

SAF-B05-004
100 BC Remaining Pipelines and Sewers -
Soil Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Charlene Martinez X3-44

NB- 6/20/05
INITIAL/DATE

RECEIVED
JUL 27 2005

EDMC

COMMENTS:

SDG __W04647__

SAF-B05-004

Rad only X Chem only

Rad & Chem

X Complete

Partial

Waste Site: 100-B-14



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. 100 BC PIPELINE

B05-004

Lot #: F5F010173
SDG #: W04647

Joan Kessner

Bechtel Hanford, Inc.
3190 George Washington Way
MSIN H9-02
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.

MARTI WARD
Project Manager

June 10, 2005

Case Narrative
LOT NUMBER: F5F010173
W04647

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on June 1, 2005. This sample is associated with your B05-004 project.

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

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

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Non-conformances

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

Metals

The MS (MSD) recovery for Cadmium is outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

Affected Samples:

F5F010173 (1): J03304

SAMPLE SUMMARY

F5F010173

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
HCNCT	001	J03304	05/23/05	09:20

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

P5F010173

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
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.

METALS

Bechtel Hanford, Inc.

Client Sample ID: J03304

TOTAL Metals

Lot-Sample #....: F5F010173-001

Matrix.....: SOLID

Date Sampled....: 05/23/05

Date Received...: 06/01/05

% Moisture.....: 2.7

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 5153099						
Arsenic	1.7	1.0	mg/kg	SW846 6010B	06/02/05	HCNCTIAC
		Dilution Factor: 1		MDL.....: 0.13		
Barium	56.2 J	20.6	mg/kg	SW846 6010B	06/02/05	HCNCTIAD
		Dilution Factor: 1		MDL.....: 0.082		
Cadmium	ND	0.51	mg/kg	SW846 6010B	06/02/05	HCNCTIAE
		Dilution Factor: 1		MDL.....: 0.13		
Chromium	4.1	1.0	mg/kg	SW846 6010B	06/02/05	HCNCTIAF
		Dilution Factor: 1		MDL.....: 0.19		
Lead	1.4	1.0	mg/kg	SW846 6010B	06/02/05	HCNCTIAG
		Dilution Factor: 1		MDL.....: 0.052		
Selenium	ND	1.5	mg/kg	SW846 6010B	06/02/05	HCNCTIAH
		Dilution Factor: 1		MDL.....: 0.16		
Silver	ND	1.0	mg/kg	SW846 6010B	06/02/05	HCNCTIAJ
		Dilution Factor: 1		MDL.....: 0.27		

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 #....: F5F010173

Matrix.....: SOLID

Date Sampled...: 05/23/05

Date Received...: 06/01/05

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: F5F010173-001 Prep Batch #....: 5153099

% Moisture.....: 2.7

Arsenic

1.7	206	190	mg/kg	92		SW846 6010B	06/02/05	HCNCT1AL
1.7	206	189	mg/kg	91	0.85	SW846 6010B	06/02/05	HCNCT1AM

Dilution Factor: 1

Barium

56.2	206	281	mg/kg	109		SW846 6010B	06/02/05	HCNCT1AN
56.2	206	275	mg/kg	107	2.1	SW846 6010B	06/02/05	HCNCT1AP

Dilution Factor: 1

Cadmium

ND	5.14	3.33 N	mg/kg	65		SW846 6010B	06/02/05	HCNCT1AQ
ND	5.14	3.33 N	mg/kg	65	0.15	SW846 6010B	06/02/05	HCNCT1AR

Dilution Factor: 1

Chromium

4.1	20.6	25.3	mg/kg	103		SW846 6010B	06/02/05	HCNCT1AT
4.1	20.6	26.4	mg/kg	109	4.3	SW846 6010B	06/02/05	HCNCT1AU

Dilution Factor: 1

Lead

1.4	51.4	49.6	mg/kg	94		SW846 6010B	06/02/05	HCNCT1AV
1.4	51.4	49.2	mg/kg	93	0.74	SW846 6010B	06/02/05	HCNCT1AW

Dilution Factor: 1

Selenium

ND	206	184	mg/kg	89		SW846 6010B	06/02/05	HCNCT1AX
ND	206	180	mg/kg	88	1.9	SW846 6010B	06/02/05	HCNCT1AO

Dilution Factor: 1

Silver

ND	5.14	4.79	mg/kg	93		SW846 6010B	06/02/05	HCNCT1A1
ND	5.14	4.74	mg/kg	92	1.2	SW846 6010B	06/02/05	HCNCT1A2

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.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: F5F010173

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F5F020000-099 Prep Batch #....: 5153099						
Arsenic	ND	1.0	mg/kg	SW846 6010B	06/02/05	HCQC21AA
		Dilution Factor: 1				
Barium	0.082 B	20.0	mg/kg	SW846 6010B	06/02/05	HCQC21AC
		Dilution Factor: 1				
Cadmium	ND	0.50	mg/kg	SW846 6010B	06/02/05	HCQC21AD
		Dilution Factor: 1				
Chromium	ND	1.0	mg/kg	SW846 6010B	06/02/05	HCQC21AE
		Dilution Factor: 1				
Lead	ND	1.0	mg/kg	SW846 6010B	06/02/05	HCQC21AF
		Dilution Factor: 1				
Selenium	ND	1.5	mg/kg	SW846 6010B	06/02/05	HCQC21AG
		Dilution Factor: 1				
Silver	ND	1.0	mg/kg	SW846 6010B	06/02/05	HCQC21AH
		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 #....: F5F010173

