

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 K2755 SAF-RC-195

Rad only

Chem only

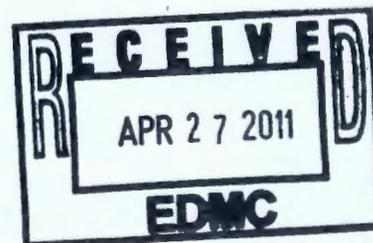
Rad & Chem

Complete

Partial

CORRECTED WET CHEM PAGES ATTACHED

Sample Location: C8239 (118-B-8); I-005, I-003, I-004



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 #	1012097
SDG #	K2755
SAF #	RC-195
Date Received	12/11/10
# Samples	4
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	X
Glycols	
DRO/KRO/GRO	X
PAHs	X
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: K2755
Project Manager: Joan Kessner

Reported:
02/16/2011 00:35

Analytical Report for Polychlorinated Biphenyls by SW846 8082

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B28NB0	1012097-01	Soil	12/07/2010 14:35	12/10/2010 10:10
B28NC5	1012097-02	Soil	12/08/2010 14:40	12/10/2010 10:10
B29K64	1012097-03	Soil	12/07/2010 09:50	12/10/2010 10:10
B29K67	1012097-04	Soil	12/07/2010 10:40	12/10/2010 10:10

Case Narrative

Client: WC-HANFORD RC-195 K2755
LVL #: 1012097

W.O. #: 60049-001-001-0001-00
Received: 12-10-2010

PCBs

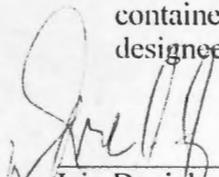
Four (4) soil samples were collected on 12-07.08-2010.

The samples and associated QC samples were extracted 12-16-2010 and analyzed 12-30-2010, 01-01-2011 according to criteria set forth in Lionville Laboratory SOPs. The extraction procedure was based on SW846 Method 3540C and the analysis procedure was based on SW846 Method 8082. All samples received Copper-Sulfur and Sulfuric Acid cleanups based on SW846 methods 3660A and 3665A.

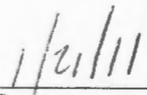
Lionville Laboratory (LvL) is NELAP accredited by the State of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvL certifies that all test results meet the requirements of NELAC with any exception noted in the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

1. The results presented in this report are derived from samples that met LvL's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. Two (2) of sixteen (16) surrogate recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR#11GC007) has been enclosed.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. The samples are reported on a dry weight basis.
8. All initial calibrations associated with this data set were within acceptance criteria.
9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

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 hardcopy data package has been authorized by the laboratory manager or a designee as verified by the following signature.



Iain Daniels
LvL Laboratory Manager



Date



GLOSSARY OF DATA

DATA QUALIFIERS

- U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
- J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
- E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- I = Interference.
- . I = Indicates an interference on one analytical column only. Result is reported from remaining analytical column.
- P = This flag is used for a dual column analysis (i.e. pesticides/PCB/herbicides) when there is greater than 40% difference for detected concentrations between the two GC columns; the lower of the two values is reported on Form 1 and flagged with a "P".
- D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C = This flag applies to a compound that has been confirmed by GC/MS.

ABBREVIATIONS

- BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
- BSD = Indicates blank spike duplicate.
- MS = Indicates matrix spike.
- MSD = Indicates matrix spike duplicate.
- DL = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.
- NA = Not Applicable.
- DF = Dilution Factor.
- NR = Not Required.
- NS = Not Spiked.
- SP = Indicates Spiked Compound.
- NPM = No pattern match for multi-component target analytes.

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: K2755
 Project Manager: Joan Kessner

Reported:
 02/16/2011 00:35

B28NB0
1012097-01 (Soil)

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

Polychlorinated Biphenyls by SW846 8082

Aroclor 1016	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1221	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1232	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1242	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1248	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1254	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1260	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1262	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1268	14.2 U	14.2	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Surrogate: Decachlorobiphenyl	107 %	43-144			L012204	12/16/2010	01/01/2011	8082
Surrogate: Tetrachloro-meta-xylene	116 %	52-141			L012204	12/16/2010	01/01/2011	8082

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WC-Hanford, Inc.
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Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 02/16/2011 00:35

B28NC5
1012097-02 (Soil)

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

Polychlorinated Biphenyls by SW846 8082

Aroclor 1016	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1221	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1232	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1242	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1248	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1254	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1260	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1262	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1268	13.9 U	13.9	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Surrogate: Decachlorobiphenyl	107 %	43-144			L012204	12/16/2010	01/01/2011	8082
Surrogate: Tetrachloro-meta-xylene	122 %	52-141			L012204	12/16/2010	01/01/2011	8082

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 02/16/2011 00:35
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B29K64
1012097-03 (Soil)

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

Polychlorinated Biphenyls by SW846 8082

Aroclor 1016	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1221	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1232	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1242	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1248	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1254	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1260	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1262	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1268	14.1 U	14.1	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Surrogate: Decachlorobiphenyl	101 %	43-144			L012204	12/16/2010	01/01/2011	8082
Surrogate: Tetrachloro-meta-xylene	108 %	52-141			L012204	12/16/2010	01/01/2011	8082

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 02/16/2011 00:35
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B29K67
1012097-04 (Soil)

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

Polychlorinated Biphenyls by SW846 8082

Aroclor 1016	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1221	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1232	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1242	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1248	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1254	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1260	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1262	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Aroclor 1268	13.6 U	13.6	ug/kg dry	1	L012204	12/16/2010	01/01/2011	8082
Surrogate: Decachlorobiphenyl	100 %	43-144			L012204	12/16/2010	01/01/2011	8082
Surrogate: Tetrachloro-meta-xylene	109 %	52-141			L012204	12/16/2010	01/01/2011	8082

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 02/16/2011 00:35
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Polychlorinated Biphenyls by SW846 8082 - 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 L012204 - SW 3540C

Blank (L012204-BLK1)		Prepared: 12/16/2010 Analyzed: 12/30/2010							
Aroclor 1016	13.3 U	13.3	ug/kg wet						
Aroclor 1221	13.3 U	13.3	ug/kg wet						
Aroclor 1232	13.3 U	13.3	ug/kg wet						
Aroclor 1242	13.3 U	13.3	ug/kg wet						
Aroclor 1248	13.3 U	13.3	ug/kg wet						
Aroclor 1254	13.3 U	13.3	ug/kg wet						
Aroclor 1260	13.3 U	13.3	ug/kg wet						
Aroclor 1262	13.3 U	13.3	ug/kg wet						
Aroclor 1268	13.3 U	13.3	ug/kg wet						
Surrogate: Decachlorobiphenyl	12.4		ug/kg wet	33.333		37*	43-144		
Surrogate: Tetrachloro-meta-xylene	12.8		ug/kg wet	33.337		38*	52-141		

LCS (L012204-BS1)		Prepared: 12/16/2010 Analyzed: 12/30/2010							
Aroclor 1016	206	13.3	ug/kg wet	166.67		124	50-138		
Aroclor 1260	176	13.3	ug/kg wet	166.67		106	50-148		
Surrogate: Decachlorobiphenyl	34.6		ug/kg wet	33.333		104	43-144		
Surrogate: Tetrachloro-meta-xylene	46.1		ug/kg wet	33.337		138	52-141		

Matrix Spike (L012204-MS6)		Source: 1012097-02		Prepared: 12/16/2010 Analyzed: 01/01/2011					
Aroclor 1016	138	14.0	ug/kg dry	174.88	13.9 U	79	50-138		
Aroclor 1260	154	14.0	ug/kg dry	174.88	13.9 U	88	50-148		
Surrogate: Decachlorobiphenyl	32.2		ug/kg dry	34.975		92	43-144		
Surrogate: Tetrachloro-meta-xylene	31.8		ug/kg dry	34.979		91	52-141		

Matrix Spike Dup (L012204-MSD6)		Source: 1012097-02		Prepared: 12/16/2010 Analyzed: 01/01/2011					
Aroclor 1016	155	13.3	ug/kg dry	166.08	13.9 U	93	50-138	17	40
Aroclor 1260	185	13.3	ug/kg dry	166.08	13.9 U	112	50-148	23	40
Surrogate: Decachlorobiphenyl	37.0		ug/kg dry	33.216		112	43-144		
Surrogate: Tetrachloro-meta-xylene	33.1		ug/kg dry	33.219		100	52-141		

PREPARATION BENCH SHEET

L012204

Lionville Laboratory

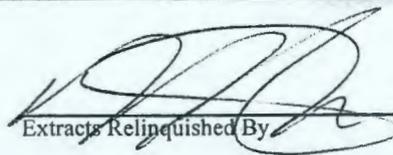
Printed: 12/18/2010 12:27:38AM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1001998

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012041-01	8082 PCBs	12/16/2010 10:16	30.18	10				250	WC-Hanford, Inc.	
1012046-01	8082 PCBs	12/16/2010 10:16	30.08	10				250	WC-Hanford, Inc.	
1012047-01	8082 PCBs	12/16/2010 10:16	31.47	10				250	WC-Hanford, Inc.	
1012068-01	8082 PCBs	12/16/2010 10:16	30.03	10				250	WC-Hanford, Inc.	
1012084-01	8082 PCBs	12/16/2010 10:16	31.28	10				250	WC-Hanford, Inc.	
1012084-02	8082 PCBs	12/16/2010 10:16	30.44	10				250	WC-Hanford, Inc.	
1012097-01	8082 PCBs	12/16/2010 10:16	30.58	10				250	WC-Hanford, Inc.	
1012097-02	8082 PCBs	12/16/2010 10:16	30.05	10				250	WC-Hanford, Inc.	
1012097-03	8082 PCBs	12/16/2010 10:16	30.71	10				250	WC-Hanford, Inc.	
1012097-04	8082 PCBs	12/16/2010 10:16	31.83	10				250	WC-Hanford, Inc.	
L012204-BLK1	QC	12/16/2010 10:16	30	10				250		
L012204-BS1	QC	12/16/2010 10:16	30	10	1002000		250	250		
L012204-MS1	QC	12/16/2010 10:16	30.45	10	1002000	1012041-01	250	250		
L012204-MS2	QC	12/16/2010 10:16	30.81	10	1002000	1012046-01	250	250		
L012204-MS3	QC	12/16/2010 10:16	30.64	10	1002000	1012047-01	250	250		
L012204-MS4	QC	12/16/2010 10:16	31.69	10	1002000	1012068-01	250	250		
L012204-MS5	QC	12/16/2010 10:16	30.01	10	1002000	1012084-02	250	250		
L012204-MS6	QC	12/16/2010 10:16	30.01	10	1002000	1012097-01	250	250		
L012204-MSD1	QC	12/16/2010 10:16	30.5	10	1002000	1012041-01	250	250		
L012204-MSD2	QC	12/16/2010 10:16	30.01	10	1002000	1012046-01	250	250		


 Extracts Relinquished By _____ Date 12/18/10 0315

S cleaned 12.20.10 52
 UC 12/20/10
 Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

L012204

Lionville Laboratory

Printed: 12/18/2010 12:27:38AM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1001998

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
L012204-MSD3	QC	12/16/2010 10:16	30.02	10	1002000	1012047-01	250	250		
L012204-MSD4	QC	12/16/2010 10:16	30.18	10	1002000	1012068-01	250	250		
L012204-MSD5	QC	12/16/2010 10:16	30.5	10	1002000	1012084-02	250	250		
L012204-MSD6	QC	12/16/2010 10:16	31.6	10	1002000	1012097-01	250	250		

Cleared 12.20.10 SZ

[Signature] 12/18/2010
 Extracts Relinquished By _____ Date _____

LE 12/20/10
 Extracts Received By _____ Date _____

1012097

Custody Transfer Record/Lab Work Request



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client <u>WC Hamford</u> <u>SAF# RC-195</u>	Refrigerator #																		
Est. Final Proj. Sampling Date	#/Type Container	Liquid																	
Project#	Solid																		
Project Contact/Phone#	Volume	Solid																	
Lionville Laboratory Project Manager <u>Orlitta Johnson</u>	Preservatives																		
QC <u>SW</u> Del <u>STD</u> TAT <u>30 days</u>	ANALYSES REQUESTED →		ORGANIC					INORG											
Date Rec'd <u>12-10-10</u> Date Due <u>1-9-11</u>	VOA	BNA	Pest	POB	Herb	PAHs	PCBs	PC	PA	PC	Metal	Mer	CN	Cy	F	HA	HA	DO2	DO3

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only											
			MS	MSD				8082	8310	8310	KRO-DRO	Met	CR6	CR6	PH	Ar	N3,N4		
S- Soil	01	B28NB0			S	12-7-10	1435	X	X	X	X	X	X	X	X	X	X		
SE- Sediment	02	B28NC5				12-8-10	1440	X	X	X	X	X	X	X	X	X	X		
SO- Solid	03	B29K64				12-7-10	0950	X	X	X	X	X	X	X	X	X	X		
SL- Sludge	04	B29K67				↓	1040	X	X	X	X	X	X	X	X	X	X		
W- Water																			
O- Oil																			
A- Air																			
DS- Drum Solids																			
DL- Drum Liquids																			
L- EP/TCLP Leachate																			
WI- Wipe																			
X- Other																			
F- Fish																			

Special Instructions: Run matrix qc

Special Instructions:

- _____
- _____
- _____
- _____
- _____
- _____

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>12-10-10</u>	<u>10:00</u>					ORIGINAL			
								REWRITTEN			

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-534	PAGE 1 OF 2			
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-005		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. GWS-115		FIELD LOGBOOK NO. HNF-N-585-15 PG 20		ACTUAL SAMPLE DEPTH 17.4-19.9 FT		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 796535167463				

MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=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 DCE Order 5400.5 (1990/1993)	PRESERVATION			Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None	None	None	
		HOLDING TIME			14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	None	None	None	None
		TYPE OF CONTAINER			aG	G	aG	G/P	G/P	G/P	G/P	G/P	Split Spoon Liner	Moisture Resistant Cont	
		NO. OF CONTAINER(S)			1	1	1	1	1	1	1	1	1	1	1
		VOLUME			250mL	120mL	250mL	250mL	120mL	120mL	250mL	1000g	200g		
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B28N47		SAMPLE ANALYSIS			PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216 (100 Area RIFS);		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME												
B28NB0	SOIL	12-7-10	1435	X	X	X	X	X	X	X	X	X	X		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
<i>A. Turner AT</i>	<i>12-7-10 1530</i>	<i>SSU-R1</i>	<i>12-7-10 1530</i>	<i>*N/C - Low yield NOT collected</i>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>CSU-R1</i>	<i>12-9-10 0930</i>	<i>cm Aquilar cm Ag</i>	<i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>cm Aquilar cm Ag</i>	<i>12-9-10 1400</i>	<i>FEDEX</i>			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>See X</i>	<i>12-10-10 10:10</i>	<i>SSU-R1</i>	<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		
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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-195-534	PAGE 2 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 p620</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 ft</i>	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		7965351674630		

186000015

SPECIAL INSTRUCTIONS

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.

