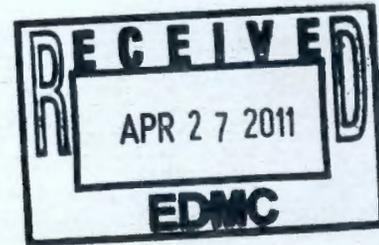


SAF-RC-195
Soil/Sediment Sampling – Integrated
Remedial Investigation/Feasibility Study,
100-BC Boreholes
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution Required



COMMENTS:

SDG K2754 SAF-RC-195

Rad only

Chem only

Rad & Chem

Complete

Partial

CORRECTED WET CHEM PAGES ATTACHED

Sample Location: C7844 (116-B-5); I-008, I-009,
I-012 Contingency

16 February 2011

Joan Kessner
WC-Hanford, Inc.
2620 Fermi Avenue
MSIN H9-03
Richland, WA 99354

Subject: Analytical Data Package

Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	1012096
SDG #	K2754
SAF #	RC-195
Date Received	12/10/10
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
Glycols	
DRO/KRO/GRO	
PAHs	
Herbicides	
Metals	X
Inorganics	X

The electronic data deliverable (EDD) has been emailed. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,

Lionville Laboratory
A Division of Eberline Analytical Corporation

Orlette S. Johnson
Project Manager

264 Welsh Pool Road
Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.
2620 Fermi Avenue
Richland WA, 99354

Project: RC-195
Project Number: K2754
Project Manager: Joan Kessner

Reported:
01/17/2011 11:05

Analytical Report for Metals by SW846 6000/7000 series

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B27J74	1012096-01	Soil	12/03/2010 09:10	12/10/2010 10:10
B27J75	1012096-02	Soil	12/03/2010 10:50	12/10/2010 10:10
B27J78	1012096-03	Soil	12/03/2010 13:50	12/10/2010 10:10



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Case Narrative

Client: WC-HANFORD RC-195
LVL#: 1012096
SDG/SAF#: K2754/RC-195

W.O.#: 60049-001-001-0001-00
Date Received: 12-10-10

METALS

The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvL) certifies that all test results meet the requirements of NELAC except as noted below.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise.

1. This narrative covers the analyses of 3 soil samples.
2. The samples were prepared and analyzed in accordance with methods listed on the data report forms.
3. All analyses were performed within the required holding times.
4. Please refer to the Sample Receipt Check List for any sample discrepancies in LvLI's sample acceptance policy.
5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury) with the exception of CCV2 (89.4%) and CCV3 (74.1%) for Lithium. The samples were reported as per the project manager.
6. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the LOQ).
7. All preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation (3-10X the LOD), samples were greater than 20X MB value}.
8. All ICP Interference Check Standards were within control limits.
9. All Standard Reference Material (SRM) analytes were within the Prediction Interval control limits supplied by the manufacturer.
10. The matrix spike (MS) recoveries for 22 analytes were outside the 75-125% control limits.
11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial

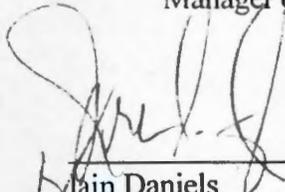
dilution are performed. A serial dilution is performed for Mercury. A PDS* was prepared at meaningful concentration level for the following analytes:

<u>Sample ID</u>	<u>Element</u>	<u>PDS Concentration (ppb)</u>	<u>PDS % Recovery</u>
B27J74	Aluminum	22,000	78.5
	Antimony	100	89.4
	Barium	100	113.6
	Boron	100	82.9
	Calcium	20,800	74.7
	Chromium	100	88.6
	Cobalt	100	85.2
	Copper	100	83.4
	Iron	42,000	51.9
	Lithium	1,600	92.9
	Magnesium	21,600	72.8
	Manganese	1,000	68.5
	Nickel	100	85.4
	Phosphorous	2,000	59.0
	Potassium	2,000	94.5
	Silicon	2,100	86.1
	Sodium	2,100	99.7
	Strontium	100	94.1
	Thallium	100	82.7
	Vanadium	1,000	79.1
	Zinc	100	81.8
	Mercury	1.0	115.8

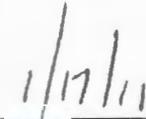
* The PDS for ICP metals was prepared with sample L101090-DUP3 due to insufficient volume of sample B27J74.

12. The duplicate analyses for 4 analytes were outside the 20% Relative Percent Difference (RPD) control limit criteria. The $\pm 20\%$ RPD control limit applies to sample results greater than ten times the MDL. The sample result for Molybdenum was less than ten times the MDL.
13. For the purposes of this report, the data have been reported to the Limit of Detection (LOD). Values between the LOD and the Limit of Quantitation (LOQ) are acquired in a region of less-certain quantification.
14. LvL is NELAP accredited by the State of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

15. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.



