

RECEIVED NOVEMBER 5, 2008

0082224



3 November 2008

Mr. Michael Neeley
CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop - B6-06
Richland, WA 99352

**Subject: Contract No. 630
Analytical Data Package**

Dear Mr. Neely:

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

LvLI Batch #	0809L134
SDG #	H3876
SAF #	F08-148
Date Received	9/18/08
# Samples	1
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
DRO/GRO/KRO	
Herbicides	
GC Alcohol	
Metals	
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. 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

r:\group\pm\orlette\hanford\data\fc_ltrs.doc

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JAN 22 2009
EDMC

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Lionville Laboratory, Inc.
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 FLRHANFORD F08-148 **H3876**

DATE RECEIVED: 09/18/08

LVL LOT # :0809L134

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
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B1WMH7

TOTAL ORGANIC CARBON	001	S	08LTZ009	09/11/08	09/26/08	09/30/08
TOTAL ORGANIC CARBON	001 REP	S	08LTZ009	09/11/08	09/26/08	09/30/08
TOTAL ORGANIC CARBON	001 MS	S	08LTZ009	09/11/08	09/26/08	09/30/08

LAB QC:

TOTAL ORGANIC CARBON	MB1	S	08LTZ009	N/A	09/26/08	09/30/08
TOTAL ORGANIC CARBON	MB1 BS	S	08LTZ009	N/A	09/26/08	09/30/08



Analytical Report

Client: FLR HANFORD F08-148 H 3876
LVL#: 0809L134

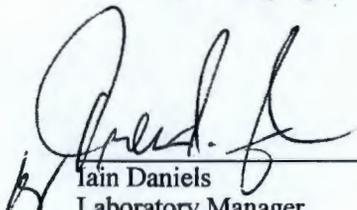
W.O.#: 60197-0001-001-0001-00
Date Received: 09-18-08

INORGANIC NARRATIVE

1. This narrative covers the analysis of 1 soil sample.
2. The sample was prepared and analyzed in accordance with the methods checked on the attached glossary.

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 time as required by the method and/or contract was met.
4. The results presented in this report are derived from a sample that met LvLI's sample acceptance policy.
5. The method blank was within the method criteria.
6. The Laboratory Control Sample (LCS) was within the laboratory control limits.
7. The matrix spike recovery was within the 75-125% control limits.
8. The replicate analysis was within the 20% Relative Percent Difference (RPD) control limit.
9. Total Organic Carbon samples are dried prior to analysis.
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

njpi09-134

10/31/08
Date

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 11 pages.

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WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
% Ash	___ D2216-80		
% Moisture	___ D2216-80		___ ILMO4.0 (e)
% Solids	___ D2216-80		___ ILMO4.0 (e)
% Volatile Solids	___ D2216-80		
ASTM Extraction in Water	___ D3987-81/85		
BTU	___ D240-87		
CEC		___ 9081	___ c
Chromium VI		___ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		___ 1110(mod) ___ 9045C	
Cyanide, Total		___ 9010B	___ ILMO4.0 (e)
Cyanide, Reactive		___ Section 7.3/9014	
Halides, Extractable Organic		___ 9020B	___ EPA 600/4/84-008
Halides, Total		___ 9020B	___ EPA 600/4/84-008
EP Toxicity		___ 1310A	
Flash Point		___ 1010	
Ignitability		___ 1010	
Oil & Grease		___ 9071A	
Carbon, Total Organic		___ ✓ 9060(mod.)	___ ✓ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	___ D240-87(mod)	___ 5050	
Petroleum Hydrocarbons, Total Recoverable		___ 9071	___ EPA 418.1
pH, Soil		___ 9045C	
Sulfide, Reactive		___ Section 7.3/9030B	
Sulfide		___ 9030B(mod)	
Specific Gravity	___ D1429-76C/	___ D5057-90	
Sulfur, Total		___ 9056	
Synthetic Preparation Leach		___ 1312	
Paint Filter		___ 9095A	
Other:	Method:		
Other:	Method		

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METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

REP = Sample Replicate

LC = Laboratory Control Sample.

NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.
2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).
3. Test Methods for Evaluating Solid Waste (USEPA SW-846).
 - a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).
 - b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).
 - c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).
 - d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).
 - e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.
 - f. Code of Federal Regulations.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 10/30/08

CLIENT: FLRHANFORD F08-148

LVL LOT #: 0809L134

WORK ORDER: 60197-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1WMH7	Total Organic Carbon	342	MG/KG	38.8	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 10/30/08

CLIENT: FLRHANFORD F08-148

LVL LOT #: 0809L134

WORK ORDER: 60197-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	08LTZ009-MB1	Total Organic Carbon	4.7	u MG/KG	4.7	1.0

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INORGANICS ACCURACY REPORT 10/30/08

CLIENT: FLRHANFORD F08-148

LVL LOT #: 0809L134

WORK ORDER: 60197-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-001	B1WMH7	Total Organic Carbon	4830	341	4710	95.5	1.0
BLANK10	08LTZ009-MB1	Total Organic Carbon	393	4.7 u	400	98.3	1.0

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INORGANICS PRECISION REPORT 10/30/08

CLIENT: FLRHANFORD F08-148

LVL LOT #: 0809L134

WORK ORDER: 60197-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	B1WMH7	Total Organic Carbon	341	363	6.2	1.0

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F08-148-005	PAGE 1 OF 1		
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR		PRICE CODE	8N	DATA TURNAROUND		
	TRENT, SJ	373-5869	WIDRIG, DL		AIR QUALITY	<input type="checkbox"/>	45 Days / 45 Days		
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.						
C6452 I-002	K-West Characterization - Groundwater Contacted Sediments		F08-148						
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH		COA	METHOD OF SHIPMENT				
GWSC-204	HNF-N-595-10	67.5-70'		123630ES10	FEDERAL EXPRESS				
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.						
Lionville Laboratory Incorporated	SEE PTR 22667		SEE PTR 7911 3904 4201						
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	Cool~-4C						
A=Air DL=Drum L=Liquid DL=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other		TYPE OF CONTAINER	gG						
		NO. OF CONTAINER(S)	1						
		VOLUME	250mL						
		SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	TOC - 9060;					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
31WMH7	SOIL	9-11-08	0937	✓					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
C. Fulton	9-11-08 1615	Mo 413 Fridge	9-11-08 1615						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
Mo 413 Fridge	SEP 17 2008 1024	Kevin Patterson	SEP 17 2008 1024						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
vin Patterson	SEP 17 2008 1130	FEDER							
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
Ex	9-18-08/0940	D. J. Newby	9-18-08/0940						
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				

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SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: Blue Hamford
 Project/SAF/SOW/Release #: FO8-148

Date: 9-18-08

LvLI Batch #: 0809L134

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|---|---|--|
| 1. Samples Hand Delivered or <u>Shipped</u> ? | Carrier <u>(FedEx)</u> | Airbill # <u>7911 3904 4201</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 <u>received cooled</u> or ambient? | Temp <u>3.8</u> °C | Cooler # <u>G5WC-4</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 & LvLI) 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 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 type="checkbox"/> Yes | <input type="checkbox"/> No
<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 checked="" type="checkbox"/> Yes | <input type="checkbox"/> No <input type="checkbox"/> N/A |
| 15. Shipment meets LvLI 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 <u>N/A</u>
Date _____ |