(1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS);

(2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);

(3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);

(4) Bulk Density - D2937 (100 Area RIFS); Particle Size (Dry Sieve) - D422 (100 Area RIFS); Saturated Hydraulic Conductivity - D2434 (100 Area RIFS) {Hydraulic Conductivity}; Saturated Hydraulic Conductivity - D5084 (100 Area RIFS) {Hydraulic Conductivity};

 ORIGINAL

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						RC-195-555		PAGE 1 OF 1	
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N		DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-008		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 p622</i>		ACTUAL SAMPLE DEPTH <i>32.3 - 34.8 FT</i>		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 796535167463					
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	Cool~4C	Cool~4C	Cool~4C	None
			HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
			TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P
			NO. OF CONTAINER(S)		1	1	1	1	1	1	1
			VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: <i>B28NC5-MU211129/10</i> <i>B29K47</i>		SAMPLE ANALYSIS PAHs - 8310 (100 Area RI/FS); SEE ITEM (1) IN SPECIAL INSTRUCTIONS PCBs - 8082 (100 Area RI/FS); SEE ITEM (2) IN SPECIAL INSTRUCTIONS Chromium Hex - 7196 (100 Area RIFS); SEE ITEM (3) IN SPECIAL INSTRUCTIONS pH (Soil) - 9045 (100 Area RIFS);									
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B28NC5	SOIL	12-8-10	1440	X	X	A	X	A	X	A	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-8-10 1550</i>	RECEIVED BY/STORED IN <i>MO413 SSU R2</i>	DATE/TIME <i>12-8-10 1550</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (C) (100 Area RIFS); (3) 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>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aquilar cm lgh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar cm lgh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FED EX</i>	DATE/TIME <i>12-10-10/10</i>		
RELINQUISHED BY/REMOVED FROM <i>FED EX</i>	DATE/TIME <i>12-10-10 110:10</i>	RECEIVED BY/STORED IN <i>W. Smith</i>	DATE/TIME <i>12-10-10/10</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		

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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-656	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION CS239 (118-B-8); I-003	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>ANF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>10-12.5 FT</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>796535167483</i>			

MATRIX* A=Air DL=Drum L=Liquid DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water W2=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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)		1	1	1	1	1	1	1
		VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K53		SAMPLE ANALYSIS		PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B29K64	SOIL	12-7-10	0950	X	X	X	X	X	X	X

1012097

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-7-10 1145</i>	RECEIVED BY/STORED IN <i>R1</i>	DATE/TIME <i>12-7-10 1145</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM <i>SSU-R1</i>	DATE/TIME <i>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aquilar</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME <i>12-10-10 10:10</i>		
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME <i>12-10-10 10:10</i>	RECEIVED BY/STORED IN <i>WJH</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		
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-195-660	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-B); I-004		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-117</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 PG 20</i>	ACTUAL SAMPLE DEPTH <i>12.4-14.9 FT</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>796535167463</i>			

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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K54		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K67	SOIL	12-7-10	1040	X	X	X	X	X	X

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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
<i>A. Turner</i>	<i>12-7-10 1145</i>	<i>R1</i>	<i>12-7-10 1145</i>		
<i>SSU-R1</i>	<i>12-9-10 0930</i>	<i>Am Aguilar</i>	<i>12-9-10 0930</i>		
<i>Am Aguilar</i>	<i>12-9-10 1400</i>	<i>FEDEX</i>			
<i>FEDEX</i>	<i>12-10-10 110:10</i>	<i>Donna DSU</i>	<i>12-10-10/10</i>		
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

Lionville Laboratory
 SAMPLE RECEIPT CHECKLIST (SRC)

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

Date: 12-10-10

LvL Batch #: 1012097

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|---|--|
| 1. Samples Hand Delivered or Shipped? | Carrier <u>Ex</u> | Airbill # <u>7965 3516 7463</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 <i>Comments:</i> |
| 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>3.3</u> °C | Cooler # <u>GWS-117</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? <u>12-10-10</u> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No <u>N/A</u> |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes | <input type="checkbox"/> No <u>N/A</u> |
| 14. QC stickers placed on bottles designated by client? | <input type="checkbox"/> Yes | <input type="checkbox"/> No <u>N/A</u> |
| 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 <u>N/A</u> |
| 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: K2755 Project Manager: Joan Kessner	Reported: 01/21/2011 13:46
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Analytical Report for Metals by SW846 6000/7000 series

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B28NB0	1012097-01	Soil	12/07/2010 14:35	12/10/2010 10:10
B28NC5	1012097-02	Soil	12/08/2010 14:40	12/10/2010 10:10
B29K64	1012097-03	Soil	12/07/2010 09:50	12/10/2010 10:10
B29K67	1012097-04	Soil	12/07/2010 10:40	12/10/2010 10:10



64 Welsh Pool Road
Eaton, Pennsylvania 19341
Phone (610) 280-3000
Fax (610) 280-3041

Case Narrative

Client: WC-HANFORD RC-195
LVL#: 1012097
SDG/SAF#: K2755/RC-195

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

METALS

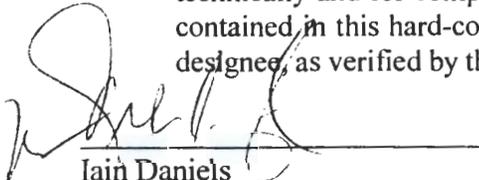
The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvL) certifies that all test results meet the requirements of NELAC except as noted below.

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 4 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).
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 8 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 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>
B28NB0	Aluminum	22,000	71.3
	Antimony	100	91.3
	Calcium	20,800	68.1
	Copper	100	83.2
	Iron	42,000	60.7
	Magnesium	21,600	69.3
	Manganese	1,000	71.8
	Silicon	2,100	92.7

12. All duplicate analyses were within 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.
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.



Iain Daniels
Laboratory Manager
Lionville Laboratory

1/24/11
Date

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: K2755
Project Manager: Joan Kessner

Reported:
01/21/2011 13:46

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

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: K2755
 Project Manager: Joan Kessner

Reported:
 01/21/2011 13:46

B28NB0
1012097-01 (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	5790		4.31	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Antimony	0.413	B	0.517	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Arsenic	2.14		0.861	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Barium	46.9		0.431	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Beryllium	0.281		0.172	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Bismuth	8.61	U	8.61	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Boron	1.11	B	1.72	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cadmium	0.111	B	0.172	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Calcium	5080		86.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Chromium	8.09		0.172	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cobalt	7.66		1.72	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Copper	16.9		0.861	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Iron	22500		17.2	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lead	3.37		0.431	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lithium	6.84		2.15	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Magnesium	3560		64.6	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Manganese	292		4.31	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Molybdenum	0.478	B	1.72	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Nickel	7.66		3.45	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Phosphorus	1040		43.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Potassium	877		345	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Selenium	0.258	U	0.258	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silicon	702		1.72	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silver	0.172	U	0.172	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Sodium	368		43.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Strontium	19.8		0.861	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Thallium	0.431	U	0.431	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Tin	2.39	B	8.61	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Vanadium	59.4		2.15	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Zinc	41.5		8.61	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Mercury	0.0136	B	0.0271	mg/kg dry	1	L012280	12/22/2010	12/22/2010	7471A

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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/21/2011 13:46
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B28NC5
1012097-02 (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	4390		4.60	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Antimony	0.540	B	0.552	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Arsenic	1.45		0.921	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Barium	62.3		0.460	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Beryllium	0.222		0.184	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Bismuth	9.21	U	9.21	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Boron	0.594	B	1.84	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cadmium	0.113	B	0.184	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Calcium	5660		92.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Chromium	4.93		0.184	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cobalt	9.60		1.84	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Copper	15.9		0.921	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Iron	29300		18.4	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lead	2.24		0.460	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lithium	4.08		2.30	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Magnesium	4060		69.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Manganese	337		4.60	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Molybdenum	0.531	B	1.84	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Nickel	10.8		3.68	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Phosphorus	1520		46.0	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Potassium	539		368	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Selenium	0.276	U	0.276	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silicon	477		1.84	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silver	0.184	U	0.184	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Sodium	426		46.0	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Strontium	21.4		0.921	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Thallium	0.460	U	0.460	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Tin	2.87	B	9.21	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Vanadium	80.3		2.30	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Zinc	48.1		9.21	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Mercury	0.0262	U	0.0262	mg/kg dry	1	L012280	12/22/2010	12/22/2010	7471A



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/21/2011 13:46
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B29K64
1012097-03 (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	7990		4.24	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Antimony	0.444	B	0.509	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Arsenic	2.83		0.848	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Barium	69.2		0.424	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Beryllium	0.330		0.170	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Bismuth	8.48	U	8.48	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Boron	1.17	B	1.70	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cadmium	0.126	B	0.170	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Calcium	5860		84.8	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Chromium	10.8		0.170	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cobalt	8.55		1.70	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Copper	16.9		0.848	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Iron	24900		17.0	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lead	4.90		0.424	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lithium	8.02		2.12	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Magnesium	4820		63.6	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Manganese	344		4.24	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Molybdenum	0.489	B	1.70	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Nickel	10.8		3.39	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Phosphorus	997		42.4	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Potassium	1360		339	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Selenium	0.254	U	0.254	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silicon	555		1.70	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silver	0.170	U	0.170	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Sodium	379		42.4	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Strontium	25.4		0.848	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Thallium	0.424	U	0.424	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Tin	2.58	B	8.48	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Vanadium	63.7		2.12	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Zinc	47.4		8.48	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Mercury	0.0271	U	0.0271	mg/kg dry	1	L012280	12/22/2010	12/22/2010	7471A

WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/21/2011 13:46
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B29K67
1012097-04 (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	7970		3.94	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Antimony	0.368	B	0.473	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Arsenic	3.04		0.788	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Barium	71.8		0.394	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Beryllium	0.353		0.158	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Bismuth	0.588	B	7.88	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Boron	1.24	B	1.58	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cadmium	0.131	B	0.158	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Calcium	7480		78.8	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Chromium	12.8		0.158	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Cobalt	8.81		1.58	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Copper	17.4		0.788	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Iron	25600		15.8	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lead	5.09		0.394	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Lithium	8.82		1.97	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Magnesium	4920		59.1	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Manganese	359		3.94	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Molybdenum	1.05	B	1.58	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Nickel	11.2		3.15	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Phosphorus	1040		39.4	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Potassium	1220		315	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Selenium	0.236	U	0.236	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silicon	652		1.58	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Silver	0.158	U	0.158	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Sodium	482		39.4	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Strontium	29.0		0.788	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Thallium	0.394	U	0.394	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Tin	2.70	B	7.88	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Vanadium	66.4		1.97	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Zinc	49.4		7.88	mg/kg dry	1	L101122	01/14/2011	01/20/2011	6010B
Mercury	0.0280	U	0.0280	mg/kg dry	1	L012280	12/22/2010	12/22/2010	7471A

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WC-Hanford, Inc.
 2620 Fermi Avenue
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Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/21/2011 13:46