Brian Daniels
Laboratory Manager
Lionville Laboratory
alm/12-096



Date

264 Welsh Pool Road
Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

WC-Hanford, Inc.
2620 Fermi Avenue
Richland WA, 99354

Project: RC-195
Project Number: K2754
Project Manager: Joan Kessner

Reported:
01/17/2011 11:05

Notes and Definitions

- U Analyte included in the analysis, but not detected
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- B Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag)
- * Value outside QC acceptance criteria
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- wet Sample results reported on a wet weight basis
- RPD Relative Percent Difference

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2754 Project Manager: Joan Kessner	Reported: 01/17/2011 11:05
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B27J74
1012096-01 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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Lionville Laboratory

Metals by SW846 6000/7000 series

Aluminum	5700		4.10	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Antimony	0.492	U	0.492	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Arsenic	1.89		0.820	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Barium	58.6		0.410	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Beryllium	0.250		0.164	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Bismuth	1.37	B	8.20	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Boron	1.64	U	1.64	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cadmium	0.109	B	0.164	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Calcium	6010		82.0	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Chromium	11.8		0.164	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cobalt	8.91		1.64	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Copper	16.1		0.820	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Iron	28800		16.4	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lead	2.70		0.410	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lithium	3.62		2.05	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Magnesium	4210		61.5	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Manganese	326		4.10	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Molybdenum	1.31	B	1.64	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Nickel	6.96		3.28	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Phosphorus	1420		41.0	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Potassium	669		328	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Selenium	0.246	U	0.246	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silicon	702		1.64	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silver	0.164	U	0.164	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Sodium	482		41.0	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Strontium	24.4		0.820	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Thallium	0.410	U	0.410	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Tin	3.43	B	8.20	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Vanadium	87.1		2.05	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Zinc	49.8		8.20	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Mercury	0.307		0.0267	mg/kg dry	1	L012234	12/20/2010	12/21/2010	7471A

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WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 01/17/2011 11:05

B27J75
1012096-02 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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Lionville Laboratory

Metals by SW846 6000/7000 series

Aluminum	5070		3.95	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Antimony	0.474	U	0.474	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Arsenic	2.63		0.789	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Barium	64.2		0.395	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Beryllium	0.226		0.158	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Bismuth	0.624	B	7.89	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Boron	0.395	B	1.58	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cadmium	0.0912	B	0.158	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Calcium	4410		78.9	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Chromium	25.5		0.158	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cobalt	6.77		1.58	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Copper	22.7		0.789	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Iron	23300		15.8	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lead	3.40		0.395	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lithium	3.78		1.97	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Magnesium	3010		59.2	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Manganese	276		3.95	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Molybdenum	3.56		1.58	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Nickel	6.62		3.16	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Phosphorus	875		39.5	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Potassium	699		316	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Selenium	0.237	U	0.237	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silicon	390		1.58	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silver	0.158	U	0.158	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Sodium	403		39.5	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Strontium	21.5		0.789	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Thallium	0.395	U	0.395	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Tin	2.63	B	7.89	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Vanadium	58.8		1.97	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Zinc	40.3		7.89	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Mercury	0.0827		0.0248	mg/kg dry	1	L012234	12/20/2010	12/21/2010	7471A

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WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 01/17/2011 11:05

B27J78
1012096-03 (Soil)

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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Lionville Laboratory

Metals by SW846 6000/7000 series

Aluminum	6250		3.59	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Antimony	0.431	U	0.431	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Arsenic	1.42		0.719	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Barium	92.4		0.359	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Beryllium	0.221		0.144	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Bismuth	0.686	B	7.19	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Boron	0.402	B	1.44	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cadmium	0.0841	B	0.144	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Calcium	4220		71.9	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Chromium	11.6		0.144	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Cobalt	6.31		1.44	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Copper	13.2		0.719	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Iron	19900		14.4	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lead	3.26		0.359	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Lithium	4.94		1.80	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Magnesium	3420		53.9	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Manganese	275		3.59	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Molybdenum	0.516	B	1.44	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Nickel	6.80		2.88	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Phosphorus	806		35.9	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Potassium	970		288	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Selenium	0.216	U	0.216	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silicon	368		1.44	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Silver	0.144	U	0.144	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Sodium	383		35.9	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Strontium	22.8		0.719	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Thallium	0.359	U	0.359	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Tin	2.49	B	7.19	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Vanadium	56.6		1.80	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Zinc	37.9		7.19	mg/kg dry	1	L101090	01/11/2011	01/13/2011	6010B
Mercury	0.0734		0.0281	mg/kg dry	1	L012234	12/20/2010	12/21/2010	7471A

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WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 01/17/2011 11:05

Metals by SW846 6000/7000 series - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L012234 - SW 7471A Prep									
Blank (L012234-BLK1)					Prepared: 12/20/2010 Analyzed: 12/21/2010				
Mercury	0.0300 U	0.0300	mg/kg wet						
Duplicate (L012234-DUP6)					Source: 1012096-01 Prepared: 12/20/2010 Analyzed: 12/21/2010				
Mercury	0.347	0.0274	mg/kg dry		0.307			12.5	20
Matrix Spike (L012234-MS6)					Source: 1012096-01 Prepared: 12/20/2010 Analyzed: 12/21/2010				
Mercury	0.389	0.0267	mg/kg dry	0.14808	0.307	56.0*	75-125		
Reference (L012234-SRM1)					Prepared: 12/20/2010 Analyzed: 12/21/2010				
Mercury	1.36	0.0290	mg/kg wet	1.2600		108	65.9-133.3		
Batch L101090 - SW 3050B									
Blank (L101090-BLK1)					Prepared: 01/11/2011 Analyzed: 01/13/2011				
Aluminum	3.42 U	3.42	mg/kg wet						
Antimony	0.293 B	0.411	mg/kg wet						
Arsenic	0.685 U	0.685	mg/kg wet						
Barium	0.342 U	0.342	mg/kg wet						
Beryllium	0.137 U	0.137	mg/kg wet						
Bismuth	6.85 U	6.85	mg/kg wet						
Boron	1.37 U	1.37	mg/kg wet						
Cadmium	0.137 U	0.137	mg/kg wet						
Calcium	68.5 U	68.5	mg/kg wet						
Chromium	0.137 U	0.137	mg/kg wet						
Cobalt	1.37 U	1.37	mg/kg wet						
Copper	0.685 U	0.685	mg/kg wet						
Iron	13.7 U	13.7	mg/kg wet						
Lead	0.342 U	0.342	mg/kg wet						
Lithium	1.71 U	1.71	mg/kg wet						
Magnesium	51.4 U	51.4	mg/kg wet						
Manganese	3.42 U	3.42	mg/kg wet						
Molybdenum	1.37 U	1.37	mg/kg wet						
Nickel	2.74 U	2.74	mg/kg wet						
Phosphorus	34.2 U	34.2	mg/kg wet						
Potassium	274 U	274	mg/kg wet						
Selenium	0.205 U	0.205	mg/kg wet						
Silicon	1.37 U	1.37	mg/kg wet						
Silver	0.137 U	0.137	mg/kg wet						
Sodium	34.2 U	34.2	mg/kg wet						

