 **Analysis Date..:** 04/07/03
Prep Batch #...: 3094244
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	3330	1840	ug/kg	55	SW846 8270C
bis(2-Chloroethyl)-ether	3330	1820	ug/kg	55	SW846 8270C
2-Chlorophenol	3330	1840	ug/kg	55	SW846 8270C
2-Methylphenol	3330	1760	ug/kg	53	SW846 8270C
2,2'-oxybis(1-Chloropropa	3330	1810	ug/kg	54	SW846 8270C
4-Methylphenol	3330	1840	ug/kg	55	SW846 8270C
N-Nitrosodi-n-propyl-amine	3330	2120	ug/kg	64	SW846 8270C
Hexachloroethane	3330	1890	ug/kg	57	SW846 8270C
Nitrobenzene	3330	1940	ug/kg	58	SW846 8270C
Isophorone	3330	2170	ug/kg	65	SW846 8270C
2-Nitrophenol	3330	1860	ug/kg	56	SW846 8270C
2,4-Dimethylphenol	3330	1830	ug/kg	55	SW846 8270C
bis(2-Chloroethoxy) methane	3330	1930	ug/kg	58	SW846 8270C
2,4-Dichlorophenol	3330	1900	ug/kg	57	SW846 8270C
1,2,4-Trichloro-benzene	3330	2060	ug/kg	62	SW846 8270C
Naphthalene	3330	2010	ug/kg	60	SW846 8270C
4-Chloroaniline	3330	1260	ug/kg	38	SW846 8270C
Hexachlorobutadiene	3330	2060	ug/kg	62	SW846 8270C
4-Chloro-3-methylphenol	3330	1890	ug/kg	57	SW846 8270C
2-Methylnaphthalene	3330	1970	ug/kg	59	SW846 8270C
Hexachlorocyclopenta-diene	3330	2230	ug/kg	67	SW846 8270C
2,4,6-Trichloro-phenol	3330	1880	ug/kg	56	SW846 8270C
2,4,5-Trichloro-phenol	3330	1890	ug/kg	57	SW846 8270C
2-Nitroaniline	3330	1930	ug/kg	58	SW846 8270C
Dimethyl phthalate	3330	2030	ug/kg	61	SW846 8270C
Acenaphthylene	3330	2040	ug/kg	61	SW846 8270C
2,6-Dinitrotoluene	3330	2020	ug/kg	61	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLCH21AC **Matrix.....:** SOLID
LCS Lot-Sample#: F3D040000-244