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 L012280 - SW 7471A Prep										
Blank (L012280-BLK1)					Prepared & Analyzed: 12/22/2010					
Mercury	0.0281	U	0.0281	mg/kg wet						
Duplicate (L012280-DUP4)					Source: 1012097-01 Prepared & Analyzed: 12/22/2010					
Mercury	0.0279	U	0.0279	mg/kg dry		0.0136				20
Matrix Spike (L012280-MS4)					Source: 1012097-01 Prepared & Analyzed: 12/22/2010					
Mercury	0.156		0.0257	mg/kg dry	0.14281	0.0136	99.5	75-125		
Reference (L012280-SRM1)					Prepared & Analyzed: 12/22/2010					
Mercury	1.26		0.0281	mg/kg wet	1.2600		99.8	65.9-133.3		
Batch L101122 - SW 3050B										
Blank (L101122-BLK1)					Prepared: 01/14/2011 Analyzed: 01/20/2011					
Aluminum	4.55	U	4.55	mg/kg wet						
Antimony	0.545	U	0.545	mg/kg wet						
Arsenic	0.909	U	0.909	mg/kg wet						
Barium	0.455	U	0.455	mg/kg wet						
Beryllium	0.182	U	0.182	mg/kg wet						
Bismuth	9.09	U	9.09	mg/kg wet						
Boron	1.82	U	1.82	mg/kg wet						
Cadmium	0.182	U	0.182	mg/kg wet						
Calcium	90.9	U	90.9	mg/kg wet						
Chromium	0.182	U	0.182	mg/kg wet						
Cobalt	1.82	U	1.82	mg/kg wet						
Copper	0.909	U	0.909	mg/kg wet						
Iron	18.2	U	18.2	mg/kg wet						
Lead	0.455	U	0.455	mg/kg wet						
Lithium	0.733	B	2.27	mg/kg wet						
Magnesium	68.2	U	68.2	mg/kg wet						
Manganese	4.55	U	4.55	mg/kg wet						
Molybdenum	1.82	U	1.82	mg/kg wet						
Nickel	3.64	U	3.64	mg/kg wet						
Phosphorus	45.5	U	45.5	mg/kg wet						
Potassium	364	U	364	mg/kg wet						
Selenium	0.273	U	0.273	mg/kg wet						
Silicon	2.42		1.82	mg/kg wet						
Silver	0.182	U	0.182	mg/kg wet						
Sodium	45.5	U	45.5	mg/kg wet						

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

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/21/2011 13:46

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 L101122 - SW 3050B

Blank (L101122-BLK1)

Prepared: 01/14/2011 Analyzed: 01/20/2011

Strontium	0.909 U	0.909	mg/kg wet						
Thallium	0.455 U	0.455	mg/kg wet						
Tin	1.81 B	9.09	mg/kg wet						
Vanadium	2.27 U	2.27	mg/kg wet						
Zinc	9.09 U	9.09	mg/kg wet						

Duplicate (L101122-DUP2)

Source: 1012097-01

Prepared: 01/14/2011 Analyzed: 01/20/2011

Aluminum	5860	4.11	mg/kg dry		5790			1	20
Antimony	0.445 B	0.493	mg/kg dry		0.413			8	20
Arsenic	2.08	0.822	mg/kg dry		2.14			3	20
Barium	51.7	0.411	mg/kg dry		46.9			10	20
Beryllium	0.245	0.164	mg/kg dry		0.281			14	20
Bismuth	8.22 U	8.22	mg/kg dry		8.61 U				20
Boron	0.993 B	1.64	mg/kg dry		1.11			11	20
Cadmium	0.129 B	0.164	mg/kg dry		0.111			15	20
Calcium	4990	82.2	mg/kg dry		5080			2	20
Chromium	8.29	0.164	mg/kg dry		8.09			2	20
Cobalt	7.88	1.64	mg/kg dry		7.66			3	20
Copper	15.3	0.822	mg/kg dry		16.9			10	20
Iron	22000	16.4	mg/kg dry		22500			2	20
Lead	3.42	0.411	mg/kg dry		3.37			1	20
Lithium	6.59	2.06	mg/kg dry		6.84			4	20
Magnesium	4210	61.7	mg/kg dry		3560			17	20
Manganese	296	4.11	mg/kg dry		292			1	20
Molybdenum	0.401 B	1.64	mg/kg dry		0.478			18	20
Nickel	8.38	3.29	mg/kg dry		7.66			9	20
Phosphorus	880	41.1	mg/kg dry		1040			17	20
Potassium	941	329	mg/kg dry		877			7	20
Selenium	0.247 U	0.247	mg/kg dry		0.258 U				20
Silicon	653	1.64	mg/kg dry		702			7	20
Silver	0.164 U	0.164	mg/kg dry		0.172 U				20
Sodium	369	41.1	mg/kg dry		368			0.3	20
Strontium	20.5	0.822	mg/kg dry		19.8			4	20
Thallium	0.411 U	0.411	mg/kg dry		0.431 U				20
Tin	2.22 B	8.22	mg/kg dry		2.39			7	20
Vanadium	53.1	2.06	mg/kg dry		59.4			11	20
Zinc	40.5	8.22	mg/kg dry		41.5			2	20

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Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/21/2011 13:46

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 L101122 - SW 3050B									
Matrix Spike (L101122-MS2)		Source: 1012097-01		Prepared: 01/14/2011		Analyzed: 01/20/2011			
Aluminum	7890	4.85	mg/kg dry	193.81	5790	1080*	75-125		
Antimony	23.9	0.581	mg/kg dry	48.452	0.413	48*	75-125		
Arsenic	163	0.969	mg/kg dry	193.81	2.14	83	75-125		
Barium	222	0.485	mg/kg dry	193.81	46.9	91	75-125		
Beryllium	4.38	0.194	mg/kg dry	4.8452	0.281	85	75-125		
Bismuth	397	9.69	mg/kg dry	484.52	8.61 U	82	75-125		
Boron	74.8	1.94	mg/kg dry	96.904	1.11	76	75-125		
Cadmium	4.01	0.194	mg/kg dry	4.8452	0.111	80	75-125		
Calcium	8250	96.9	mg/kg dry	2422.6	5080	131*	75-125		
Chromium	25.1	0.194	mg/kg dry	19.381	8.09	88	75-125		
Cobalt	47.6	1.94	mg/kg dry	48.452	7.66	82	75-125		
Copper	34.1	0.969	mg/kg dry	24.226	16.9	71*	75-125		
Iron	24800	19.4	mg/kg dry	96.904	22500	2450*	75-125		
Lead	42.3	0.485	mg/kg dry	48.452	3.37	80	75-125		
Lithium	91.8	2.42	mg/kg dry	96.904	6.84	88	75-125		
Magnesium	6680	72.7	mg/kg dry	2422.6	3560	129*	75-125		
Manganese	386	4.85	mg/kg dry	48.452	292	196*	75-125		
Molybdenum	80.5	1.94	mg/kg dry	96.904	0.478	83	75-125		
Nickel	48.8	3.88	mg/kg dry	48.452	7.66	85	75-125		
Phosphorus	1510	48.5	mg/kg dry	484.52	1040	96	75-125		
Potassium	3230	388	mg/kg dry	2422.6	877	97	75-125		
Selenium	156	0.291	mg/kg dry	193.81	0.258 U	80	75-125		
Silicon	882	1.94	mg/kg dry	96.904	702	185*	75-125		
Silver	3.83	0.194	mg/kg dry	4.8452	0.172 U	79	75-125		
Sodium	2610	48.5	mg/kg dry	2422.6	368	93	75-125		
Strontium	107	0.969	mg/kg dry	96.904	19.8	90	75-125		
Thallium	147	0.485	mg/kg dry	193.81	0.431 U	76	75-125		
Tin	78.7	9.69	mg/kg dry	96.904	2.39	79	75-125		
Vanadium	100	2.42	mg/kg dry	48.452	59.4	84	75-125		
Zinc	86.4	9.69	mg/kg dry	48.452	41.5	93	75-125		

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: K2755
 Project Manager: Joan Kessner

Reported:
 01/21/2011 13:46

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 L101122 - SW 3050B									
Reference (L101122-SRM1)				Prepared: 01/14/2011 Analyzed: 01/20/2011					
Aluminum	8080	11.4	mg/kg wet	6766.6		119	0-225.5		
Antimony	53.2	1.36	mg/kg wet	56.630		94	0-225.6		
Arsenic	117	2.27	mg/kg wet	113.85		103	85-115		
Barium	305	1.14	mg/kg wet	298.35		102	75.7-124.3		
Beryllium	107	0.455	mg/kg wet	108.32		99	85.2-114.8		
Boron	88.1	4.55	mg/kg wet	86.580		102	68.5-131.6		
Cadmium	230	0.455	mg/kg wet	224.09		102	84.9-115.1		
Calcium	3290	227	mg/kg wet	3305.9		99	82.8-117.2		
Chromium	79.0	0.455	mg/kg wet	77.590		102	76.8-123.2		
Cobalt	167	4.55	mg/kg wet	163.19		102	79.4-120.6		
Copper	261	2.27	mg/kg wet	265.65		98	82.4-117.6		
Iron	8580	45.5	mg/kg wet	8202.8		105	78.9-121.1		
Lead	187	1.14	mg/kg wet	187.62		100	81.5-118.5		
Lithium	112	5.68	mg/kg wet	113.01		99	33.8-166.2		
Magnesium	8080	170	mg/kg wet	8352.3		97	84.2-115.8		
Manganese	1010	11.4	mg/kg wet	951.35		106	69-131		
Molybdenum	238	4.55	mg/kg wet	234.78		102	80.1-119.9		
Nickel	224	9.09	mg/kg wet	220.85		101	81.4-118.6		
Potassium	14900	909	mg/kg wet	14177		105	85.7-114.3		
Selenium	196	0.682	mg/kg wet	187.99		105	78.8-121.2		
Silicon	1400	4.55	mg/kg wet	939.78		150	0-272.3		
Silver	82.2	0.455	mg/kg wet	83.960		98	81.9-118.1		
Sodium	9080	114	mg/kg wet	9587.1		95	83.5-116.4		
Strontium	189	2.27	mg/kg wet	171.65		110	67.5-132.5		
Thallium	87.8	1.14	mg/kg wet	85.410		103	77.1-122.9		
Tin	102	22.7	mg/kg wet	101.60		101	86.7-113.2		
Vanadium	103	5.68	mg/kg wet	97.430		106	75.8-124.2		
Zinc	202	22.7	mg/kg wet	196.52		103	78.9-121.1		

SAMPLE DIGESTION RECORD

Digestion Batch #: L101122
 Date/Time Initiated: 11/11/09 9:45
 Date/Time Completed: 11/11/09 14:10
 Analyst: JS
 Matrix (circle one): (Soil) Water Other
 Method (circle one): 3005A 3010A (3050) 200.7 (1994)

Digested / Undigested (circle one)
 Balance #: BIT
 Balance Cal Verification: (Y) NA
 Temp: 95
 BLOCK 1 (2) (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
1012045-01		0.51	50		70	Coarse	Brown	Rocks	N/A
L101122 - Rep1		0.63	50						
* 0.5	0.5	0.57	50						
1012045-02		0.70	50			Fine	gray	Rocks	
03		0.67	50			Coarse	Ottawa Sand		
04		0.72	50			Coarse	Ottawa Sand		
1012047-01		0.63	50			Coarse	Brown	Rocks	
L101122 - Rep2		0.66	50						
* 0.5	0.5	0.56	50						
1012047-02		0.57	50			Coarse	Black	Rocks	
03		0.64	50			Fine	Brown	Rocks	
04		0.69	50			Fine	Brown	Rocks	
L101122 - Rep3		0.55	50			Coarse	Bailing chips		
* 0.5	0.5	0.66	50			Fine	dusty fine sand		

JS
 11/11/09

Spiking IDs / Expiration Date:

MS#: 1001843

LCS#: 1001370

Reagent IDs:

HNO₃: 329049
 HCl: 543102
 H₂O₂: 343A17
 1:1 HNO₃: 637-033-02
 1:1 HCl:

File ID#: _____

Data Review By / Date:

JS 11/11/09

* 6072-089-15 250ml
 1 087-12 1

Analyst: M. White
 Date: 12/22/10
 Start Time/Temp: 2000/95°
 End Time/Temp: 2040/97°

Instrument ID: HG3.2
 Balance #: 629 /NA
 Pipette Calibration (Daily) (Y)

Prep Batch: L012280
 Worksheet: HG122202
 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	
ICW		0.125	2.5	10ml	50	
CW		0.250	5.0	10ml	50	
IC/CS				10ml	50	
L012280-BLK1				0.32	50	
SRM1		(X)	(X)	0.32	50	
1011035-01				0.38	50	
L012280-DUP1				0.37	50	
MS1		0.500	1.0	0.38	50	
1012084-01				0.36	50	
L012280-DUP2				0.37	50	
MS2		0.500	1.0	0.37	50	
1012084-02				0.33	50	
1012086-01				0.34	50	
L012280-DUP3				0.38	50	
MS3		0.500	1.0	0.38	50	
1012086-02				0.35	50	
04				0.37	50	
1012097-01				0.36	50	
L012280-DUP4				0.35	50	
MS4		0.500	1.0	0.38	50	
1012097-02				0.36	50	

Standard:	ID	Prep Date/Time
ICAL/MS	RI 09019858	12/22/10 1700
ICV/CCV/LCS	EV 0902297A	L

Reviewed By/Date: WJM 12/23/10
 se book # 9368 for std traceability information

Soil LCS True Value = 1.26 µg/Kg
 Standard # 1001520 (X)

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

Custody Transfer Record/Lab Work Request



1012097

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client <u>WC Hamford SAF# RC-195</u>	Refrigerator #	A	B	C	D	E	F	G
Est. Final Proj. Sampling Date _____	#/Type Container	Liquid						
Project# _____	Solid	1001	1001	1001	1001	1001	1001	1001
Project Contact/Phone# _____	Volume	Solid	250	250	120	250	120	250
Lionville Laboratory Project Manager <u>Orlitta Johnson</u>	Preservatives		-	-	-	-	-	-
QC <u>SW</u> Del <u>STD</u> TAT <u>30 days</u>								

Date Rec'd <u>12-10-10</u>	Date Due <u>1-9-11</u>	ANALYSES REQUESTED
		ORGANIC
		VOA BNA Pests PCB Herb PAHs PCBs PAHs DRO
		INORG
		(2) Metal + Hg CN Cr6 Pb Arsenic DO2 DO3