000000009



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2754 Project Manager: Joan Kessner	Reported: 01/17/2011 11:05
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Metals by SW846 6000/7000 series - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch L101090 - SW 3050B

Blank (L101090-BLK1)

Prepared: 01/11/2011 Analyzed: 01/13/2011

Strontium	0.685 U	0.685	mg/kg wet						
Thallium	0.342 U	0.342	mg/kg wet						
Tin	1.44 B	6.85	mg/kg wet						
Vanadium	1.71 U	1.71	mg/kg wet						
Zinc	6.85 U	6.85	mg/kg wet						

Duplicate (L101090-DUP3)

Source: 1012096-01

Prepared: 01/11/2011 Analyzed: 01/13/2011

Aluminum	5460		4.10	mg/kg dry	5700			4	20
Antimony	0.492	U	0.492	mg/kg dry	0.492 U				20
Arsenic	1.61		0.820	mg/kg dry	1.89			16	20
Barium	79.4		0.410	mg/kg dry	58.6			30*	20
Beryllium	0.243		0.164	mg/kg dry	0.250			3	20
Bismuth	1.18	B	8.20	mg/kg dry	1.37			15	20
Boron	0.420	B	1.64	mg/kg dry	1.64 U				20
Cadmium	0.0907	B	0.164	mg/kg dry	0.109			18	20
Calcium	6320		82.0	mg/kg dry	6010			5	20.
Chromium	5.52		0.164	mg/kg dry	11.8			73*	20
Cobalt	9.30		1.64	mg/kg dry	8.91			4	20
Copper	14.4		0.820	mg/kg dry	16.1			11	20
Iron	26800		16.4	mg/kg dry	28800			7	20
Lead	2.48		0.410	mg/kg dry	2.70			9	20
Lithium	3.73		2.05	mg/kg dry	3.62			3	20
Magnesium	3850		61.5	mg/kg dry	4210			9	20
Manganese	299		4.10	mg/kg dry	326			9	20
Molybdenum	0.687	B	1.64	mg/kg dry	1.31			62*	20
Nickel	6.79		3.28	mg/kg dry	6.96			2	20
Phosphorus	1510		41.0	mg/kg dry	1420			6	20
Potassium	629		328	mg/kg dry	669			6	20
Selenium	0.246	U	0.246	mg/kg dry	0.246 U				20
Silicon	461		1.64	mg/kg dry	702			42*	20
Silver	0.164	U	0.164	mg/kg dry	0.164 U				20
Sodium	345		41.0	mg/kg dry	482			33*	20
Strontium	23.9		0.820	mg/kg dry	24.4			2	20
Thallium	0.410	U	0.410	mg/kg dry	0.410 U				20
Tin	2.97	B	8.20	mg/kg dry	3.43			14	20
Vanadium	72.0		2.05	mg/kg dry	87.1			19	20
Zinc	47.8		8.20	mg/kg dry	49.8			4	20

00000010

264 Welsh Pool Road
 Exton, PA 19341
 Phone: 610-280-3000
 Fax: 610-280-3044

WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 01/17/2011 11:05

Metals by SW846 6000/7000 series - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch L101090 - SW 3050B

Matrix Spike (L101090-MS3)	Source: 1012096-01	Prepared: 01/11/2011	Analyzed: 01/13/2011
Aluminum	4370	3.86	mg/kg dry 154.52 5700 -861*
Antimony	19.2	0.464	mg/kg dry 38.630 0.492 U 50*
Arsenic	127	0.773	mg/kg dry 154.52 1.89 81
Barium	168	0.386	mg/kg dry 154.52 58.6 71*
Beryllium	3.17	0.155	mg/kg dry 3.8630 0.250 76
Bismuth	300	7.73	mg/kg dry 386.30 1.37 77
Boron	55.4	1.55	mg/kg dry 77.259 1.64 U 72*
Cadmium	3.15	0.155	mg/kg dry 3.8630 0.109 79
Calcium	6370	77.3	mg/kg dry 1931.5 6010 18*
Chromium	15.5	0.155	mg/kg dry 15.452 11.8 24*
Cobalt	36.9	1.55	mg/kg dry 38.630 8.91 72*
Copper	27.7	0.773	mg/kg dry 19.315 16.1 60*
Iron	21400	15.5	mg/kg dry 77.259 28800 -9650*
Lead	31.7	0.386	mg/kg dry 38.630 2.70 75
Lithium	53.9	1.93	mg/kg dry 77.259 3.62 65*
Magnesium	4540	57.9	mg/kg dry 1931.5 4210 17*
Manganese	255	3.86	mg/kg dry 38.630 326 -183*
Molybdenum	60.4	1.55	mg/kg dry 77.259 1.31 77
Nickel	34.1	3.09	mg/kg dry 38.630 6.96 70*
Phosphorus	1530	38.6	mg/kg dry 386.30 1420 27*
Potassium	2030	309	mg/kg dry 1931.5 669 70*
Selenium	122	0.232	mg/kg dry 154.52 0.246 U 79
Silicon	500	1.55	mg/kg dry 77.259 702 -261*
Silver	3.05	0.155	mg/kg dry 3.8630 0.164 U 79
Sodium	1800	38.6	mg/kg dry 1931.5 482 68*
Strontium	81.4	0.773	mg/kg dry 77.259 24.4 74*
Thallium	111	0.386	mg/kg dry 154.52 0.410 U 72*
Tin	62.1	7.73	mg/kg dry 77.259 3.43 76
Vanadium	87.7	1.93	mg/kg dry 38.630 87.1 2*
Zinc	69.1	7.73	mg/kg dry 38.630 49.8 50*