Matrix.....: SOLID

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>	
LCS Lot-Sample#: F5F020000-099 Prep Batch #....: 5153099								
Arsenic	161	171	mg/kg	106	SW846 6010B	06/02/05	HCQC21AJ	
			Dilution Factor: 1					
Barium	252	288	mg/kg	114	SW846 6010B	06/02/05	HCQC21AK	
			Dilution Factor: 1					
Cadmium	128	133	mg/kg	104	SW846 6010B	06/02/05	HCQC21AL	
			Dilution Factor: 1					
Chromium	69.5	73.4	mg/kg	106	SW846 6010B	06/02/05	HCQC21AM	
			Dilution Factor: 1					
Lead	142	153	mg/kg	107	SW846 6010B	06/02/05	HCQC21AN	
			Dilution Factor: 1					
Selenium	64.2	66.7	mg/kg	104	SW846 6010B	06/02/05	HCQC21AP	
			Dilution Factor: 1					
Silver	130	151	mg/kg	116	SW846 6010B	06/02/05	HCQC21AQ	
			Dilution Factor: 1					

NOTE(S):

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

F5F010173

CLIENT ANALYSIS SUMMARY

Storage Loc: B138
 Date Received: 2005-06-01
 Analytical Due Date: 2005-06-08
 Report Due Date: 2005-06-08
 Report Type: P
 EDD Code: FEADII

Project Manager: MAW Quote #: 63144 SDG: WO4647
 Project: 100 BC PIPELINE B05-004
 PO#: MRC-SBB-A-19981 Report to: Joan Kessner
 Client: 127642 Bechtel Hanford, Inc.

RUSH

#SMPS in LOT: 0

Metals: CRDL standard required +/-25% Batch Hanford samples by themselves Report is RO2. All raw data must be turned in to Connele.

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	A
1	J03304			2005-05-23 / 920	HCNCT	SOLID
SAMPLE COMMENTS:						
AS QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
BA QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
CD QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
CR QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
PB QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
SE QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
AG QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
XX ZV	RAD SCREEN	RAD SCREEN	RA IN-HOUSE RAD SCREEN	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
XX WM	MCAW 160.3 W MOD	Moisture, Percent (160.3)	88 NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D CD QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D AG QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D BA QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D CR QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D PB QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D SE QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
D AS QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S SE QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S AG QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S AS QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S BA QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S CD QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S CR QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08
S PB QM	SW846 6010B	Inductively Coupled Plasma (6010B Trace)	46 METALS, TOTAL - Soils	01 STANDARD TEST SET	PROT: A WRK LOC	06 08

CR 6898

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B05-004-040	Page 1 of 1
Collector C. Martinez	Company Contact Charlene Martinez	Telephone No. 539-2816	Project Coordinator KESSNER, JH	Price Code 20	Data Turnaround		
Project Designation 100 BC Remaining Pipelines and Sewers - Soil Quick Turn	Sampling Location 100 BC/100-B-14 (n) loadout		SAF No. B05-004	Air Quality <input type="checkbox"/>			
Ice Chest No. AFS-04-048	Field Logbook No. EL-1585-2	COA R10B142600	Method of Shipment Govt Vehicle				
Shipped To Severn Trent Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A				
POSSIBLE SAMPLE HAZARDS/REMARKS from red area - 05/23/05 Possibly radioactive Special Handling and/or Storage cool 4 degrees centigrade							
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time	Preservation	Note		
J03304	SOIL	05/23/05	09:30	AG	1		03215
					250ml		
					See item (1) in Special Instructions		
CHAIN OF POSSESSION							
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
C. Martinez	05/23/05 16:20	3728 2B	05/23/05				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
3728 Ref 2B	05/31/05 11:00	Received By/Stored In	05/31/05 11:00				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
3728 Ref 2B	05/31/05 14:30	Received By/Stored In	05/31/05 14:00				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
3728 Ref 2B	05/31/05 14:30	Received By/Stored In	05/31/05 14:00				
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				
3728 Ref 2B	05/31/05 14:30	Received By/Stored In	05/31/05 14:00				
SPECIAL INSTRUCTIONS							
(1) Metals by ICP - 6010 - Quick Turn (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver)							
Matrix *							
S-Soil SF-Sediment SO-Solid SL-Sludge W-Water O-Oil A-Air D-Drum Solids DL-Drum Liquids T-Tissue W-Wipe L-Liquid V-Vegetation X-Other							
LABORATORY SECTION			Received By			Date/Time	
FINAL SAMPLE DISPOSITION			Disposal Method			Date/Time	
			Oil Clarke			05-25-05 09:30	
			Disposal Method			Disposed By	