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only															
			MS	MSD				VOA	BNA	Pests	PCB	Herb	PAHs	PCBs	PAHs	DRO	(2) Metal + Hg	CN	Cr6	Pb	Arsenic	DO2	DO3
S- Soil	01	B28NBO			S	12-7-10	1435			X	X	X			X	X	X	X					
SE- Sediment	02	B28NC5				12-8-10	1440			X	X	X			X	X	X	X					
SO- Solid	03	B29K64				12-7-10	0950			X	X	X			X	X	X	X					
SL- Sludge	04	B29K67				↓	1040			X	X	X			X	X	X	X					
W- Water																							
O- Oil																							
A- Air																							
DS- Drum Solids																							
DL- Drum Liquids																							
L- EP/TCLP Leachate																							
WI- Wipe																							
X- Other																							
F- Fish																							

Special Instructions: Run matrix qc

Special Instructions:

- _____
- _____
- _____
- _____
- _____
- _____

Relinquished by	Received by	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>12-10-10</u>	<u>10:00</u>

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL			
REWRITTEN			

3888816

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-534	PAGE 1 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 PG 20</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 FT</i>		COA 302512ES10	METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO Lionville Laboratory Incorporated	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/ATR BILL NO. <i>796535167463</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	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None	None	None	
		HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	None	None		
		TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P	Split Spoon Liner	Moisture Resistant Cont.		
		NO. OF CONTAINER(S)		1	1	1	1	1	1	1	1	1		
		VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL	1000g	200g		
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B28N47		SAMPLE ANALYSIS		PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B28NB0	SOIL	12-7-10	1435	X	X	X	X	X	X	X	X	*N/C	*N/C	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
<i>A. Turner AT</i>	<i>12-7-10 1530</i>	<i>SSU-R1</i>	<i>12-7-10 1530</i>	<i>*N/C - Low yield NOT collected</i>	
<i>SSU-R1</i>	<i>12-9-10 0930</i>	<i>cmAgular cmAg</i>	<i>12-9-10 0930</i>		
<i>cmAgular cmAg</i>	<i>12-9-10 1400</i>	<i>FEDEX</i>	<i>12-9-10 1400</i>		
<i>FEDEX</i>	<i>12-10-10 10:10</i>	<i>SSU-R1</i>	<i>12-10-10 10:10</i>		
<i>SSU-R1</i>	<i>12-10-10 10:10</i>				
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-195-534	PAGE 2 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 p620</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9ft</i>	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		<i>796535167463</i>	

SPECIAL INSTRUCTIONS

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.

(1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS);
(2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);
(3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);
(4) Bulk Density - D2937 (100 Area RIFS); Particle Size (Dry Sieve) - D422 (100 Area RIFS); Saturated Hydraulic Conductivity - D2434 (100 Area RIFS) {Hydraulic Conductivity};
Saturated Hydraulic Conductivity - D5084 (100 Area RIFS) {Hydraulic Conductivity};

 ORIGINAL

10000018

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-555	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-008		PROJECT DESIGNATION Soll/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 p622</i>	ACTUAL SAMPLE DEPTH <i>32.3 - 34.8 FT</i>	COA 302512ES10		METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Licville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR 796535167463			

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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: <i>B28NC5 MUM 11/29/10</i> <i>B29K47</i>		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B28NC5	SOIL	12-8-10	1440	X	X	X	X	X	X

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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
<i>A. Turner</i>	<i>12-8-10 1550</i>	<i>MO413 S5U R2</i>	<i>12-8-10 1550</i>		
<i>S5U-R2</i>	<i>12-9-10 0930</i>	<i>cm Aquilar cm lgh</i>	<i>12-9-10 0930</i>		
<i>cm Aquilar cm lgh</i>	<i>12-9-10 1400</i>	<i>FCDEX</i>			
<i>FCDEX</i>	<i>12-10-10 110:10</i>	<i>WJ Smith</i>	<i>12-10-10/10</i>		

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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-656	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-003	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>ANF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>10-12.5 FT</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>796535167463</i>				

MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe Y=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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K53									
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K64	SOIL	12-7-10	0950	X	X	X	X	X	X

1012097

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-7-10 1145</i>	RECEIVED BY/STORED IN <i>MO 413 SSUR</i>	DATE/TIME <i>12-7-10 1145</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM <i>SSUR</i>	DATE/TIME <i>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Saular cm lgh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Saular cm lgh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEJEX</i>	DATE/TIME <i>12-9-10 1400</i>		
RELINQUISHED BY/REMOVED FROM <i>vee</i>	DATE/TIME <i>12-10-10 10:10</i>	RECEIVED BY/STORED IN <i>WJ m... DSU:49</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		
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-195-660	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-004	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>12.4-14.9 ft</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>796535167463</i>				

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wine 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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K54	SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K67	SOIL	12-7-10	1040	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-7-10 1145</i>	RECEIVED BY/STORED IN <i>M0413 Ssu R1</i>	DATE/TIME <i>12-7-10 1145</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM <i>SSU-RI</i>	DATE/TIME <i>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aguilar cm Agl</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aguilar cm Agl</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>code</i>	DATE/TIME <i>12-10-10 110:10</i>	RECEIVED BY/STORED IN <i>Dr. Smith</i>	DATE/TIME <i>12-10-10/10</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

12088885

Lionville Laboratory
SAMPLE RECEIPT CHECKLIST (SRC)

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

Date: 12-10-10

LvL Batch #: 1012097

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|--|--|
| 1. Samples Hand Delivered or Shipped? | Carrier <u>EX</u> | Airbill # <u>7965 3516 7463</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>3.3</u> °C | Cooler # <u>GWS-117</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?
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? | <u>12-10-10</u> <input checked="" type="checkbox"/> Yes
<input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No
<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?
Person Contacted _____ | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A
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: K2755
Project Manager: Joan Kessner

Reported:
01/13/2011 20:00

Analytical Report for Polynuclear Aromatic Compounds by SW846 8310

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B28NB0	1012097-01	Soil	12/07/2010 14:35	12/10/2010 10:10
B28NC5	1012097-02	Soil	12/08/2010 14:40	12/10/2010 10:10
B29K64	1012097-03	Soil	12/07/2010 09:50	12/10/2010 10:10
B29K67	1012097-04	Soil	12/07/2010 10:40	12/10/2010 10:10

Case Narrative

Client: WC-HANFORD RC-195 K2755
LVL #: 1012097

W.O. #: 60049-001-001-0001-00
Date Received: 12-10-2010

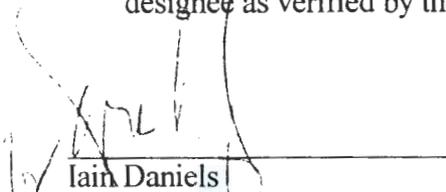
POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)

Four (4) soil samples were collected on 12-07,08-2010.

The samples and associated QC samples were extracted 12-14-2010 and analyzed 01-05,06-2011 according to criteria set forth in Lionville Laboratory SOPs. The extraction procedure was based on SW846 Method 3540C and the analysis procedure was based on SW846 Method 8310.

Lionville Laboratory (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. LvL certifies that all test results meet the requirements of NELAC with any exception noted in the following statements:

1. The results presented in this report are derived from samples that met LvL's sample acceptance policy.
2. All required holding times for extraction and analysis have been met.
3. All obtainable surrogate recoveries were within acceptance criteria.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. The initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. The samples were 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 data package has been authorized by the laboratory manager or a designed as verified by the following signature.


Iain Daniels
LvL Laboratory Manager


Date



GLOSSARY OF DATA

DATA QUALIFIERS

- U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
- J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
- E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- I = Interference.
- . I = Indicates an interference on one analytical column only. Result is reported from remaining analytical column.
- P = This flag is used for a dual column analysis (i.e. pesticides/PCB/herbicides) when there is greater than 40% difference for detected concentrations between the two GC columns; the lower of the two values is reported on Form 1 and flagged with a "P".
- D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C = This flag applies to a compound that has been confirmed by GC/MS.

ABBREVIATIONS

- BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
- BSD = Indicates blank spike duplicate.
- MS = Indicates matrix spike.
- MSD = Indicates matrix spike duplicate.
- DL = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.
- NA = Not Applicable.
- DF = Dilution Factor.
- NR = Not Required.
- NS = Not Spiked.
- SP = Indicates Spiked Compound.
- NPM = No pattern match for multi-component target analytes.



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

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/13/2011 20:00

B28NB0
1012097-01 (Soil)

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

Polynuclear Aromatic Compounds by SW846 8310

Naphthalene	3.55 U	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthylene	3.55 U	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthene	1.85 J	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluorene	1.83 J	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Phenanthrene	30.8	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Anthracene	5.21	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluoranthene	39.1	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Indeno[1,2,3-cd]pyrene	5.64	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Pyrene	160	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[a]anthracene	8.13	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Chrysene	70.3	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[b] fluoranthene	10.8	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[k] fluoranthene	3.63	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[a] pyrene	11.0	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Dibenz[a,h]anthracene	3.55 U	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[g,h,i] perylene	2.53 J	3.55	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Surrogate: Triphenylene	107 %	68-129			L012186	12/14/2010	01/06/2011	8310

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

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/13/2011 20:00

B28NC5
1012097-02 (Soil)

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

Polynuclear Aromatic Compounds by SW846 8310

Naphthalene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthylene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthene	1.05 J	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluorene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Phenanthrene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Anthracene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluoranthene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Indeno[1,2,3-cd]pyrene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Pyrene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benz[a]anthracene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Chrysene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[b] fluoranthene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[k] fluoranthene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[a] pyrene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Dibenz[a,h]anthracene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[g,h,i] perylene	3.32 U	3.32	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Surrogate: Triphenylene	97 %	68-129			L012186	12/14/2010	01/06/2011	8310

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

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/13/2011 20:00

B29K64
1012097-03 (Soil)

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

Polynuclear Aromatic Compounds by SW846 8310

Naphthalene	3.51 U	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthylene	1.37 J	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthene	4.71	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluorene	1.55 J	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Phenanthrene	32.0	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Anthracene	3.41 J	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluoranthene	40.9	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Indeno[1,2,3-cd]pyrene	4.67	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Pyrene	149	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benz[a]anthracene	5.83	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Chrysene	52.6	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[b] fluoranthene	12.5	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[k] fluoranthene	3.65	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[a] pyrene	8.55	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Dibenz[a,h]anthracene	3.51 U	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[g,h,i] perylene	0.913 J	3.51	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Surrogate: Triphenylene	107 %	68-129			L012186	12/14/2010	01/06/2011	8310



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/13/2011 20:00
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B29K67
1012097-04 (Soil)

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

Polynuclear Aromatic Compounds by SW846 8310

Naphthalene	6.03	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthylene	68.7	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Acenaphthene	72.1	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluorene	9.05	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Phenanthrene	122	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Anthracene	20.3	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Fluoranthene	142	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Indeno[1,2,3-cd]pyrene	17.2	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Pyrene	81.3	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benz[a]anthracene	29.0	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Chrysene	23.0	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[b] fluoranthene	46.1	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[k] fluoranthene	21.0	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[a] pyrene	37.9	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Dibenz[a,h]anthracene	3.52	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Benzo[g,h,i] perylene	31.5	3.35	ug/kg dry	1	L012186	12/14/2010	01/06/2011	8310
Surrogate: Triphenylene	107 %	68-129			L012186	12/14/2010	01/06/2011	8310



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 Exton, PA 19341
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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/13/2011 20:00
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Polynuclear Aromatic Compounds by SW846 8310 - 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 L012186 - SW 3540C

Blank (L012186-BLK1)

Prepared: 12/14/2010 Analyzed: 01/05/2011

Naphthalene	3.33 U	3.33	ug/kg wet						
Acenaphthylene	3.33 U	3.33	ug/kg wet						
Acenaphthene	3.33 U	3.33	ug/kg wet						
Fluorene	3.33 U	3.33	ug/kg wet						
Phenanthrene	3.33 U	3.33	ug/kg wet						
Anthracene	3.33 U	3.33	ug/kg wet						
Fluoranthene	3.33 U	3.33	ug/kg wet						
Indeno[1,2,3-cd]pyrene	3.33 U	3.33	ug/kg wet						
Pyrene	3.33 U	3.33	ug/kg wet						
Benz[a]anthracene	3.33 U	3.33	ug/kg wet						
Chrysene	3.33 U	3.33	ug/kg wet						
Benzo[b] fluoranthene	3.33 U	3.33	ug/kg wet						
Benzo[k] fluoranthene	3.33 U	3.33	ug/kg wet						
Benzo[a] pyrene	3.33 U	3.33	ug/kg wet						
Dibenz[a,h]anthracene	3.33 U	3.33	ug/kg wet						
Benzo[g,h,i] perylene	3.33 U	3.33	ug/kg wet						

Surrogate: Triphenylene 157 ug/kg wet 166.67 94 68-129

LCS (L012186-BS1)

Prepared: 12/14/2010 Analyzed: 01/05/2011

Naphthalene	133	3.33	ug/kg wet	166.67	80	0-127
Acenaphthylene	152	3.33	ug/kg wet	166.67	91	50-140
Acenaphthene	144	3.33	ug/kg wet	166.67	86	17-139
Fluorene	144	3.33	ug/kg wet	166.67	86	28-145
Phenanthrene	147	3.33	ug/kg wet	166.67	88	30-152
Anthracene	157	3.33	ug/kg wet	166.67	94	19-171
Fluoranthene	149	3.33	ug/kg wet	166.67	90	34-159
Indeno[1,2,3-cd]pyrene	145	3.33	ug/kg wet	166.67	87	31-156
Pyrene	165	3.33	ug/kg wet	166.67	99	33-152
Benz[a]anthracene	157	3.33	ug/kg wet	166.67	94	32-157
Chrysene	156	3.33	ug/kg wet	166.67	94	31-159
Benzo[b] fluoranthene	155	3.33	ug/kg wet	166.67	93	33-164
Benzo[k] fluoranthene	164	3.33	ug/kg wet	166.67	98	28-161
Benzo[a] pyrene	148	3.33	ug/kg wet	166.67	89	29-149
Dibenz[a,h]anthracene	157	3.33	ug/kg wet	166.67	94	27-153
Benzo[g,h,i] perylene	167	3.33	ug/kg wet	166.67	100	32-157

