0081609

RECEIVED SEPTEMBER 10, 2008

LvLI

10 LIONVILLE LABORATORY INC.

RECEIVED
JAN 22 2009
EDMC

Mr. Steve Trent
Fluor Hanford Inc.
825 Jadwin Ave.
Richland, WA 99352

Subject: Contract No. 630
Analytical Data Package

Dear Mr. Trent:

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

LvLI Batch #	0807L462
SDG #	H3795 ✓
SAF #	F08-101
Date Received	7/17/08
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	X
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 Incorporated

Orlette S. Johnson
Project Manager

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

SEMIVOLATILES

Lionville Laboratory, Inc.
BNA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F08-101 H3795

DATE RECEIVED: 07/17/08 LVL LOT # :0807L462

CLIENT ID	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1VDX3	001	S	08LE0345	07/09/08	07/22/08	08/07/08
B1VDX3	001 MS	S	08LE0345	07/09/08	07/22/08	08/07/08
B1VDX3	001 MSD	S	08LE0345	07/09/08	07/22/08	08/07/08
B1V9P5	002	S	08LE0345	07/10/08	07/22/08	08/07/08
B1VDX6	003	S	08LE0345	07/09/08	07/22/08	08/07/08
LAB QC:						
SBLKWK	MB1	S	08LE0345	N/A	07/22/08	08/06/08
SBLKWK	MB1 BS	S	08LE0345	N/A	07/22/08	08/06/08

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LIONVILLE LABORATORY INC.

Case Narrative

Client: TNU-HANFORD F08-101
LVL #: 0807L462
SDG/SAF # H3795 / F08-101

W.O. #: 11343-606-001-9999-00
Date Received: 07-17-2008

SEMIVOLATILE

Three (3) soil samples were collected on 07-09,10-2008.

The samples and their associated QC samples were extracted according to Lionville Laboratory SOPs based on SW 846 method 3540C on 07-22-2008 and analyzed according to criteria set forth in Lionville Laboratory SOPs based on SW 846 Method 8270C for client specified target compounds on 08-06,07-2008.

All soil samples are reported on a wet weight basis due to matrix (client indicates matrix as other liquid). The following is a summary of QC results accompanying the sample results. Lionville Laboratory Inc (LvLI) certifies that all test results meet the requirements of NELAC except as noted below:

1. Discrepancies from the sample acceptance policy have been recorded on the Sample Receipt Checklist.

2. Samples were extracted and analyzed within holding time.

3. Non-target compounds were detected in these samples.

4. All obtainable surrogate recoveries were within acceptance criteria.

5. Four (4) of one hundred thirty (130) surrogate recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 08MS181) has been enclosed.

6. One (1) of sixty-five (65) blank spike recoveries were outside acceptance criteria. A copy of the Sample Discrepancy Report (SDR# 08MS181) has been enclosed.

7. The method blank contained the common laboratory contaminant Di-n-butylphthalate at a level less than the CRQL.

8. All initial calibrations associated with this data set were within acceptance criteria.

r:\group\data\2008\bna\tnu\0807-462cs2.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at 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 22 pages.

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LIONVILLE LABORATORY INC.

9. All continuing calibration standards analyzed prior to sample extracts were within acceptance criteria.

10. Internal standard area and retention time criteria were met.

11. Manual integrations are performed according to SOP QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the Glossary ("Technical Flags For Manual Integration").

12. A spectral search was conducted for the compound Cyclohexanone; however, this compound was not identified in the samples.

13. LvLI 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.

14. 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 Incorporated

8/18/08
Date

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Lionville Laboratory Sample Discrepancy Report (SDR)

SDR #: 08MS181

Initiator: Sharon Saylor
Date: 8-14-08
Client: TNU Hanford
F08-101 H3795

Batch: 08071462
Samples: ms, msd, BS
Method: SW846/MCAWW/CLP/

Parameter: 8270
Matrix: SOLID
Prep Batch: 08LE0345

1. Reason for SDR

a. COC Discrepancy
__ Tech Profile Error __ Client Request __ Sampler Error on C-O-C
__ Transcription Error __ Wrong Test Code __ Other _____

b. General Discrepancy
__ Missing Sample/Extract* __ Container Broken __ Wrong Sample Pulled __ Label ID's Illegible
__ Hold Time Exceeded __ Insufficient Sample* __ Preservation Wrong __ Received Past Hold
__ Improper Bottle Type __ Not Amenable to Analysis