264 Welsh Pool Road
 Exton, PA 19341
 Phone: 610-280-3000
 Fax: 610-280-3041

WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 01/17/2011 11:05

Metals by SW846 6000/7000 series - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L101090 - SW 3050B									
Reference (L101090-SRM1)				Prepared: 01/11/2011 Analyzed: 01/13/2011					
Aluminum	7860	12.3	mg/kg wet	6766.6		116	0-225.5		
Antimony	71.6	1.48	mg/kg wet	56.630		126	0-225.6		
Arsenic	121	2.46	mg/kg wet	113.85		106	85-115		
Barium	303	1.23	mg/kg wet	298.35		102	75.7-124.3		
Beryllium	107	0.492	mg/kg wet	108.32		99	85.2-114.8		
Boron	81.6	4.92	mg/kg wet	86.580		94	68.5-131.6		
Cadmium	229	0.492	mg/kg wet	224.09		102	84.9-115.1		
Calcium	3390	246	mg/kg wet	3305.9		103	82.8-117.2		
Chromium	83.7	0.492	mg/kg wet	77.590		108	76.8-123.2		
Cobalt	167	4.92	mg/kg wet	163.19		102	79.4-120.6		
Copper	261	2.46	mg/kg wet	265.65		98	82.4-117.6		
Iron	8490	49.2	mg/kg wet	8202.8		104	78.9-121.1		
Lead	190	1.23	mg/kg wet	187.62		101	81.5-118.5		
Lithium	107	6.15	mg/kg wet	113.01		95	33.8-166.2		
Magnesium	8100	184	mg/kg wet	8352.3		97	84.2-115.8		
Manganese	970	12.3	mg/kg wet	951.35		102	69-131		
Molybdenum	249	4.92	mg/kg wet	234.78		106	80.1-119.9		
Nickel	228	9.84	mg/kg wet	220.85		103	81.4-118.6		
Potassium	14500	984	mg/kg wet	14177		102	85.7-114.3		
Selenium	195	0.738	mg/kg wet	187.99		104	78.8-121.2		
Silicon	860	4.92	mg/kg wet	939.78		91	0-272.3		
Silver	85.9	0.492	mg/kg wet	83.960		102	81.9-118.1		
Sodium	9350	123	mg/kg wet	9587.1		98	83.5-116.4		
Strontium	189	2.46	mg/kg wet	171.65		110	67.5-132.5		
Thallium	87.6	1.23	mg/kg wet	85.410		103	77.1-122.9		
Tin	103	24.6	mg/kg wet	101.60		102	86.7-113.2		
Vanadium	108	6.15	mg/kg wet	97.430		111	75.8-124.2		
Zinc	199	24.6	mg/kg wet	196.52		101	78.9-121.1		

00000012

SAMPLE DIGESTION RECORD

Digestion Batch #: L101090
 Date/Time Initiated: 11/11 1130
 Date/Time Completed: 11/11 1620
 Analyst: JJS
 Matrix (circle): Soil Water Other
 Method (circle one): 3005A 3010A 3050 200.7 (1994)

Digested / Undigested (circle one)
 Balance #: B17
 Balance Cal Verification: Y NA
 Temp: 96
 BLOCK 1 3 (circle one)

NOTE: All temperatures are recorded as corrected temperatures

Work Order #	Spike Vol (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/Sol/TC	Texture	Color / Appearance	Artifact	Turb
1012077-01		0.77	50		TO	Coarse	Brown	H ₂ O/Rocks	N/A
* L101090-01		0.58	50			↓	↓	↓	
-MS1	0.5	0.59	50						
* 1012077-02		0.50	50			Coarse	Brown	H ₂ O/Rocks	
1012084-01		0.70	50			Fine	Brown	Rocks	
* L101090-02		0.57	50			↓	↓	↓	
-MS2	0.5	0.72	50						
1012089-02		0.61	50			Fine	Brown	Rocks	
1012096-01		0.65	50			Fine	Brown	Rocks	
* L101090-03		0.65	50			↓	↓	↓	
-MS3	0.5	0.69	50						
1012096-02		0.68	50			Fine	Brown	Rocks	
03		0.76	50			Fine	Brown	Rocks	
L101090-04		0.77	50			Coarse	Boiling Chips		
9AM	<u>3</u>	0.61	50			Fine	Dusty and sand		

Spiking IDs / Expiration Date:

MS#: 1000843

LCS#: 1001370

Reagent IDs:

HNO₃ J27041

HCl J34056

H₂O₂ J-13-117

1:1 HNO₃ 637-07302

1:1 HCl _____

File ID#: _____

Data Review By / Date:

Agm 11/21/11

R:\group\QA\SOP\

Signed\SPR\Metals Digestion log.doc

* 6072-089-15 250ml
 ↓ 087-12 ↓

Page #:

Analyst: M. Miller
 Date: 12/22/10
 Start Time/Temp: 2:50/96°
 End Time/Temp: 2:00/97°

Instrument ID: HG-3.1
 Balance #: B29 /NA
 Pipette Calibration (Daily) Y

Prep Batch: L012234
 Worksheet: HG122161
 SOP No. ME-HgCVAA
 BLOCK 1 (2) (circle one)

NOTE: All temperatures are recorded as corrected temperatures.