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
3-Nitroaniline	3330	1460	ug/kg	44	SW846 8270C
Acenaphthene	3330	2060	ug/kg	62	SW846 8270C
2,4-Dinitrophenol	3330	1170	ug/kg	35	SW846 8270C
4-Nitrophenol	3330	2070	ug/kg	62	SW846 8270C
Dibenzo(a,h)anthracene	3330	2100	ug/kg	63	SW846 8270C
Dibenzofuran	3330	2020	ug/kg	61	SW846 8270C
2,4-Dinitrotoluene	3330	2160	ug/kg	65	SW846 8270C
Diethyl phthalate	3330	2120	ug/kg	64	SW846 8270C
Fluorene	3330	2090	ug/kg	63	SW846 8270C
4-Chlorophenyl phenyl ether	3330	2060	ug/kg	62	SW846 8270C
4-Nitroaniline	3330	1860	ug/kg	56	SW846 8270C
4,6-Dinitro-2-methylphenol	3330	1500	ug/kg	45	SW846 8270C
N-Nitrosodiphenylamine	3330	2140	ug/kg	64	SW846 8270C
Pyrene	3330	2110	ug/kg	63	SW846 8270C
4-Bromophenyl phenyl ether	3330	2020	ug/kg	61	SW846 8270C
Hexachlorobenzene	3330	2190	ug/kg	66	SW846 8270C
Pentachlorophenol	3330	1620	ug/kg	49	SW846 8270C
Phenanthrene	3330	2120	ug/kg	64	SW846 8270C
Anthracene	3330	2050	ug/kg	61	SW846 8270C
Carbazole	3330	1960	ug/kg	59	SW846 8270C
Di-n-butyl phthalate	3330	2070	ug/kg	62	SW846 8270C
Fluoranthene	3330	2130	ug/kg	64	SW846 8270C
Butyl benzyl phthalate	3330	2210	ug/kg	66	SW846 8270C
Benzo(a)anthracene	3330	2160	ug/kg	65	SW846 8270C
3,3'-Dichlorobenzidine	3330	1480	ug/kg	44	SW846 8270C
Chrysene	3330	2150	ug/kg	64	SW846 8270C
bis(2-Ethylhexyl) phthalate	3330	2040	ug/kg	61	SW846 8270C
Di-n-octyl phthalate	3330	2080	ug/kg	62	SW846 8270C
Benzo(b)fluoranthene	3330	2160	ug/kg	65	SW846 8270C
Benzo(k)fluoranthene	3330	2420	ug/kg	73	SW846 8270C
Benzo(a)pyrene	3330	2100	ug/kg	63	SW846 8270C
Indeno(1,2,3-cd)pyrene	3330	2070	ug/kg	62	SW846 8270C
Benzo(ghi)perylene	3330	2380	ug/kg	71	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLCH21AC **Matrix.....:** SOLID
LCS Lot-Sample#: F3D040000-244

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	57	(30 - 115)
Phenol-d5	56	(41 - 115)
Nitrobenzene-d5	59	(20 - 115)
2-Fluorobiphenyl	64	(23 - 123)
2,4,6-Tribromophenol	61	(41 - 119)
Terphenyl-d14	60	(17 - 120)

NOTE(S):

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

Bold print denotes control parameters

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

GC Semivolatiles

Lot-Sample #...: F3D020197-001 **Work Order #...:** FK64L2AN **Matrix.....:** SOLID
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03
Prep Date.....: 04/04/03 **Analysis Date..:** 04/06/03
Prep Batch #...: 3094380
Dilution Factor: 1
% Moisture.....: 3.3 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Heptachlor	ND	1.8	ug/kg	0.37
Heptachlor epoxide	ND	1.8	ug/kg	0.35
Toxaphene	ND	69	ug/kg	8.3
Aldrin	ND	1.8	ug/kg	0.34
alpha-BHC	ND	1.8	ug/kg	0.35
beta-BHC	ND	1.8	ug/kg	0.30
delta-BHC	ND	1.8	ug/kg	0.25
gamma-BHC (Lindane)	ND	1.8	ug/kg	0.36
4,4'-DDD	ND	1.8	ug/kg	0.33
4,4'-DDE	ND	1.8	ug/kg	0.33
4,4'-DDT	ND	1.8	ug/kg	0.36
Dieldrin	ND	1.8	ug/kg	0.39
Endosulfan I	ND	1.8	ug/kg	0.25
Endosulfan II	ND	1.8	ug/kg	0.30
Endosulfan sulfate	ND	1.8	ug/kg	0.34
Endrin	ND	1.8	ug/kg	0.47

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(18 - 150)
Decachlorobiphenyl	80	(30 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F3D020197 Work Order #...: FK64L1CG-MS Matrix.....: SOLID
MS Lot-Sample #: F3D020197-001 FK64L1CH-MSD
Date Sampled...: 03/31/03 Date Received..: 04/02/03
Prep Date.....: 04/04/03 Analysis Date..: 04/06/03
Prep Batch #...: 3094380
Dilution Factor: 1 % Moisture.....: 3.3