Surrogate: Triphenylene 160 ug/kg wet 166.67 96 68-129



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: K2755
 Project Manager: Joan Kessner

Reported:
 01/13/2011 20:00

Polynuclear Aromatic Compounds by SW846 8310 - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L012186 - SW 3540C									
Matrix Spike (L012186-MS1)		Source: 1012097-02		Prepared: 12/14/2010 Analyzed: 01/06/2011					
Naphthalene	151	3.47	ug/kg dry	173.60	3.32 U	87	0-127		
Acenaphthylene	177	3.47	ug/kg dry	173.60	3.32 U	102	50-140		
Acenaphthene	177	3.47	ug/kg dry	173.60	1.05	101	17-139		
Fluorene	169	3.47	ug/kg dry	173.60	3.32 U	97	28-145		
Phenanthrene	176	3.47	ug/kg dry	173.60	3.32 U	101	30-152		
Anthracene	184	3.47	ug/kg dry	173.60	3.32 U	106	19-171		
Fluoranthene	177	3.47	ug/kg dry	173.60	3.32 U	102	34-159		
Indeno[1,2,3-cd]pyrene	172	3.47	ug/kg dry	173.60	3.32 U	99	31-156		
Pyrene	198	3.47	ug/kg dry	173.60	3.32 U	114	33-152		
Benz[a]anthracene	185	3.47	ug/kg dry	173.60	3.32 U	107	32-157		
Chrysene	187	3.47	ug/kg dry	173.60	3.32 U	108	31-159		
Benzo[b] fluoranthene	188	3.47	ug/kg dry	173.60	3.32 U	108	33-164		
Benzo[k] fluoranthene	194	3.47	ug/kg dry	173.60	3.32 U	112	28-161		
Benzo[a] pyrene	166	3.47	ug/kg dry	173.60	3.32 U	96	29-149		
Dibenz[a,h]anthracene	186	3.47	ug/kg dry	173.60	3.32 U	107	27-153		
Benzo[g,h,i] perylene	194	3.47	ug/kg dry	173.60	3.32 U	112	32-157		
<i>Surrogate: Triphenylene</i>	170		ug/kg dry	173.60		98	68-129		
Matrix Spike Dup (L012186-MSD1)		Source: 1012097-02		Prepared: 12/14/2010 Analyzed: 01/06/2011					
Naphthalene	146	3.30	ug/kg dry	164.98	3.32 U	88	0-127	2	40
Acenaphthylene	168	3.30	ug/kg dry	164.98	3.32 U	102	50-140	0.2	40
Acenaphthene	163	3.30	ug/kg dry	164.98	1.05	98	17-139	3	40
Fluorene	160	3.30	ug/kg dry	164.98	3.32 U	97	28-145	0.1	40
Phenanthrene	167	3.30	ug/kg dry	164.98	3.32 U	101	30-152	0.02	40
Anthracene	175	3.30	ug/kg dry	164.98	3.32 U	106	19-171	0.3	40
Fluoranthene	169	3.30	ug/kg dry	164.98	3.32 U	102	34-159	0.4	40
Indeno[1,2,3-cd]pyrene	162	3.30	ug/kg dry	164.98	3.32 U	98	31-156	0.7	40
Pyrene	191	3.30	ug/kg dry	164.98	3.32 U	116	33-152	2	40
Benz[a]anthracene	175	3.30	ug/kg dry	164.98	3.32 U	106	32-157	0.7	40
Chrysene	173	3.30	ug/kg dry	164.98	3.32 U	105	31-159	3	40
Benzo[b] fluoranthene	176	3.30	ug/kg dry	164.98	3.32 U	107	33-164	1	40
Benzo[k] fluoranthene	185	3.30	ug/kg dry	164.98	3.32 U	112	28-161	0.09	40
Benzo[a] pyrene	158	3.30	ug/kg dry	164.98	3.32 U	96	29-149	0.4	40
Dibenz[a,h]anthracene	177	3.30	ug/kg dry	164.98	3.32 U	108	27-153	0.3	40
Benzo[g,h,i] perylene	187	3.30	ug/kg dry	164.98	3.32 U	113	32-157	1	40
<i>Surrogate: Triphenylene</i>	163		ug/kg dry	164.98		99	68-129		

PREPARATION BENCH SHEET

L012186

Lionville Laboratory

Printed: 12/16/2010 11:22:48AM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1001909

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012097-01	8310 PAH	12/14/2010 15:18	30.51	5				500	WC-Hanford, Inc.	
1012097-02	8310 PAH	12/14/2010 15:18	31.57	5				500	WC-Hanford, Inc.	
1012097-03	8310 PAH	12/14/2010 15:18	30.9	5				500	WC-Hanford, Inc.	
1012097-04	8310 PAH	12/14/2010 15:18	32.45	5				500	WC-Hanford, Inc.	
1012102-01	8310 PAH	12/14/2010 15:18	31.02	5				500	WC-Hanford, Inc.	
1012102-02	8310 PAH	12/14/2010 15:18	30.29	5				500	WC-Hanford, Inc.	
1012102-03	8310 PAH	12/14/2010 15:18	31.15	5				500	WC-Hanford, Inc.	
L012186-BLK1	QC	12/14/2010 15:18	30	5				500		
L012186-BS1	QC	12/14/2010 15:18	30	5	1001668		1000	500		
L012186-MS1	QC	12/14/2010 15:18	30.23	5	1001668	1012097-02	1000	500		
L012186-MS2	QC	12/14/2010 15:18	31.25	5	1001668	1012102-01	1000	500		
L012186-MSD1	QC	12/14/2010 15:18	31.81	5	1001668	1012097-02	1000	500		
L012186-MSD2	QC	12/14/2010 15:18	30.61	5	1001668	1012102-01	1000	500		

J. An
 Extracts Relinquished By _____
 12/16/10 11:22
 Date

S. Zok
 Extracts Received By _____
 12/16/10 11:22
 Date

Custody Transfer Record/Lab Work Request



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

1012097

Client <u>WC Hartford</u> SAF# <u>RC-195</u>	Refrigerator #																			
Est. Final Proj. Sampling Date _____	#/Type Container	Liquid																		
Project# _____	Solid																			
Project Contact/Phone# _____	Volume	Solid																		
Lionville Laboratory Project Manager <u>Orlette Johnson</u>	Preservatives																			
QC <u>SW</u> Del <u>STD</u> TAT <u>30 days</u>	ANALYSES REQUESTED →		ORGANIC					INORG												
Date Rec'd <u>12-10-10</u> Date Due <u>1-9-11</u>	VOA	BNA	pest	PCB	Herb	PAHs	BB10	PAH-D	PC	(2) Metal	GN	Cr6	F	30	HA	DO2	DO3			

MATRIX CODES: S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum DL- Drum L- Liquids EP/TCLP Leachate WI- Wipe X- Other F- Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only													
			MS	MSD				8082	8310	844	KRO	DRO	Met	CR6	30	PH	Amion	MSD			
	01	B28NBO			S	12-7-10	1435		X	X	X	X	X	X	X	X	X				
	02	B28NC5			I	12-8-10	1440		X	X	X	X	X	X	X	X	X				
	03	B29K64			I	12-7-10	0950		X	X	X	X	X	X	X	X	X				
	04	B29K67			I	12-7-10	1040		X	X	X	X	X	X	X	X	X				

Special Instructions: Run matrix QC

- Special Instructions:
- _____
 - _____
 - _____
 - _____
 - _____
 - _____

Relinquished by	Received by	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>12-10-10</u>	<u>10:00</u>

Relinquished by	Received by	Date	Time

Relinquished	Received by	Date	Time
ORIGINAL			
REWRITTEN			

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-534	PAGE 1 OF 2
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH	
SAMPLING LOCATION C8239 (118-B-8); I-005		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195	
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 Pg 20</i>		ACTUAL SAMPLE DEPTH <i>17.4-19.9 Ft</i>		METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated		OFFSITE PROPERTY NO. SEE PTR				BILL OF LADING/AIR BILL NO. 796535167463	

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	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None	None	None		
		HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	None	None			
		TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P	G/P	Split Spoon Liner	Moisture Resistant Cont		
		NO. OF CONTAINER(S)		1	1	1	1	1	1	1	1	1	1		
		VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL	1000g	200g			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B28N47		SAMPLE ANALYSIS		PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216 (100 Area RIFS);			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME												
B28NB0	SOIL	12-7-10	1435	X	X	X	X	X	X	X	X	*N/C	*N/C		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
<i>A. Turner</i>	<i>12-7-10 1530</i>	<i>SSU-R1</i>	<i>12-7-10 1830</i>	<i>*N/C - Low yield NOT collected</i>	
<i>SSU-R1</i>	<i>12-9-10 0930</i>	<i>cm Aguilar</i>	<i>cm Aguilar</i>		
<i>cm Aguilar</i>	<i>12-9-10 1400</i>	<i>FEDCX</i>	<i>DSW</i>		
<i>FEDCX</i>	<i>12-10-10 10:10</i>	<i>J. Turner</i>	<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		
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-195-534	PAGE 2 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C8239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	45 Days / 45 Days
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 ft</i>	COA 302512ES10		METHOD OF SHIPMENT FEDERAL EXPRESS	
SHIPPED TO Lionville Laboratory Incorporated	OFFSITE PROPERTY NO. SEE PTR	BILL OF LADING/AIR BILL NO.			796535167463	
		SEE PTR				

SPECIAL INSTRUCTIONS

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.

(1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS);

(2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);

(3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);

(4) Bulk Density - D2937 (100 Area RIFS); Particle Size (Dry Sieve) - D422 (100 Area RIFS); Saturated Hydraulic Conductivity - D2434 (100 Area RIFS) {Hydraulic Conductivity}; Saturated Hydraulic Conductivity - D5084 (100 Area RIFS) {Hydraulic Conductivity};

 ORIGINAL

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-555	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-008		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud			SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 p622</i>	ACTUAL SAMPLE DEPTH <i>32.3 - 34.8 FT</i>		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 796535167463		

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	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None	
		HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP		
		TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P		
		NO. OF CONTAINER(S)		1	1	1	1	1	1	1		
		VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL		
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: <i>B28NC5 MUSA 11/29/10</i> <i>B29K47</i>		SAMPLE ANALYSIS		PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B28NC5	SOIL	12-8-10	1440	X	X	A	X	X	X	X		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-8-10 1550</i>	RECEIVED BY/STORED IN <i>MOY/ISSU R2</i>	DATE/TIME <i>12-8-10 1550</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CY) (100 Area RIFS); (3) 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>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aquilar cm lgh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar cm lgh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME <i>12-10-10 11:10</i>		
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME <i>12-10-10 11:10</i>	RECEIVED BY/STORED IN <i>W. Turner</i>	DATE/TIME <i>12-10-10 14:10</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

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-656	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND	
SAMPLING LOCATION C8239 (118-B-8); I-003	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Study		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	45 Days / 45 Days	
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>ANF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>10-12.5 FT</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>796535167463</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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K53		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K64	SOIL	12-7-10	0950	X	X	X	X	X	X

1012097

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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
<i>A. Turner</i>	12-7-10 1145	<i>MO 413 SSU R2</i>	12-7-10 1145		
<i>SSU-R1</i>	12-9-10 0930	<i>cm Saular cm lgh</i>	12-9-10 0930		
<i>cm Saular cm lgh</i>	12-9-10 1400	<i>FEJEX</i>			
<i>vee</i>	12-10-10 10:10	<i>WJ m... DSU 49</i>	12-10-10 10:10		
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-195-660	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-004	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>12.4-14.9 ft</i>	COA 302512ES10		METHOD OF SHIPMENT FEDERAL EXPRESS		
SHIPPED TO Llcville Laboratory Incorporated	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. SEE PTR		796535167463		

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 Y=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 DCE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
	VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL	
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K54	SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K67	SOIL	12-7-10	1040	X	X	X	X	X	X

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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);
<i>A. Turner</i>	<i>12-7-10 1145</i>	<i>R1</i>	<i>12-7-10 1145</i>	
<i>SSU-RI</i>	<i>12-9-10 0930</i>	<i>cm Aguilar</i>	<i>12-9-10 0930</i>	
<i>cm Aguilar</i>	<i>12-9-10 1400</i>	<i>FEDEx</i>		
<i>COE</i>	<i>12-10-10 110:10</i>	<i>DSM</i>	<i>12-10-10/10</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 RC-195
 Project/SAF/SOW/Release #:

Date: 12-10-10

LvL Batch #: 1012097

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|---|---|
| 1. Samples Hand Delivered or Shipped? | Carrier: <u>Ex</u> | Airbill # <u>7965 3516 7463</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>3.3</u> °C | Cooler # <u>GWS-117</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 | |
| <hr/> | | |
| 12. Samples received within hold times? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Short holds taken to wet lab? <u>12-10-10</u> | <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: K2755 Project Manager: Joan Kessner	Reported: 01/20/2011 20:35
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Analytical Report for Extractable Petroleum Hydrocarbons by SW846 8015

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B28NB0	1012097-01	Soil	12/07/2010 14:35	12/10/2010 10:10
B28NC5	1012097-02	Soil	12/08/2010 14:40	12/10/2010 10:10
B29K64	1012097-03	Soil	12/07/2010 09:50	12/10/2010 10:10
B29K67	1012097-04	Soil	12/07/2010 10:40	12/10/2010 10:10

Case Narrative

Client: WC-HANFORD RC-195 K2755
LVL #: 1012097

W.O. #: 60049-001-001-0001-00
Date Received: 12-10-2010

DIESEL RANGE ORGANICS

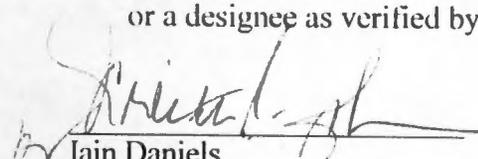
Four (4) soil samples were collected on 12-07,08-2010.