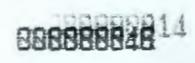
Lvl Work Order#	pH < 2 (Liq)	Spike Vol (mL)	Spike Conc. (µg/L)	Initial Wt. or Vol (g or mL)	Final Sample Vol (mL)	Comments, % Solids, etc.
Blank				10ml	50	
0.2 µg/L		0.100		10ml	50	
1.0 µg/L		0.500		10ml	50	
2.0 µg/L		1.000		10ml	50	
5.0 µg/L		2.500		10ml	50	
10.0 µg/L		5.000		10ml	50	
ICV		0.125	2.5	10ml	50	
CW		0.250	5.0	10ml	50	
ICB/CEB				10ml	50	
L012234-BU1				0.30	50	
SRM1				0.31	50	
1012059-01				0.35	50	
L012234-DUP1				0.35	50	
MS1		0.500	1.0	0.35	50	
1012059-02				0.35	50	
03				0.37	50	
04				0.37	50	
05				0.34	50	
06				0.35	50	
1012068-01				0.35	50	
L012234-DUP2				0.34	50	
MS2		0.500	1.0	0.33	50	
1012073-01				0.36	50	
L012234-DUP3				0.35	50	
MS3		0.500	1.0	0.37	50	
1012073-02				0.38	50	
1012077-01				0.34	50	

Standard:	ID	Prep Date/Time
ICAL/MS	RI 0901985B	12/22/10 1635
ICV/CCV/LCS	IV, 0902297A	J

Reviewed By/Date: [Signature] 12/22/10
 se book # 9368 for std traceability information

Soil LCS True Value = 1.76 mg/Kg
 Standard # 1.01320

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
 after LCS Spiking Concentration: 1.0 µg/ml



Analyst: W. Miller
 Date: 12/22/10
 Start Time/Temp: 12:15 046
 End Time/Temp: 12:15 046

Instrument ID: 1163.1
 Balance #: 509 /NA
 Pipette Calibration (Daily) (M)

Prep Batch: 1012234
 Worksheet: 10122101
 SOP No. ME-HgCVAA
 BLOCK 1 (2) (circle one)

NOTE: All temperatures are recorded as corrected temperatures.

LVL Work Order#	pH <2 (Liq)	Spike Vol (mL)	Spike Conc. (µg/L)	Initial Wt. or Vol (g or mL)	Final Sample Vol (mL)	Comments, % Solids, etc.
<u>1012234-DUPY</u>				<u>0.36</u>	<u>50</u>	
<u>MSY</u>		<u>0.500</u>	<u>1.0</u>	<u>0.35</u>	<u>50</u>	
<u>1012077-02</u>				<u>0.35</u>	<u>50</u>	
<u>1012079-01</u>				<u>0.37</u>	<u>50</u>	
<u>1012234-DUPS</u>				<u>0.36</u>	<u>50</u>	
<u>MS5</u>		<u>0.500</u>	<u>1.0</u>	<u>0.36</u>	<u>50</u>	
<u>1012079-02</u>				<u>0.37</u>	<u>50</u>	
<u>03</u>				<u>0.35</u>	<u>50</u>	
<u>04</u>				<u>0.37</u>	<u>50</u>	
<u>1012096-01</u>				<u>0.36</u>	<u>50</u>	
<u>1012234-DUP6</u>				<u>0.35</u>	<u>50</u>	
<u>MS6</u>		<u>0.500</u>	<u>1.0</u>	<u>0.36</u>	<u>50</u>	
<u>1012096-02</u>				<u>0.39</u>	<u>50</u>	
<u>03</u>				<u>0.35</u>	<u>50</u>	
<u>W. Miller 12/22/10</u>						

Standard:	ID	Prep Date/Time	Reviewed By/Date: <u>W. Miller 12/22/10</u>
ICAL/MS			
ICV/CCV/LCS			

Soil LCS True Value = 1.1 mg/kg mg/Kg
 Standard # 1.1 mg/kg

se book # 9368 for std traceability information
 Water Matrix Spiking Solution Concentration = 0.1 µg/ml
 after LCS Spiking Concentration: 1.0 µg/ml

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-155	PAGE 1 OF 1
COLLECTOR BAILEY	COMPANY CONTACT DALE DYKMAN	TELEPHONE NO. (509) 373-2530	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C7844 (116-B-5); I-008	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. IFS-04-009	FIELD LOGBOOK NO. HNF-N-585-3/86	ACTUAL SAMPLE DEPTH 50.5'-53.0'	COA 302512ES10		METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO Lionville Laboratory Incorporated	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR		794195246654		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1
		VOLUME	250mL	120mL	120mL	250mL
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H66	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