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
gamma-BHC (Lindane)	ND	17.2	14.4	ug/kg	83		SW846 8081A
	ND	17.2	12.8	ug/kg	74	11	SW846 8081A
Heptachlor	ND	17.2	14.9	ug/kg	86		SW846 8081A
	ND	17.2	13.3	ug/kg	77	11	SW846 8081A
Aldrin	ND	17.2	15.4	ug/kg	89		SW846 8081A
	ND	17.2	14.0	ug/kg	81	9.8	SW846 8081A
Dieldrin	ND	17.2	15.4	ug/kg	89		SW846 8081A
	ND	17.2	15.7	ug/kg	91	2.0	SW846 8081A
Endrin	ND	17.2	15.3	ug/kg	89		SW846 8081A
	ND	17.2	13.7	ug/kg	80	11	SW846 8081A
4,4'-DDT	ND	17.2	17.3	ug/kg	100		SW846 8081A
	ND	17.2	18.8	ug/kg	109	8.6	SW846 8081A
alpha-BHC	ND	17.2	15.1	ug/kg	88		SW846 8081A
	ND	17.2	13.5	ug/kg	79	11	SW846 8081A
beta-BHC	ND	17.2	13.7	ug/kg	80		SW846 8081A
	ND	17.2	12.8	ug/kg	74	7.0	SW846 8081A
delta-BHC	ND	17.2	14.2	ug/kg	82		SW846 8081A
	ND	17.2	12.4	ug/kg	72	13	SW846 8081A
4,4'-DDD	ND	17.2	14.8	ug/kg	86		SW846 8081A
	ND	17.2	13.4	ug/kg	78	9.5	SW846 8081A
4,4'-DDE	ND	17.2	15.5	ug/kg	90		SW846 8081A
	ND	17.2	15.3	ug/kg	89	1.3	SW846 8081A
Endosulfan I	ND	17.2	13.7	ug/kg	80		SW846 8081A
	ND	17.2	12.5	ug/kg	73	9.4	SW846 8081A
Endosulfan II	ND	17.2	12.7	ug/kg	74		SW846 8081A
	ND	17.2	11.0	ug/kg	64	15	SW846 8081A
Endosulfan sulfate	ND	17.2	10.0	ug/kg	58		SW846 8081A
	ND	17.2	9.22	ug/kg	54	8.5	SW846 8081A
Heptachlor epoxide	ND	17.2	15.5	ug/kg	90		SW846 8081A
	ND	17.2	13.6	ug/kg	79	13	SW846 8081A

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1CG-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1CH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(18 - 150)
	83	(18 - 150)
Decachlorobiphenyl	85	(30 - 150)
	83	(30 - 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.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FLC271AA **Matrix.....:** SOLID
MB Lot-Sample #: F3D040000-380