The samples and associated QC samples were extracted 12-13-2010, 01-17-2011 and analyzed 12-17-2010, 01-06,07,19,20-2011 according to criteria set forth in Lionville Laboratory SOPs. The extraction procedure was based on SW846 Method 3540C and the analysis procedure was based on SW846 Method 8015B for Diesel Range Organics.

Lionville Laboratory (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. LvL certifies that all test results meet the requirements of NELAC with any exception noted in the following statements:

1. The results presented in this report are derived from samples that met LvL's sample acceptance policy.
2. The samples were originally extracted within their required holding time. Due to low surrogate recovery, the sample B28NC5 was re-extracted outside of hold time. Both the original and the re-extracted results have been reported. A copy of the Sample Discrepancy Report (SDR#11GC009) has been enclosed.
3. One (1) of fifteen (15) surrogate recoveries was outside acceptance criteria. A copy of the Sample Discrepancy Report (SDDR#11GC009) has been enclosed.
4. The method blank was below the reporting limits for all target compounds.
5. All blank spike recoveries were within acceptance criteria.
6. All matrix spike recoveries were within acceptance criteria.
7. All initial calibrations associated with this data set were within acceptance criteria.
8. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.
9. The samples were 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 hardcopy data package has been authorized by the laboratory manager or a designee as verified by the following signature.


Iain Daniels
LvL Laboratory Manager

1/24/11
Date



GLOSSARY OF DATA

DATA QUALIFIERS

- U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).
- J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination.
- E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- I = Interference.
- . I = Indicates an interference on one analytical column only. Result is reported from remaining analytical column.
- P = This flag is used for a dual column analysis (i.e. pesticides/PCB/herbicides) when there is greater than 40% difference for detected concentrations between the two GC columns; the lower of the two values is reported on Form 1 and flagged with a "P".
- D = This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- C = This flag applies to a compound that has been confirmed by GC/MS.

ABBREVIATIONS

- BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking solutions and carried through all the steps in the method. Spike recoveries are reported.
- BSD = Indicates blank spike duplicate.
- MS = Indicates matrix spike.
- MSD = Indicates matrix spike duplicate.
- DL = indicates that recoveries were not obtained because the extract had to be diluted for analysis.
- NA = Not Applicable.
- DF = Dilution Factor.
- NR = Not Required.
- NS = Not Spiked.
- SP = Indicates Spiked Compound.
- NPM = No pattern match for multi-component target analytes.



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: K2755 Project Manager: Joan Kessner	Reported: 01/20/2011 20:35
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Extractable Petroleum Hydrocarbons by SW846 8015
Lionville Laboratory

Analyte	Result and Qualifier	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
B28NB0 (1012097-01) Soil								
Surrogate: <i>p</i> -Terphenyl	96 %	39-129			L012172	12/13/2010	01/07/2011	8015M
Diesel Range Organics	4930	3430	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
Motor Oil	16000	10300	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
Kerosene	10300 U	10300	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
B28NC5 (1012097-02) Soil								
Surrogate: <i>p</i> -Terphenyl	% *	U 39-129			L012172	12/13/2010	01/07/2011	8015M
Diesel Range Organics	3430 U	3430	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
Motor Oil	10300 U	10300	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
Kerosene	10300 U	10300	ug/kg dry	1	L012172	12/13/2010	01/07/2011	8015M
B28NC5 (1012097-02RE1) Soil								
Surrogate: <i>p</i> -Terphenyl	91 %	39-129			L101154	12/13/2010	01/20/2011	8015M
Diesel Range Organics	3470 U	3470	ug/kg dry	1	L101154	12/13/2010	01/20/2011	8015M
Motor Oil	10400 U	10400	ug/kg dry	1	L101154	12/13/2010	01/20/2011	8015M
Kerosene	10400 U	10400	ug/kg dry	1	L101154	12/13/2010	01/20/2011	8015M
B29K64 (1012097-03) Soil								
Surrogate: <i>p</i> -Terphenyl	80 %	39-129			L012172	12/13/2010	01/06/2011	8015M
Diesel Range Organics	12400	3580	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M
Motor Oil	32800	10700	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M
Kerosene	10700 U	10700	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M
B29K67 (1012097-04) Soil								
Surrogate: <i>p</i> -Terphenyl	100 %	39-129			L012172	12/13/2010	01/06/2011	8015M
Diesel Range Organics	57900	3480	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M
Motor Oil	132000	10400	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M
Kerosene	10400 U	10400	ug/kg dry	1	L012172	12/13/2010	01/06/2011	8015M



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

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 01/20/2011 20:35

Extractable Petroleum Hydrocarbons by SW846 8015 - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L012172 - SW 3540C									
Blank (L012172-BLK1) Prepared: 12/13/2010 Analyzed: 12/17/2010									
Diesel Range Organics	3330 U	3330	ug/kg wet						
Motor Oil	10000 U	10000	ug/kg wet						
<i>Surrogate: p-Terphenyl</i>	5930		ug/kg wet	6666.7		89	39-129		
Blank (L012172-BLK2) Prepared: 12/13/2010 Analyzed: 01/06/2011									
Kerosene	10000 U	10000	ug/kg wet						
LCS (L012172-BS1) Prepared: 12/13/2010 Analyzed: 12/17/2010									
Diesel Range Organics	61300	3330	ug/kg wet	66667		92	42-133		
<i>Surrogate: p-Terphenyl</i>	6590		ug/kg wet	6666.7		99	39-129		
LCS (L012172-BS2) Prepared: 12/13/2010 Analyzed: 01/06/2011									
Kerosene	56800	10000	ug/kg wet	66667		85	0-200		
Matrix Spike (L012172-MS4) Source: 1012097-02 Prepared: 12/13/2010 Analyzed: 01/07/2011									
Diesel Range Organics	56600	3430	ug/kg dry	68580	3430 U	83	42-133		
<i>Surrogate: p-Terphenyl</i>	6520		ug/kg dry	6858.0		95	39-129		
Matrix Spike (L012172-MS5) Source: 1012097-02 Prepared: 12/13/2010 Analyzed: 01/07/2011									
Kerosene	55300	9890	ug/kg dry	65910	10300 U	84	0-200		
Matrix Spike Dup (L012172-MSD4) Source: 1012097-02 Prepared: 12/13/2010 Analyzed: 01/07/2011									
Diesel Range Organics	58100	3490	ug/kg dry	69788	3430 U	83	42-133	0.8	40
<i>Surrogate: p-Terphenyl</i>	6280		ug/kg dry	6978.8		90	39-129		
Matrix Spike Dup (L012172-MSD5) Source: 1012097-02 Prepared: 12/13/2010 Analyzed: 01/07/2011									
Kerosene	52300	9890	ug/kg dry	65951	10300 U	79	0-200	6	200



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 01/20/2011 20:35
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Extractable Petroleum Hydrocarbons by SW846 8015 - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L101154 - SW 3540C									
Blank (L101154-BLK1)				Prepared: 01/17/2011 Analyzed: 01/19/2011					
Diesel Range Organics	3330 U	3330	ug/kg wet						
Motor Oil	10000 U	10000	ug/kg wet						
Kerosene	10000 U	10000	ug/kg wet						
Surrogate: p-Terphenyl	4990		ug/kg wet	6666.7		75	39-129		
LCS (L101154-BS1)				Prepared: 01/17/2011 Analyzed: 01/19/2011					
Diesel Range Organics	56700	3330	ug/kg wet	66667		85	42-133		
Surrogate: p-Terphenyl	6380		ug/kg wet	6666.7		96	39-129		

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PREPARATION BENCH SHEET

REVISION

L101154

Lionville Laboratory

Printed: 1/20/2011 9:01:05PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1002047

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012097-02RE1	8015M DRO	01/17/2011 13:00	30.23	1				1000	WC-Hanford, Inc.	From L012172 by SA on 01/17/2011
1101119-01	8015M DRO	01/17/2011 13:00	15.54	1				1000	WC-Hanford, Inc.	
1101119-02	8015M DRO	01/17/2011 13:00	15.47	1				1000	WC-Hanford, Inc.	
1101119-03	8015M DRO	01/17/2011 13:00	15.11	1				1000	WC-Hanford, Inc.	
1101119-04	8015M DRO	01/17/2011 13:00	15.98	1				1000	WC-Hanford, Inc.	
1101119-05	8015M DRO	01/17/2011 13:00	15.41	1				1000	WC-Hanford, Inc.	
1101119-06	8015M DRO	01/17/2011 13:00	15.08	1				1000	WC-Hanford, Inc.	
L101154-BLK1	QC	01/17/2011 13:00	30	1				1000		
L101154-BS1	QC	01/17/2011 13:00	30	1	1001180		1000	1000		
L101154-MS1	QC	01/17/2011 13:00	15.51	1	1001180	1101119-05	1000	1000		
L101154-MSD1	QC	01/17/2011 13:00	16.01	1	1001180	1101119-05	1000	1000		

REVISION for Prep date
 Extracts Relinquished By _____ Date _____

CAO 01/20/11
 Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

L101154

Lionville Laboratory

Printed: 1/18/2011 2:40:16PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1001998

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012097-02RE1	8015M DRO	12/13/2010 15:51	30.23	1				1000	WC-Hanford, Inc.	From L012172 by SA on 01/17/2011
1101119-01	8015M DRO	01/17/2011 13:00	15.54	1				1000	WC-Hanford, Inc.	
1101119-02	8015M DRO	01/17/2011 13:00	15.47	1				1000	WC-Hanford, Inc.	
1101119-03	8015M DRO	01/17/2011 13:00	15.11	1				1000	WC-Hanford, Inc.	
1101119-04	8015M DRO	01/17/2011 13:00	15.98	1				1000	WC-Hanford, Inc.	
1101119-05	8015M DRO	01/17/2011 13:00	15.41	1				1000	WC-Hanford, Inc.	
1101119-06	8015M DRO	01/17/2011 13:00	15.08	1				1000	WC-Hanford, Inc.	
L101154-BLK1	QC	01/17/2011 13:00	30	1				1000		
L101154-BS1	QC	01/17/2011 13:00	30	1	1001180		1000	1000		
L101154-MS1	QC	01/17/2011 13:00	15.51	1	1001180	1101119-05	1000	1000		
L101154-MSD1	QC	01/17/2011 13:00	16.01	1	1001180	1101119-05	1000	1000		

S. Ari 1/18/11 14:40
 Extracts Relinquished By _____ Date _____

S. Lab 01/18/11 14:40
 Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

REVISION

L012172

Lionville Laboratory

Printed: 1/13/2011 9:02:28PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1002047

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012081-01	8015M DRO	12/13/2010 15:51	30.2	1				1000	WC-Hanford, Inc.	
1012081-01	8015M KRO	12/13/2010 15:51	30.2	1				1000	WC-Hanford, Inc.	Added for BatchQC in: L012172
1012084-01	8015M DRO	12/13/2010 15:51	30.54	1				1000	WC-Hanford, Inc.	
1012084-01	8015M KRO	12/13/2010 15:51	30.54	1				1000	WC-Hanford, Inc.	
1012084-02	8015M DRO	12/13/2010 15:51	31.92	1				1000	WC-Hanford, Inc.	
1012084-02	8015M KRO	12/13/2010 15:51	31.92	1				1000	WC-Hanford, Inc.	
1012097-01	8015M DRO	12/13/2010 15:51	31.61	1				1000	WC-Hanford, Inc.	
1012097-01	8015M KRO	12/13/2010 15:51	31.61	1				1000	WC-Hanford, Inc.	
1012097-02	8015M DRO	12/13/2010 15:51	30.62	1				1000	WC-Hanford, Inc.	
1012097-02	8015M KRO	12/13/2010 15:51	30.62	1				1000	WC-Hanford, Inc.	
1012097-03	8015M DRO	12/13/2010 15:51	30.32	1				1000	WC-Hanford, Inc.	
1012097-03	8015M KRO	12/13/2010 15:51	30.32	1				1000	WC-Hanford, Inc.	
1012097-04	8015M DRO	12/13/2010 15:51	31.21	1				1000	WC-Hanford, Inc.	
1012097-04	8015M KRO	12/13/2010 15:51	31.21	1				1000	WC-Hanford, Inc.	
L012172-BLK1	QC	12/13/2010 15:51	30	1				1000		ODRO
L012172-BLK2	QC	12/13/2010 15:51	30	1				1000		KDRO
L012172-BS1	QC	12/13/2010 15:51	30	1	1002032		1000	1000		ODRO
L012172-BS2	QC	12/13/2010 15:51	30	1	1002036		500	1000		KDRO
L012172-MS1	QC	12/13/2010 15:51	30.87	1	1002032	1012081-01	1000	1000		ODRO
L012172-MS2	QC	12/13/2010 15:51	30.84	1	1002032	1012084-01	1000	1000		ODRO