1012096																	
<table border="1"> <thead> <tr> <th>SAMPLE NO.</th> <th>MATRIX*</th> <th>SAMPLE DATE</th> <th>SAMPLE TIME</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>B27J74</td> <td>SOIL</td> <td>12-3-10</td> <td>0910</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					B27J74	SOIL	12-3-10	0910	✓	✓	✓	✓	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME														
B27J74	SOIL	12-3-10	0910	✓	✓	✓	✓										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM BAILEY	DATE/TIME 12-3-10/1500	RECEIVED BY/STORED IN W0413 SSU R2	DATE/TIME 12-3-10/1500	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM SSU-R2	DATE/TIME DEC 08 2010 0840	RECEIVED BY/STORED IN J.R. Aguilar	DATE/TIME DEC 08 2010 0840		
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME DEC 08 2010 0840	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM Ex	DATE/TIME 12-10-10 10:10	RECEIVED BY/STORED IN Smith	DATE/TIME 12-10-10/10:10		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-156	PAGE 1 OF 1
COLLECTOR BAILEY		COMPANY CONTACT DALE DYKMAN	TELEPHONE NO. (509) 373-2530	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C7844 (116-B-5); I-009		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. AFS-04-009		FIELD LOGBOOK NO. HNF-N-885-3/86	ACTUAL SAMPLE DEPTH 56.0' - 58.5'		COA 302512ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. 794195246654			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C	Cool~4C	Cool~4C	None	
		HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	ASAP	
		TYPE OF CONTAINER	G/P	G/P	G/P	G/P	
		NO. OF CONTAINER(S)	1	1	1	1	
		VOLUME	250mL	120mL	120mL	250mL	
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H66	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B27J75	SOIL	12-3-10	1050	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
JK BAILEY / JRB	12-3-10 / 1500	Mouly SSU R2	12-3-10 / 1500		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU-R2	DEC 08 2010 0840	J.R. Aguilar	DEC 08 2010 0840		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
J.R. Aguilar	DEC 08 2010 0840	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
FEDEX	12-10-10 / 10:10	J.R. Aguilar	12-10-10 / 10:10		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-159	PAGE 1 OF 1
COLLECTOR <i>BAILEY</i>		COMPANY CONTACT DALE DYKMAN	TELEPHONE NO. (509) 373-2530	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C7844 (116-B-5); I-012 CONTINGENCY SAMPLE		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>IFS-04-009</i>		FIELD LOGBOOK NO. <i>HNF-X-585-3/86</i>	ACTUAL SAMPLE DEPTH <i>63.0' - 65.5'</i>		COA 302512ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. <i>794195246654</i>			

MATRIX* A=Air DL=Drum L=Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION				Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME				6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER				G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)				1	1	1	1
		VOLUME				250mL	120mL	120mL	250mL
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H68				SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B27J78	SOIL	<i>12-3-10</i>	<i>1350</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>J.R. Aguilar</i>	DATE/TIME <i>12-3-10 1500</i>	RECEIVED BY/STORED IN <i>M. O. B. SSU R2</i>	DATE/TIME <i>12-3-10/1500</i>	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM <i>SSU-R2</i>	DATE/TIME <i>DEC 08 2010 0840</i>	RECEIVED BY/STORED IN <i>J.R. Aguilar</i>	DATE/TIME <i>DEC 08 2010 0840</i>		
RELINQUISHED BY/REMOVED FROM <i>J.R. Aguilar</i>	DATE/TIME <i>DEC 08 2010 0840</i>	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>J.R. Aguilar</i>	DATE/TIME <i>12-10-10 1010</i>	RECEIVED BY/STORED IN <i>J.R. Aguilar</i>	DATE/TIME <i>12-10-10/10:10</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

Lionville Laboratory
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford
 Project/SAF/SOW/Release #: RC-195

Date: 12.10.10

LvL Batch #: 1012096

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | | |
|--|---|--------------------------------------|---|
| 1. Samples Hand Delivered or <u>Shipped?</u> | Carrier <u>FEDEX</u> | <input type="checkbox"/> No | Airbill # <u>7941 9524 6654</u> |
| 2. Custody Seals on coolers or shipping containers intact, signed & dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 3. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Comments: |
| 4. All expected paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 5. Samples received <u>cooled</u> or ambient? | Temp <u>2.9</u> °C | | Cooler # <u>AFS-04-009</u> |
| How was the temperature taken? | <input checked="" type="checkbox"/> IR | <input type="checkbox"/> Temp. Blank | <input type="checkbox"/> Other (Specify): |
| Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 7. COC (Client & LvL) signed & dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 8. Sample containers are intact? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 9. All samples on COC received? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| All samples received on COC? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 10. All sample label information matches COC? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 11. Samples properly preserved? (If #5 is no, then this is no.) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 12. Samples received within hold times? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| Short holds taken to wet lab? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 14. QC stickers placed on bottles designated by client? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 15. Shipment meets LvL Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 16. Project Manager contacted concerning any discrepancies? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| Person Contacted _____ | | Date _____ | |



264 Welsh Pool Road
Exton, PA 19341
Phone: 610-280-3000
Fax: 610-280-3041

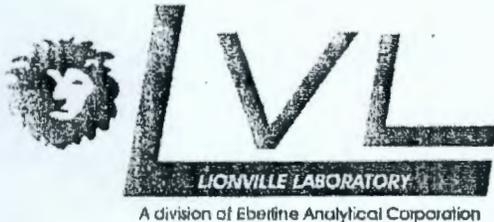
WC-Hanford, Inc.
2620 Fermi Avenue
Richland WA, 99354

Project: RC-195
Project Number: K2754
Project Manager: Joan Kessner

Reported:
04/14/2011 09:54

Analytical Report for Wet Chemistry

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B27J74	1012096-01	Soil	12/03/2010 09:10	12/10/2010 10:10
B27J75	1012096-02	Soil	12/03/2010 10:50	12/10/2010 10:10
B27J78	1012096-03	Soil	12/03/2010 13:50	12/10/2010 10:10