Prep Date.....: 04/04/03
Analysis Date..: 04/06/03 **Prep Batch #...:** 3094380
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	1.7	ug/kg	SW846 8081A
alpha-BHC	ND	1.7	ug/kg	SW846 8081A
beta-BHC	ND	1.7	ug/kg	SW846 8081A
delta-BHC	ND	1.7	ug/kg	SW846 8081A
gamma-BHC (Lindane)	ND	1.7	ug/kg	SW846 8081A
4,4'-DDD	ND	1.7	ug/kg	SW846 8081A
4,4'-DDE	ND	1.7	ug/kg	SW846 8081A
4,4'-DDT	ND	1.7	ug/kg	SW846 8081A
Dieldrin	ND	1.7	ug/kg	SW846 8081A
Endosulfan I	ND	1.7	ug/kg	SW846 8081A
Endosulfan II	ND	1.7	ug/kg	SW846 8081A
Endosulfan sulfate	ND	1.7	ug/kg	SW846 8081A
Endrin	ND	1.7	ug/kg	SW846 8081A
Heptachlor	ND	1.7	ug/kg	SW846 8081A
Heptachlor epoxide	ND	1.7	ug/kg	SW846 8081A
Toxaphene	ND	67	ug/kg	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(18 - 150)
Decachlorobiphenyl	85	(30 - 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 #...: F3D020197 **Work Order #...:** FLC271AC **Matrix.....:** SOLID
LCS Lot-Sample#: F3D040000-380
Prep Date.....: 04/04/03 **Analysis Date..:** 04/06/03
Prep Batch #...: 3094380
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
gamma-BHC (Lindane)	**16.7**	**15.7**	**ug/kg**	**94**	**SW846 8081A**
Heptachlor	**16.7**	**15.6**	**ug/kg**	**94**	**SW846 8081A**
Aldrin	**16.7**	**17.7**	**ug/kg**	**106**	**SW846 8081A**
Dieldrin	**16.7**	**16.1**	**ug/kg**	**97**	**SW846 8081A**
Endrin	**16.7**	**16.6**	**ug/kg**	**100**	**SW846 8081A**
4,4'-DDT	**16.7**	**16.7**	**ug/kg**	**100**	**SW846 8081A**
alpha-BHC	**16.7**	**16.1**	**ug/kg**	**97**	**SW846 8081A**
beta-BHC	**16.7**	**14.8**	**ug/kg**	**89**	**SW846 8081A**
delta-BHC	**16.7**	**16.0**	**ug/kg**	**96**	**SW846 8081A**
4,4'-DDD	**16.7**	**16.1**	**ug/kg**	**97**	**SW846 8081A**
4,4'-DDE	**16.7**	**16.2**	**ug/kg**	**97**	**SW846 8081A**
Endosulfan I	**16.7**	**14.8**	**ug/kg**	**89**	**SW846 8081A**
Endosulfan II	**16.7**	**14.8**	**ug/kg**	**89**	**SW846 8081A**
Endosulfan sulfate	**16.7**	**13.1**	**ug/kg**	**79**	**SW846 8081A**
Heptachlor epoxide	**16.7**	**15.3**	**ug/kg**	**92**	**SW846 8081A**
alpha-Chlordane	**16.7**	**15.7**	**ug/kg**	**94**	**SW846 8081A**
gamma-Chlordane	**16.7**	**15.9**	**ug/kg**	**95**	**SW846 8081A**
Endrin aldehyde	**16.7**	**12.2**	**ug/kg**	**73**	**SW846 8081A**
Endrin ketone	**16.7**	**14.4**	**ug/kg**	**86**	**SW846 8081A**
Methoxychlor	**16.7**	**14.9**	**ug/kg**	**89**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(22 - 150)
Decachlorobiphenyl	101	(47 - 150)

NOTE(S):

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

Bold print denotes control parameters

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

GC Semivolatiles

Lot-Sample #...: F3D020197-001 **Work Order #...:** FK64L1AM **Matrix.....:** SOLID
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03
Prep Date.....: 04/03/03 **Analysis Date..:** 04/07/03
Prep Batch #...: 3093256
Dilution Factor: 1
% Moisture.....: 3.3 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aroclor 1016	ND	34	ug/kg	6.6
Aroclor 1221	ND	34	ug/kg	7.3
Aroclor 1232	ND	34	ug/kg	8.3
Aroclor 1242	ND	34	ug/kg	7.8
Aroclor 1248	ND	34	ug/kg	9.9
Aroclor 1254	ND	34	ug/kg	8.2
Aroclor 1260	**68**	**34**	**ug/kg**	**7.7**
Aroclor 1262	ND	34	ug/kg	4.1
Aroclor 1268	ND	34	ug/kg	10

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	92	(14 - 150)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK64L1CA-MS **Matrix.....:** SOLID
MS Lot-Sample #: F3D020197-001 FK64L1CC-MSD
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03
Prep Date.....: 04/03/03 **Analysis Date..:** 04/06/03
Prep Batch #...: 3093256
Dilution Factor: 1 **% Moisture.....:** 3.3