Extracts Relinquished By

Date

Extracts Received By

Date

PREPARATION BENCH SHEET

L012172

Lionville Laboratory

Printed: 1/13/2011 9:02:28PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1002047

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
L012172-MS3	QC	12/13/2010 15:51	31.31	1	1002036	1012084-02	500	1000		KDRO
L012172-MS4	QC	12/13/2010 15:51	30.61	1	1002032	1012097-02	1000	1000		ODRO
L012172-MS5	QC	12/13/2010 15:51	31.85	1	1002036	1012097-02	500	1000		KDRO
L012172-MSD1	QC	12/13/2010 15:51	30.17	1	1002032	1012081-01	1000	1000		ODRO
L012172-MSD2	QC	12/13/2010 15:51	30.52	1	1002032	1012084-01	1000	1000		ODRO
L012172-MSD3	QC	12/13/2010 15:51	30.67	1	1002036	1012084-02	500	1000		KDRO
L012172-MSD4	QC	12/13/2010 15:51	30.08	1	1002032	1012097-02	1000	1000		ODRO
L012172-MSD5	QC	12/13/2010 15:51	31.83	1	1002036	1012097-02	500	1000		KDRO

Extracts Relinquished By _____ Date _____

Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

L012172

Lionville Laboratory

Printed: 12/14/2010 3:12:16PM

0000013

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1002047

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
1012081-01	8015M DRO	12/13/2010 15:51	30.2	1				1000	WC-Hanford, Inc.	
1012081-01	8015M KRO	12/13/2010 15:51	30.2	1				1000	WC-Hanford, Inc.	Added for BatchQC in: L012172
1012084-01	8015M DRO	12/13/2010 15:51	30.54	1				1000	WC-Hanford, Inc.	
1012084-01	8015M KRO	12/13/2010 15:51	30.54	1				1000	WC-Hanford, Inc.	
1012084-02	8015M DRO	12/13/2010 15:51	31.92	1				1000	WC-Hanford, Inc.	
1012084-02	8015M KRO	12/13/2010 15:51	31.92	1				1000	WC-Hanford, Inc.	
1012097-01	8015M DRO	12/13/2010 15:51	31.61	1				1000	WC-Hanford, Inc.	
1012097-01	8015M KRO	12/13/2010 15:51	31.61	1				1000	WC-Hanford, Inc.	
1012097-02	8015M DRO	12/13/2010 15:51	30.62	1				1000	WC-Hanford, Inc.	
1012097-02	8015M KRO	12/13/2010 15:51	30.62	1				1000	WC-Hanford, Inc.	
1012097-03	8015M DRO	12/13/2010 15:51	30.32	1				1000	WC-Hanford, Inc.	
1012097-03	8015M KRO	12/13/2010 15:51	30.32	1				1000	WC-Hanford, Inc.	
1012097-04	8015M DRO	12/13/2010 15:51	31.21	1				1000	WC-Hanford, Inc.	
1012097-04	8015M KRO	12/13/2010 15:51	31.21	1				1000	WC-Hanford, Inc.	
L012172-BLK1	QC	12/13/2010 15:51	30	1				1000		ODRO
L012172-BLK2	QC	12/13/2010 15:51	30	1				1000		KDRO
L012172-BS1	QC	12/13/2010 15:51	30	1	1002032		1000	1000		ODRO
L012172-BS2	QC	12/13/2010 15:51	30	1	1002036		1000	1000		KDRO
L012172-MS1	QC	12/13/2010 15:51	30.87	1	1002032	1012081-01	1000	1000		ODRO
L012172-MS2	QC	12/13/2010 15:51	30.84	1	1002032	1012084-01	1000	1000		ODRO

Estev 12/14/10 15:30
 Extracts Relinquished By _____ Date _____

Stroh 12/14/10 15:35
 Extracts Received By _____ Date _____

PREPARATION BENCH SHEET

L012172

Lionville Laboratory

Printed: 12/14/2010 3:12:16PM

Matrix: Solid

Prepared using: GC - SW 3540C

Surrogate used: 1002047

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surrogate	Client	Extraction Comments
L012172-MS3	QC	12/13/2010 15:51	31.31	1	1002036	1012084-02	1000	1000		KDRO
L012172-MS4	QC	12/13/2010 15:51	30.61	1	1002032	1012097-02	1000	1000		ODRO
L012172-MS5	QC	12/13/2010 15:51	31.85	1	1002036	1012097-02	1000	1000		KDRO
L012172-MSD1	QC	12/13/2010 15:51	30.17	1	1002032	1012081-01	1000	1000		ODRO
L012172-MSD2	QC	12/13/2010 15:51	30.52	1	1002032	1012084-01	1000	1000		ODRO
L012172-MSD3	QC	12/13/2010 15:51	30.67	1	1002036	1012084-02	1000	1000		KDRO
L012172-MSD4	QC	12/13/2010 15:51	30.08	1	1002032	1012097-02	1000	1000		ODRO
L012172-MSD5	QC	12/13/2010 15:51	31.83	1	1002036	1012097-02	1000	1000		KDRO

S. Am 12/14/10 15:30
 Extracts Relinquished By _____ Date

S. Lark 12/14/10 15:35
 Extracts Received By _____ Date

Custody Transfer Record/Lab Work Request



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

1012097

Client <u>WC Hartford</u> SAF# <u>RC-195</u>	Refrigerator #																		
Est. Final Proj. Sampling Date _____	#/Type Container	Liquid																	
Project# _____	Solid		1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal	1gal
Project Contact/Phone# _____	Volume	Solid	250	250	120	250	120	250	120	250	120	250	120	250	120	250	120	250	120
Lionville Laboratory Project Manager <u>Orlette Johnson</u>	Preservatives		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC <u>SW</u> Del <u>STD</u> TAT <u>30 days</u>	ANALYSES REQUESTED →	ORGANIC						INORG											
Date Rec'd <u>12-10-10</u> Date Due <u>1-9-11</u>		VOA	BNA	Peat	PCB	Herb	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs	PAHs

MATRIX CODES: S- Soil SE- Sediment SO- Solid SL- Sludge W- Water O- Oil A- Air DS- Drum Solids DL- Drum Liquids L- EP/TCLP Leachates WI- Wipe X- Other F- Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only													
			MS	MSD				8082	8310	8310	KRO-DRO	Met	CR6	CR6	PH	Anions	N310				
			01	B28NBO				S			12-7-10	1435	X	X	X	X	X	X	X	X	X
02	B28NC5	S			12-8-10	1440	X	X	X	X	X	X	X	X	X	X	X	X	X		
03	B29K64	S			12-7-10	0950	X	X	X	X	X	X	X	X	X	X	X	X	X		
04	B29K67	S			12-7-10	1040	X	X	X	X	X	X	X	X	X	X	X	X	X		

Special Instructions: Run matrix QC

- _____
- _____
- _____
- _____
- _____
- _____

Relinquished by	Received by	Date	Time
<u>[Signature]</u>	<u>[Signature]</u>	<u>12-10-10</u>	<u>10:00</u>

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
<u>ORIGINAL</u>			
<u>REWRITTEN</u>			

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-534	PAGE 1 OF 2		
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-005		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 PG 20</i>		ACTUAL SAMPLE DEPTH <i>17.4-19.9 FT</i>		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 796535167463			

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	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None	None	None	
		HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	None	None		
		TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P	Split Spoon Liner	Moisture Resistant Cont.		
		NO. OF CONTAINER(S)		1	1	1	1	1	1	1	1	1		
		VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL	1000g	200g		
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B28N47		SAMPLE ANALYSIS		PAHs - 8310 (100 Area R1/F5);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area R1/F5);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area R1/F5);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area R1/F5);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216 (100 Area R1/F5);

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B28NB0	SOIL	12-7-10	1435	X	X	X	X	X	X	X	X	*N/C	*N/C

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
<i>A. Turner</i>	<i>12-7-10 1530</i>	<i>SSU-R1</i>	<i>12-7-10 1530</i>	<i>*N/C - Low yield NOT collected</i>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>CSU-R1</i>	<i>12-9-10 0930</i>	<i>cm Agular cm lgh</i>	<i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>cm Agular cm lgh</i>	<i>12-9-10 1400</i>	<i>FEDCX</i>	<i>12-10-10 10:10</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>FEDCX</i>	<i>12-10-10 10:10</i>	<i>SSU-R1</i>	<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

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-195-534	PAGE 2 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C8239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/> 45 Days / 45 Days		
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 p620</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 ft</i>	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		796535167463		

SPECIAL INSTRUCTIONS

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.

(1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS);
(2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);
(3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);
(4) Bulk Density - D2937 (100 Area RIFS); Particle Size (Dry Sieve) - D422 (100 Area RIFS); Saturated Hydraulic Conductivity - D2434 (100 Area RIFS) {Hydraulic Conductivity};
Saturated Hydraulic Conductivity - D5084 (100 Area RIFS) {Hydraulic Conductivity};

 ORIGINAL

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-555	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-008		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 p622</i>	ACTUAL SAMPLE DEPTH <i>32.3 - 34.8 FT</i>	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 796535167463			

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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: <i>B28NC5 MUM 11/29/10</i> <i>B29K47</i>		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B28NC5	SOIL	12-8-10	1440	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-8-10 1550</i>	RECEIVED BY/STORED IN <i>MO413 SSU R2</i>	DATE/TIME <i>12-8-10 1550</i>	** The laboratory is to analyze pH within 24 hours of receipt. <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. <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (2) (100 Area RIFS); (3) 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>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aquilar cm Agh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar cm Agh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME <i>12-10-10 11:10</i>	RECEIVED BY/STORED IN <i>WJ HICKS</i>	DATE/TIME <i>12-10-10/10</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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-195-656	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-003	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>ANF-N-585-15 pg 20</i>	ACTUAL SAMPLE DEPTH <i>10'-12.5 FT</i>	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 796535167463				

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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K53		SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K64	SOIL	12-7-10	0950	X	X	X	X	X	X

1012097

61000000

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME 12-7-10 1145	RECEIVED BY/STORED IN <i>MO 413 SSU R2</i>
RELINQUISHED BY/REMOVED FROM <i>SSU-R1</i>	DATE/TIME 12-9-10 0930	RECEIVED BY/STORED IN <i>cm Aquilar cm lgh</i>
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar cm lgh</i>	DATE/TIME 12-9-10 1400	RECEIVED BY/STORED IN <i>FEJCY</i>
RELINQUISHED BY/REMOVED FROM <i>vee</i>	DATE/TIME 12-10-10 10:10	RECEIVED BY/STORED IN <i>W. Miller DSU 49</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.
 (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS);
 (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);
 (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);

 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-195-660	PAGE 1 OF 1
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-004	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. <i>GWS-117</i>	FIELD LOGBOOK NO. <i>HNF-N-585-15 Pg 20</i>	ACTUAL SAMPLE DEPTH <i>12.4-14.9 ft</i>		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		<i>796535167463</i>		

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	Cool~4C	Cool~4C	Cool~4C	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K54	SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K67	SOIL	12-7-10	1040	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-7-10 1145</i>	RECEIVED BY/STORED IN <i>M0413 SSU R1</i>	DATE/TIME <i>12-7-10 1145</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-DieselKerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);
RELINQUISHED BY/REMOVED FROM <i>SSU-R1</i>	DATE/TIME <i>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aguilar cm Agl</i>	DATE/TIME <i>12-9-10 0930</i>	
RELINQUISHED BY/REMOVED FROM <i>cm Aguilar cm Agl</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEDEX</i>	DATE/TIME	
RELINQUISHED BY/REMOVED FROM <i>FEDEX</i>	DATE/TIME <i>12-10-10 11:10</i>	RECEIVED BY/STORED IN <i>SSU-R1</i>	DATE/TIME <i>12-10-10/10</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	



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 RC.195
Project/SAF/SOW/Release #:

Date: 12-10-10

LvL Batch #: 1012097

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | | |
|--|--|--|---|
| 1. Samples Hand Delivered or Shipped? | Carrier <u>Ex</u> | Airbill # <u>7965 3516 7463</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>3.3</u> °C | Cooler # <u>GWS-117</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?
All samples received on COC? | <input checked="" type="checkbox"/> Yes
<input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No
<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"/> Yes | <input type="checkbox"/> No
<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?
Person Contacted _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A
Date _____ |



264 Welsh Pool Road
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Phone: 610-280-3000
Fax: 610-280-3041

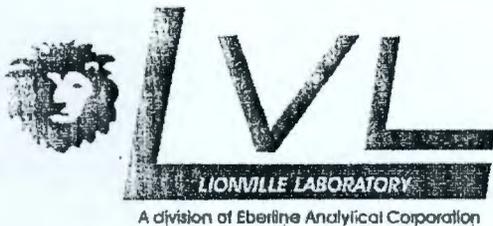
WC-Hanford, Inc.
2620 Fermi Avenue
Richland WA, 99354

Project: RC-195
Project Number: K2755
Project Manager: Joan Kessner

Reported:
04/14/2011 09:28

Analytical Report for Wet Chemistry

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B28NB0	1012097-01	Soil	12/07/2010 14:35	12/10/2010 10:10
B28NC5	1012097-02	Soil	12/08/2010 14:40	12/10/2010 10:10
B29K64	1012097-03	Soil	12/07/2010 09:50	12/10/2010 10:10
B29K67	1012097-04	Soil	12/07/2010 10:40	12/10/2010 10:10