264 Welsh Pool Road
Exton, Pennsylvania 19341
Phone (610) 280-3000
Fax (610) 280-3041

Case Narrative

Client: WC-HANFORD RC-195 K2754
LVL#: 1012096

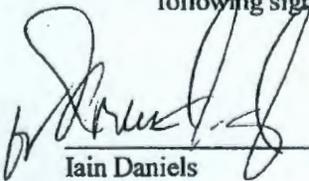
Date Received: 12-10-10

INORGANIC NARRATIVE

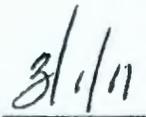
1. This narrative covers the analyses of 3 soil samples. Analyses were not performed for Anions by Ion Chromatography as twice the contractual holding times were exceeded.
2. The samples were prepared and analyzed in accordance with the methods indicated on the data summary report. Results for soil or solid pH are measured in water at 25°C unless otherwise specified.

Lionville Lab (LvL) is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvL certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding times as required by the method and/or contract were met with the exception of Nitrate Nitrite and Hexavalent Chromium.
4. The results presented in this report are derived from samples that met LvL's sample acceptance policy with the exceptions noted on the Sample Receipt Checklist.
5. The method blanks were within the method criteria.
6. The Laboratory Control Samples (LCS) were within the laboratory control limits and method criteria.
7. The matrix spike recoveries were within the 75-125% control limits.
8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.
9. Results for soil samples are reported on a dry weight basis.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.



Iain Daniels
Laboratory Manager
Lionville Laboratory
npj12-096



Date



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Reported:
04/14/2011 09:54

Notes and Definitions

- U Analyte included in the analysis, but not detected
- D Results reported from a dilution; related reporting limits are elevated due to the presence of an interference or a high target value
- * Value outside QC acceptance criteria
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- Dry Sample results reported on a dry weight basis
- Wet Sample results reported on a wet weight basis
- RPD Relative Percent Difference
- LOD Limit of Detection (LOD): the minimum estimated concentration of a target analyte that can be detected reliably. Concentrations at the LOD or between the LOD and LOQ are flagged estimated with either a 'J' qualifier or client-specific qualifier.
- LOQ Limit of Quantitation (LOQ): the minimum concentration of a target analyte that can be quantified reliably



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Reported:
 04/14/2011 09:54

**Wet Chemistry
 Lionville Laboratory**

Analyte	Result and Qualifier	LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
B27J74 (1012096-01) Soil									
%Solids	93.8	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	4.63	0.10	0.51	mg/kg dry	1	L102007	01/25/2011	01/25/2011	EPA 353.2
Hexavalent Chromium	0.21 U	0.21	0.53	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.36		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	6.21	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216
B27J75 (1012096-02) Soil									
%Solids	93.1	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	1.36	0.11	0.53	mg/kg dry	1	L102007	01/25/2011	01/25/2011	EPA 353.2
Hexavalent Chromium	0.21 U	0.21	0.54	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.70		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	6.85	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216
B27J78 (1012096-03) Soil									
%Solids	91.5	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	0.81	0.10	0.49	mg/kg dry	1	L102007	01/25/2011	01/25/2011	EPA 353.2
Hexavalent Chromium	0.22 U	0.22	0.55	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.69		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	8.48	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2754 Project Manager: Joan Kessner	Reported: 04/14/2011 09:54
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Wet Chemistry - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L101038 - Default Prep GenChem										
Duplicate (L101038-DUP3)			Source: 1012096-01		Prepared & Analyzed: 01/06/2011					
pH	8.39		0.10	pH Units		8.36			0.358	20
Reference (L101038-SRM1)					Prepared & Analyzed: 01/06/2011					
pH	10.02		0.10	pH Units	10.000		100	99-101		
Batch L101263 - SW 3060A										
Blank (L101263-BLK1)					Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	0.20 U	0.20	0.50	mg/kg wet						
LCS (L101263-BS1)					Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	4.03	0.20	0.50	mg/kg wet	4.0000		101	80-120		
LCS (L101263-BS2)					Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	1030 D	20.0	50.0	mg/kg wet	1024.0		101	80-120		
Duplicate (L101263-DUP3)			Source: 1012096-01		Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	0.21 U	0.21	0.53	mg/kg dry		0.21 U				20
Matrix Spike (L101263-MS5)			Source: 1012096-01		Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	4.23	0.21	0.53	mg/kg dry	4.2647	0.21 U	99	75-125		
Matrix Spike (L101263-MS6)			Source: 1012096-01		Prepared & Analyzed: 01/25/2011					
Hexavalent Chromium	1180 D	21.3	53.3	mg/kg dry	1160.4	0.21 U	102	75-125		
Batch L102007 - Default Prep GenChem										
Blank (L102007-BLK1)					Prepared & Analyzed: 01/25/2011					
Nitrate/Nitrite as N	0.09 U	0.09	0.47	mg/kg wet						



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Project: RC-195
 Project Number: K2754
 Project Manager: Joan Kessner

Reported:
 04/14/2011 09:54

Wet Chemistry - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L102007 - Default Prep GenChem										
LCS (L102007-BS1) Prepared & Analyzed: 01/25/2011										
Nitrate/Nitrite as N	4.20	0.09	0.44	mg/kg wet	4.3937		95.6	90-110		20
Duplicate (L102007-DUP1) Source: 1012096-01 Prepared & Analyzed: 01/25/2011										
Nitrate/Nitrite as N	5.27	0.10	0.50	mg/kg dry		4.63			13.0	20
Matrix Spike (L102007-MS1) Source: 1012096-01 Prepared & Analyzed: 01/25/2011										
Nitrate/Nitrite as N	10.3	0.10	0.48	mg/kg dry	4.8098	4.63	118	75-125		