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**172**	**242**	**ug/kg**	**141**		**SW846 8082**
	ND	**172**	**218**	**ug/kg**	**126**	**11**	**SW846 8082**
Aroclor 1260	**68**	**172**	**269**	**ug/kg**	**117**		**SW846 8082**
	68	**172**	**272**	**ug/kg**	**118**	**0.95**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	125	(14 - 150)
	109	(14 - 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.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: F3D020197 **Work Order #...:** FK8591AA **Matrix.....:** SOLID
MB Lot-Sample #: F3D030000-256

Prep Date.....: 04/03/03
Analysis Date..: 04/04/03 **Prep Batch #...:** 3093256
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
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
Aroclor 1262	ND	33	ug/kg	SW846 8082
Aroclor 1268	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	104	(14 - 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 #...: F3D020197 **Work Order #...:** FK8591AC **Matrix.....:** SOLID
LCS Lot-Sample#: F3D030000-256
Prep Date.....: 04/03/03 **Analysis Date..:** 04/04/03
Prep Batch #...: 3093256
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**167**	**203**	**ug/kg**	**122**	**SW846 8082**
Aroclor 1260	**167**	**198**	**ug/kg**	**119**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	107	(63 - 150)

NOTE(S):

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

Bold print denotes control parameters

METALS

BECHTEL HANFORD, INC.

Client Sample ID: J00KV2

TOTAL Metals

Lot-Sample #...: F3D020197-001 Matrix.....: SOLID
Date Sampled...: 03/31/03 Date Received..: 04/02/03
% Moisture.....: 3.3

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3092358						
Silver	ND	1.0	mg/kg	SW846 6010B	04/02-04/03/03	FK64L1AE
		Dilution Factor: 1		MDL.....: 0.64		
Arsenic	**3.6**	**1.0**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK64L1AF**
		Dilution Factor: 1		MDL.....: 0.099		
Barium	**68.4**	**20.7**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK64L1AG**
		Dilution Factor: 1		MDL.....: 0.43		
Cadmium	ND	0.52	mg/kg	SW846 6010B	04/02-04/03/03	FK64L1AH
		Dilution Factor: 1		MDL.....: 0.28		
Chromium	**11.1**	**1.0**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK64L1AD**
		Dilution Factor: 1		MDL.....: 0.11		
Lead	**32.9 J**	**0.31**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK64L1AC**
		Dilution Factor: 1		MDL.....: 0.069		
Selenium	**0.77 J**	**0.52**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK64L1AJ**
		Dilution Factor: 1		MDL.....: 0.21		
Prep Batch #...: 3094148						
Mercury	**0.048**	**0.034**	**mg/kg**	**SW846 7471A**	**04/04/03**	**FK64L1AK**
		Dilution Factor: 1		MDL.....: 0.0081		