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Case Narrative

Client: WC-HANFORD RC-195 K2755
LVL#: 1012097

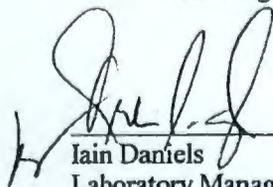
Date Received: 12-10-10

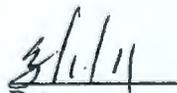
INORGANIC NARRATIVE

1. This narrative covers the analyses of 4 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
njpvl12-097


Date



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

Project: RC-195
Project Number: K2755
Project Manager: Joan Kessner

Reported:
04/14/2011 09:28

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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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 04/14/2011 09:28
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**Wet Chemistry
 Lionville Laboratory**

Analyte	Result and Qualifier	LOD	LOQ	Units	Dilution	Batch	Prepared	Analyzed	Method
B28NB0 (1012097-01) Soil									
%Solids	92.1	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	3.14	0.11	0.53	mg/kg dry	1	L102007	01/25/2011	01/25/2011	EPA 353.2
Hexavalent Chromium	0.22 U	0.22	0.54	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.72		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	7.86	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216
B28NC5 (1012097-02) Soil									
%Solids	95.3	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	1.62	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	0.52	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.38		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	4.73	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216
B29K64 (1012097-03) Soil									
%Solids	92.1	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	3.90	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	0.54	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	7.88	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216
B29K67 (1012097-04) Soil									
%Solids	92.0	0.1	0.1	% by Weight	1	L012276	12/20/2010	12/20/2010	SM2540G
Nitrate/Nitrite as N	2.37	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	0.54	mg/kg dry	1	L101263	01/25/2011	01/25/2011	ISW846 7196A
pH	8.45		0.10	pH Units	1	L101038	01/06/2011	01/06/2011	ISW846 9045D
%Moisture	8.01	0.01	0.01	% by Weight	1	L012279	12/20/2010	12/20/2010	D2216



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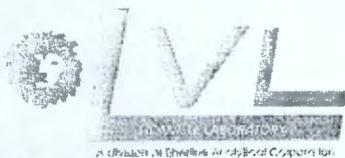
WC-Hanford, Inc.
 2620 Fermi Avenue
 Richland WA, 99354

Project: RC-195
 Project Number: K2755
 Project Manager: Joan Kessner

Reported:
 04/14/2011 09:28

Wet Chemistry - Quality Control
Lionville Laboratory

Analyte	Result and Qualifiers	LOD	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch L012276 - NO PREP										
Duplicate (L012276-DUP1)		Source: 1012097-02			Prepared & Analyzed: 12/20/2010					
%Solids	94.8	0.1	0.1	% by Weight		95.3			0.6	20
Batch L012279 - NO PREP										
Duplicate (L012279-DUP2)		Source: 1012097-02			Prepared & Analyzed: 12/20/2010					
%Moisture	5.25	0.10	0.10	% by Weight		4.73			10.5	20
Batch L101038 - Default Prep GenChem										
Duplicate (L101038-DUP4)		Source: 1012097-01			Prepared & Analyzed: 01/06/2011					
pH	8.81		0.10	pH Units		8.72			1.03	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		



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WC-Hanford, Inc. 2620 Fermi Avenue Richland WA, 99354	Project: RC-195 Project Number: K2755 Project Manager: Joan Kessner	Reported: 04/14/2011 09:28
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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 L101263 - SW 3060A										
Duplicate (L101263-DUP4) Source: 1012097-01 Prepared & Analyzed: 01/25/2011										
Hexavalent Chromium	0.22 U	0.22	0.54	mg/kg dry		0.22 U				20
Matrix Spike (L101263-MS7) Source: 1012097-01 Prepared & Analyzed: 01/25/2011										
Hexavalent Chromium	4.40	0.22	0.54	mg/kg dry	4.3413	0.22 U	101	75-125		
Matrix Spike (L101263-MS8) Source: 1012097-01 Prepared & Analyzed: 01/25/2011										
Hexavalent Chromium	1210 D	21.7	54.3	mg/kg dry	1209.2	0.22 U	100	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						
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-DUP2) Source: 1012097-01 Prepared & Analyzed: 01/25/2011										
Nitrate/Nitrite as N	2.71	0.10	0.51	mg/kg dry		3.14			14.6	20
Matrix Spike (L102007-MS2) Source: 1012097-01 Prepared & Analyzed: 01/25/2011										
Nitrate/Nitrite as N	8.23	0.10	0.52	mg/kg dry	5.2230	3.14	97.6	75-125		

6

COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C8239 (118-B-8); I-005		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 P620</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 FT</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>796535167463</i>		

MATRIX* A=Air DL=Drum L=Liquid DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water W'=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	Cool~4C	Cool~4C	Cool~4C	None	None	None
		HOLDING TIME	14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	None	None
		TYPE OF CONTAINER	aG	G	aG	G/P	G/P	G/P	G/P	Split Spoon Liner	Moisture Resistant
		NO. OF CONTAINER(S)	1	1	1	1	1	1	1	1	1
		VOLUME	250mL	120mL	250mL	250mL	120mL	120mL	250mL	1000g	200g
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B28N47	SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7195 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B28NBO	SOIL	12-7-10	1435	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
<i>A. Turner</i>	<i>12-7-10 1530</i>	<i>SSU-RI</i>	<i>12-7-10 1530</i>	<i>*NCL - Low yield NOT collected</i>	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>CSU-RI</i>	<i>12-9-10 0930</i>	<i>cm Aquilar</i>	<i>cm Aquilar 12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>cm Aquilar</i>	<i>12-9-10 1400</i>	<i>FEOLX</i>			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>FEOLX</i>	<i>12-10-10 10:10</i>	<i>SSU-RI</i>	<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		
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	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-195-534	PAGE 2 OF 2
COLLECTOR <i>Turner, Crow</i>	COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH
SAMPLING LOCATION C9239 (118-B-8); I-005	PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud	SAF NO. RC-195	PRICE CODE 8N AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. <i>GWS-115</i>	FIELD LOGBOOK NO. <i>HNF-N-58515 pg 20</i>	ACTUAL SAMPLE DEPTH <i>17.4-19.9 ft</i>	DATA TURNAROUND 45 Days / 45 Days
SHIPPED TO Lionville Laboratory Incorporated	OFFSITE PROPERTY NO. SEE PTR	COA 302512E510	METHOD OF SHIPMENT FEDERAL EXPRESS
		BILL OF LADING/AIR BILL NO. SEE PTR	<i>796535167463</i>

000000000

SPECIAL INSTRUCTIONS

** The laboratory is to analyze pH within 24 hours of receipt. ** The RCCC acknowledges that the analytical holding time for Nitrate, Nitrite, and Phosphate by EPA methods 300.0 or 9056 will not be met. ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix.

- (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS);
- (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS);
- (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);
- (4) Bulk Density - D2937 (100 Area RIFS); Particle Size (Dry Sieve) - D422 (100 Area RIFS); Saturated Hydraulic Conductivity - D2434 (100 Area RIFS) {Hydraulic Conductivity}; Saturated Hydraulic Conductivity - D5084 (100 Area RIFS) {Hydraulic Conductivity};

 ORIGINAL

COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA	TELEPHONE NO. (509) 376-4554	PROJECT COORDINATOR KESSNER, JH	PRICE CODE BN	DATA TURNAROUND 45 Days / 45 Days			
SAMPLING LOCATION C8239 (118-B-8); I-008		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud		SAF NO. RC-195	AIR QUALITY <input type="checkbox"/>				
ICE CHEST NO. <i>GWS-115</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 p622</i>	ACTUAL SAMPLE DEPTH <i>32.3 - 34.8 FT</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>796535167463</i>					
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WZ=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	Cool~4C	Cool~4C	Cool~4C	None
HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	
TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P	
NO. OF CONTAINER(S)		1	1	1	1	1	1	1	
VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL	
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: <i>B29K47</i>	SAMPLE ANALYSIS	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B28NC5	SOIL	12-8-10	1440	X	X	X	X	X	X

0000000010

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-8-10 1550</i>	RECEIVED BY/STORED IN <i>M0413 SSU R2</i>	DATE/TIME <i>12-8-10 1550</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (100 Area RIFS); (3) 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>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aauler cm lgh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aauler cm lgh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FED EX</i>	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>FED EX</i>	DATE/TIME <i>12-10-10 11:10</i>	RECEIVED BY/STORED IN <i>WJ Hines</i>	DATE/TIME <i>12-10-10/10</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		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

ORIGINAL

COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N		DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION C8239 (118-B-8); I-003		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. <i>GWS-117</i>		FIELD LOGBOOK NO. <i>ANF-N-585-15 pg 20</i>		ACTUAL SAMPLE DEPTH <i>10-12.5 FT</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>796535167463</i>					
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	Cool~4C	Cool~4C	Cool~4C	None
			HOLDING TIME		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP
			TYPE OF CONTAINER		aG	G	aG	G/P	G/P	G/P	G/P
			NO. OF CONTAINER(S)		1	1	1	1	1	1	1
			VOLUME		250mL	120mL	250mL	250mL	120mL	120mL	250mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K53		SAMPLE ANALYSIS		PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	
SAMPLE NO.		MATRIX*		SAMPLE DATE		SAMPLE TIME					
B29K64		SOIL		12-7-10		0950		X	X	X	X

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1012097

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>A. Turner</i>	DATE/TIME <i>12-7-10 1145</i>	RECEIVED BY/STORED IN <i>RI M127</i>	DATE/TIME <i>12-7-10 1145</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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (SCV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
RELINQUISHED BY/REMOVED FROM <i>SSU-RI</i>	DATE/TIME <i>12-9-10 0930</i>	RECEIVED BY/STORED IN <i>cm Aquilar cmlyh</i>	DATE/TIME <i>12-9-10 0930</i>		
RELINQUISHED BY/REMOVED FROM <i>cm Aquilar cmlyh</i>	DATE/TIME <i>12-9-10 1400</i>	RECEIVED BY/STORED IN <i>FEALY</i>	DATE/TIME <i>12-9-10 1400</i>		
RELINQUISHED BY/REMOVED FROM <i>FEALY</i>	DATE/TIME <i>12-10-10 110:10</i>	RECEIVED BY/STORED IN <i>WJ Miller DSM:JG</i>	DATE/TIME <i>12-10-10 110:10</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		



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

COLLECTOR <i>Turner, Crow</i>		COMPANY CONTACT RADLOFF, ANNA		TELEPHONE NO. (509) 376-4554		PROJECT COORDINATOR KESSNER, JH		PRICE CODE 8N		DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION CB239 (118-B-8); I-004		PROJECT DESIGNATION Soil/Sediment Sampling - Integrated Remedial Investigation/Feasibility Stud				SAF NO. RC-195		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO. <i>GWS-117</i>		FIELD LOGBOOK NO. <i>HNF-N-585-15 pg 20</i>		ACTUAL SAMPLE DEPTH <i>12.4-14.9 FT</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>796535167463</i> SEE PTR					

MATRIX*	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							
		HOLDING TIME							
		TYPE OF CONTAINER							
		NO. OF CONTAINER(S)							
		VOLUME							
		Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
		14/40 Days	14/40 Days	1 yr/1 yr	6 Months	30 Days	28 Days/48 Hours	ASAP	
		aG	G	aG	G/P	G/P	G/P	G/P	
		1	1	1	1	1	1	1	
		250mL	120mL	250mL	250mL	120mL	120mL	250mL	
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B29K54	PAHs - 8310 (100 Area RI/FS);	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082 (100 Area RI/FS);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196 (100 Area RIFS);	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	pH (Soil) - 9045 (100 Area RIFS);	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B29K67	SOIL	12-7-10	1040	X	X	X	X	X	X

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. <input type="checkbox"/> <input type="checkbox"/> ** Physical Properties laboratory: Conduct the hydraulic conductivity test (ASTM 5084 or 2434) as appropriate to the sample matrix. <input type="checkbox"/> <input type="checkbox"/> (1) TPH-Diesel/Kerosene Range - WTPH-D (100 Area RIFS); (2) ICP Metals - 6010TR (100 Area RIFS Client List); Mercury - 7471 - (CV) (100 Area RIFS); (3) IC Anions - 300.0 (100 Area RI/FS); NO2/NO3 - 353.2 (100 Area RI/FS);	
<i>A. Turner</i>	<i>12-7-10 1145</i>	<i>M0413 SSM</i>	<i>12-7-10 1145</i>		
<i>SSM-RI</i>	<i>12-9-10 0930</i>	<i>cm Aquila</i>	<i>12-9-10 0930</i>		
<i>cm Aquila</i>	<i>12-9-10 1400</i>	<i>FEDEX</i>			
<i>FEDEX</i>	<i>12-10-10 110:10</i>	<i>DSM</i>	<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		
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

000000012

Lionville Laboratory
 SAMPLE RECEIPT CHECKLIST (SRC)

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

Date: 12-10-10

LvL Batch #: 1012097

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|--|--|--|
| 1. Samples Hand Delivered or Shipped? | Carrier <u>Ex</u> | Airbill # <u>7965 3516 7463</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 <i>Comments:</i> |
| 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>3.3</u> °C | Cooler # <u>GWS-117</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?
All samples received on COC? | <input checked="" type="checkbox"/> Yes
<input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No
<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"/> Yes | <input checked="" type="checkbox"/> No <u>NO₂ NO₃ PO₄</u>
<input type="checkbox"/> No <input type="checkbox"/> N/A |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes | <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 14. QC stickers placed on bottles designated by client? | <input type="checkbox"/> Yes | <input type="checkbox"/> No <input 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 <u>12-10-10</u>
<u>225-11</u> | <input checked="" type="checkbox"/> No <u>See #12</u> |
| 16. Project Manager contacted concerning any discrepancies?
Person Contacted _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No <input type="checkbox"/> N/A
Date _____ |