

RECEIVED JULY 10, 2008

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD F08-096 K3769

DATE RECEIVED: 06/11/08

LVL LOT # :0806L276

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1W0W4						
% SOLIDS	001	S	08L%S058	06/05/08	06/16/08	06/17/08
% SOLIDS	001 REP	S	08L%S058	06/05/08	06/16/08	06/17/08
SULFIDE	001	S	08LSD045	06/05/08	06/18/08	06/18/08
SULFIDE	001 REP	S	08LSD045	06/05/08	06/18/08	06/18/08
SULFIDE	001 MS	S	08LSD045	06/05/08	06/18/08	06/18/08

LAB QC:

SULFIDE	MB1	S	08LSD045	N/A	06/18/08	06/18/08
SULFIDE	MB1 BS	S	08LSD045	N/A	06/18/08	06/18/08
SULFIDE	MB1 BSD	S	08LSD045	N/A	06/18/08	06/18/08

000000001



Analytical Report

Client: TNU-HANFORD F08-096 H3769
LVL#: 0806L276

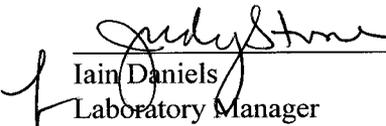
W.O.#: 11343-606-001-9999-00
Date Received: 06-11-08

INORGANIC NARRATIVE

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

LvLI 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. LvLI 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 not met for Sulfide.
4. The results presented in this report are derived from a sample that did not meet LvLI's sample acceptance policy as noted on the Sample Receipt Checklist.
5. The method blank for Sulfide was within the method criteria.
6. The Laboratory Control Samples (LCS) for Sulfide were within the laboratory control limits. The duplicate LCS for Sulfide was within the 20% Relative Percent Difference (RPD) control limit.
7. The matrix spike recovery for Sulfide was within the 75-125% control limits.
8. The replicate analyses were within the 20% 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 Incorporated

7/1/08
Date

njp06-276

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 12 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	___ 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) / 9234	
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.

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INORGANICS DATA SUMMARY REPORT 06/20/08

CLIENT: TNU-HANFORD F08-096 **K3769**
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0806L276

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-----	-----	-----	-----	-----	-----	-----
-001	B1W0W4	% Solids	96.6	%	0.01	1.0
		Sulfide	21.7	u MG/KG	21.7	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 06/20/08

CLIENT: TNU-HANFORD F08-096 **R3769**
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0806L276

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	08LSD045-MB1	Sulfide	20.0	u MG/KG	20.0	1.0

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INORGANICS ACCURACY REPORT 06/20/08

CLIENT: TNU-HANFORD F08-096 **K3769**
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0806L276

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
=====	=====	=====	=====	=====	=====	=====	=====
-001	B1W0W4	Sulfide	221	0.0	219	101.3	1.0
BLANK10	08LSD045-MB1	Sulfide	204	20.0 u	209	97.4	1.0
		Sulfide MSD	212	20.0 u	210	101.3	1.0

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INORGANICS DUPLICATE SPIKE REPORT 06/20/08

CLIENT: TNU-HANFORD F08-096 **K3769**
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0806L276

SAMPLE	SITE ID	ANALYTE	SPIKE#1	SPIKE#2	%DIFF
			%RECOV	%RECOV	
BLANK10	08LSD045-MB1	Sulfide	97.4	101.3	3.9

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INORGANICS PRECISION REPORT 06/20/08

CLIENT: TNU-HANFORD F08-096 **K3769**
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0806L276

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR (REP)
			RESULT	REPLICATE	RPD	
-----	-----	-----	-----	-----	-----	-----
-001REP	B1W0W4	% Solids	96.6	96.1	0.47	1.0
		Sulfide	21.7 u	21.2 u	NC	1.0

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SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hanford
 Project/SAF/SOW/Release #: F08-096

Date: 6-11-08

LvLI Batch #: 0806L276

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|---|--|--|
| 1. Samples Hand Delivered or <u>Shipped?</u> | Carrier <u>FedEx</u> | Airbill # <u>7905 2388 0571</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>P-1</u> °C | Cooler # <u>GRP-08-15</u> |
| How was the temperature taken? | <input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank | <input type="checkbox"/> Other (Specify): <u>6-11-08</u> |
| Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C) | <input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 10. All sample label information matches COC? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 11. Samples properly preserved? (If #5 is no, then this is no.) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 12. Samples received within hold times?
Short holds taken to wet lab? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input 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 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| 16. Project Manager contacted concerning any discrepancies?
Person Contacted <u>[Signature]</u> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A
Date <u>6-11-08</u> |