4

COLLECTOR		COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
BAILEY		DALE DYERMAN	(509) 373-2530	KESSNER, JH	8N	45 Days / 45 Days
SAMPLING LOCATION		PROJECT DESIGNATION		SAF NO.	AIR QUALITY	
C7844 (116-B-5); 1-008		Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		RC-195	<input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	
IFS-04-009		HNF-N-585-3/86	50.5'-53.0'	302512ES10	FEDERAL EXPRESS	
SHIPPED TO		OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.			
Lionville Laboratory Incorporated		SEE PTR	794195246654			
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Cool-4C	Cool-4C	Cool-4C	None
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1
		VOLUME	250mL	120mL	120mL	250mL
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H66	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B27J74	SOIL	12-3-10	0910	✓	✓	✓

1012096

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
BAILEY HICKS	12-3-10/1500	W0413 SSU R2	12-3-10/1500		
SSU-R2	DEC 08 2010 0840	J.R. Aguilar	DEC 08 2010 0840		
J.R. Aguilar	DEC 08 2010 0840	FEDEX			
SSU R2	12-10-10/10:10	J.R. Aguilar	12-10-10/10:10		
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		

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

COLLECTOR BAILEY		COMPANY CONTACT DALE DYCKMAN		TELEPHONE NO. (509) 373-2530		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C7844 (116-B-5); I-009		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. APS-04-009		FIELD LOGBOOK NO. HNFN-885-3/86		ACTUAL SAMPLE DEPTH 560' - 58.5'		COA 302512ES10		METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO Lionville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR				BILL OF LADING/AIR BILL NO. 794195246654				
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)		PRESERVATION	Cool~4C	Cool~4C	Cool~4C	None			
			HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	ASAP			
			TYPE OF CONTAINER	G/P	G/P	G/P	G/P			
			NO. OF CONTAINER(S)	1	1	1	1			
			VOLUME	250mL	120mL	120mL	250mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H66		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B27J75	SOIL	12-3-10	1058	✓	✓	✓	✓			

600000000

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
CREANITY / 0816	12-3-10 / 1500	MOYI3 SSU R2	12-3-10 / 1500		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU-R2	DEC 08 2010 0840	J.A. Aguilar	DEC 08 2010 0840		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
J.A. Aguilar	DEC 08 2010 0840	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<div style="text-align: center; font-size: 2em; font-weight: bold;">ORIGINAL</div>	
FEDEX	12-10-10 / 10:10	W.D. ...	12-10-10 / 10:10		
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		

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

COLLECTOR BAILEY		COMPANY CONTACT DALE DYEKMAN	TELEPHONE NO. (509) 373-2530	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C7844 (116-B-5); I-012 CONTINGENCY SAMPLE		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. IFS-04-009		FIELD LOGBOOK NO. HNF-R-585-3/86	ACTUAL SAMPLE DEPTH 63.0' - 65.5'	COA 302512ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. 794195246654		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool-4C	Cool-4C	Cool-4C	None
		HOLDING TIME	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1
		VOLUME	250mL	120mL	120mL	250mL
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B27H68	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B27J78	SOIL	12-3-10	1350	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME 12-3-10 1500	RECEIVED BY/STORED IN SSU R2	DATE/TIME 12-3-10 1500	** The laboratory is to analyze pH within 24 hours of receipt. <input type="checkbox"/> <input type="checkbox"/> ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. (1) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (2) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM SSU-R2	DATE/TIME DEC 08 2010 0840	RECEIVED BY/STORED IN J.R. Aguilar	DATE/TIME DEC 08 2010 0840		
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME DEC 08 2010 0840	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM J.R. Aguilar	DATE/TIME 12-10-10 1010	RECEIVED BY/STORED IN J.R. Aguilar	DATE/TIME 12-10-10 10:10		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

ORIGINAL

Lionville Laboratory
 SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: WC Hanford
 Project/SAF/SOW/Release #: RC-195

Date: 12-10-10

LvL Batch #: 1012096

Sample Custodian: *[Signature]*

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|---|---|
| 1. Samples Hand Delivered or <u>Shipped?</u> | Carrier <i>FEDEX</i> | Airbill # 7941 9524 6654 |
| 2. Custody Seals on coolers or shipping containers intact, signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 3. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Comments: |
| 4. All expected paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 5. Samples received <u>cooled</u> or ambient? | Temp <i>2.9</i> °C | Cooler # <i>AFS-04-009</i> |
| How was the temperature taken? | <input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank | <input type="checkbox"/> Other (Specify) |
| Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals |
| 7. COC (Client & LvL) signed & dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 8. Sample containers are intact? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 9. All samples on COC received?
All samples received on COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 10. All sample label information matches COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 11. Samples properly preserved? (If #5 is no, then this is no.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 12. Samples received within hold times?
Short holds taken to wet lab? | <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <i>NO₂ NO₃ PO₄-O</i>
N/A |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes <input type="checkbox"/> No | N/A |
| 14. QC stickers placed on bottles designated by client? | <input type="checkbox"/> Yes <input type="checkbox"/> No | N/A |
| 15. Shipment meets LvL Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.) | <input checked="" type="checkbox"/> Yes
<i>12-25-11</i> | <input checked="" type="checkbox"/> No <i>see #12</i> |
| 16. Project Manager contacted concerning any discrepancies?
Person Contacted _____ | <input type="checkbox"/> Yes <input type="checkbox"/> No | N/A
Date _____ |