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.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3D020197 **Matrix.....:** SOLID
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F3D020197-001 **Prep Batch #...:** 3092358									
								% Moisture.....: 3.3	
Arsenic									
	3.6	207	204	mg/kg	97		SW846 6010B	04/02-04/03/03	FK64L1AW
	3.6	207	203	mg/kg	97	0.12	SW846 6010B	04/02-04/03/03	FK64L1AX
			Dilution Factor: 1						
Barium									
	68.4	207	303	mg/kg	113		SW846 6010B	04/02-04/03/03	FK64L1A0
	68.4	207	263	mg/kg	94	14	SW846 6010B	04/02-04/03/03	FK64L1A1
			Dilution Factor: 1						
Cadmium									
	ND	5.17	4.33	mg/kg	84		SW846 6010B	04/02-04/03/03	FK64L1A2
	ND	5.17	4.48	mg/kg	87	3.3	SW846 6010B	04/02-04/03/03	FK64L1A3
			Dilution Factor: 1						
Chromium									
	11.1	20.7	32.1	mg/kg	101		SW846 6010B	04/02-04/03/03	FK64L1AR
	11.1	20.7	29.5	mg/kg	89	8.5	SW846 6010B	04/02-04/03/03	FK64L1AT
			Dilution Factor: 1						
Lead									
	32.9	51.7	84.3	mg/kg	99		SW846 6010B	04/02-04/03/03	FK64L1AP
	32.9	51.7	82.7	mg/kg	96	1.9	SW846 6010B	04/02-04/03/03	FK64L1AQ
			Dilution Factor: 1						
Selenium									
	0.77	207	195	mg/kg	94		SW846 6010B	04/02-04/03/03	FK64L1A4
	0.77	207	194	mg/kg	94	0.24	SW846 6010B	04/02-04/03/03	FK64L1A5
			Dilution Factor: 1						
Silver									
	ND	5.17	6.62 N	mg/kg	128		SW846 6010B	04/02-04/03/03	FK64L1AU
	ND	5.17	6.57 N	mg/kg	127	0.67	SW846 6010B	04/02-04/03/03	FK64L1AV
			Dilution Factor: 1						
MS Lot-Sample #: F3D020197-001 **Prep Batch #...:** 3094148									
								% Moisture.....: 3.3	
Mercury									
	0.048	0.172	0.227	mg/kg	104		SW846 7471A	04/04/03	FK64L1A6
	0.048	0.172	0.226	mg/kg	103	0.76	SW846 7471A	04/04/03	FK64L1A7
			Dilution Factor: 1						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: F3D020197 **Matrix.....:** SOLID
Date Sampled...: 03/31/03 **Date Received..:** 04/02/03

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 #...: F3D020197 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F3D020000-358 **Prep Batch #...:** 3092358						
Arsenic	ND	1.0	mg/kg	SW846 6010B	04/02-04/03/03	FK7AC1AE
		Dilution Factor: 1				
Barium	ND	20.0	mg/kg	SW846 6010B	04/02-04/03/03	FK7AC1AF
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	04/02-04/03/03	FK7AC1AG
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	04/02-04/03/03	FK7AC1AC
		Dilution Factor: 1				
Lead	**0.18 B**	**0.30**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK7AC1AA**
		Dilution Factor: 1				
Selenium	**0.22 B**	**0.50**	**mg/kg**	**SW846 6010B**	**04/02-04/03/03**	**FK7AC1AH**
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	04/02-04/03/03	FK7AC1AD
		Dilution Factor: 1				
MB Lot-Sample #: F3D040000-148 **Prep Batch #...:** 3094148						
Mercury	ND	0.033	mg/kg	SW846 7471A	04/04/03	FLA691AA
		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 #...: F3D020197 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F3D020000-358 **Prep Batch #...:** 3092358							
Lead	95.0	99.7	mg/kg	105	SW846 6010B	04/02-04/03/03	FK7AC1AJ
			Dilution Factor: 1				
Chromium	82.6	89.2	mg/kg	108	SW846 6010B	04/02-04/03/03	FK7AC1AK
			Dilution Factor: 1				
Silver	141	181	mg/kg	128	SW846 6010B	04/02-04/03/03	FK7AC1AL
			Dilution Factor: 1				
Arsenic	197	204	mg/kg	103	SW846 6010B	04/02-04/03/03	FK7AC1AM
			Dilution Factor: 1				
Barium	392	442	mg/kg	113	SW846 6010B	04/02-04/03/03	FK7AC1AN
			Dilution Factor: 1				
Cadmium	69.1	72.3	mg/kg	105	SW846 6010B	04/02-04/03/03	FK7AC1AP
			Dilution Factor: 1				
Selenium	117	120	mg/kg	102	SW846 6010B	04/02-04/03/03	FK7AC1AQ
			Dilution Factor: 1				
LCS Lot-Sample#: F3D040000-148 **Prep Batch #...:** 3094148							
Mercury	9.41	8.42	mg/kg	89	SW846 7471A	04/04/03	FLA691AC
			Dilution Factor: 10				

NOTE(S):

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