Note*: Verified by [Log-In] or [Prep Group] (circle)...signature/date: _____

c. Problem (Include all relevant specific results; attach data if necessary)

low recovery of several spike analytes in the BS, ms, + msd (1,2,4 Trichlorobenzene, Hexachlorocyclopentadiene, 2,3,4,6 tetrachlorophenol)

2. Known or Probable Causes(s) Hexachlorocyclopentadiene is subject to thermal decomposition in the inlet of the gas chromatograph, chemical reactions in acetone solution, and photochemical decomposition. Acidic phenols can be subject to erratic chromatograph behavior, especially if the GC system is contaminated with high boiling material. Others sporadic. All the spikes/surrogates within criteria

3. Discussion and Proposed Action
__ Re-log
__ Entire Batch
__ Following Samples: _____
__ Re-leach
__ Re-extract
__ Re-digest
__ Revise EDD
__ Change Test Code to _____
__ Place On/Take Off Hold (circle)

Other Description: narrate

4. Project Manager Instructions...signature/date: [signature] 8/14/08
__ Concur with Proposed Action
__ Disagree with Proposed Action; See Instruction
✓ Include in Case Narrative
__ Client Contacted:
Date/Person _____
__ Add
__ Cancel

5. Final Action...signature/date: [signature] 8/17/08
__ Verified re-[log][leach][extract][digest][analysis] (circle)
✓ Included in Case Narrative
__ Hard Copy COC Revised
__ Electronic COC Revised
__ EDD Corrections Completed

Other Explanation:

When Final Action has been recorded, forward original to QA for diposition.

Route
__ Lab Manager: Daniels
✓ Project Mgr (circle): Johnson / Stone
__ Sample Prep (circle): Ford
__ Log-in: King

Route
__ Metals: Welsh / _____
__ Inorganic: Perrone / _____
__ GC/LC: Carey / _____
__ MS VOA: Rubino / _____
✓ MS BNA: Carden / _____
__ Other: _____

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QA-139-A-0208

000000004

GLOSSARY

DATA QUALIFIERS

U = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.

J = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection 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. This flag is also used for a TIC as well as for a positively identified TCL compound.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

D = Identifies all compounds identified in an analysis at a secondary dilution factor.

I = Interference.

NQ = Result qualitatively confirmed but not able to quantify.

A = Indicates that a TIC is a suspected aldol-condensation product.

N = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.

X = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).

Y = Additional qualifiers used as required are explained in the case narrative.

[illegible]

GLOSSARY

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike 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	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quan modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quan modifications:

MP - Missed Peak: manually added peak not found by automatic quan program.

PA - Peak Assignment: quan report was changed to reflect correct peak assignment.

RI - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.

SP - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.

CB - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.

PI - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Lionville Laboratory, Inc.

Semivolatiles by GC/MS, Appendix IX List

Report Date: 08/14/08 14:51

RFW Batch Number: 0807L462 Client: TNUHANFORD F08-101 H3795 Work Order: 11343606001 Page: 1a

	Cust ID:	B1VDX3	B1VDX3	B1VDX3	B1V9P5	B1VDX6	SBLKWK
Sample Information	RFW#:	001	001 MS	001 MSD	002	003	08LE0345-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Surrogate Recovery	Nitrobenzene-d5	58 %	46 %	81 %	72 %	76 %	91 %
	2-Fluorobiphenyl	57 %	47 %	76 %	66 %	77 %	84 %
	Terphenyl-d14	69 %	60 %	87 %	72 %	86 %	91 %
	Phenol-d5	59 %	47 %	84 %	70 %	77 %	92 %
	2-Fluorophenol	54 %	45 %	81 %	63 %	73 %	83 %
	2,4,6-Tribromophenol	24 %	49 %	63 %	52 %	33 %	65 %
		fl	fl	fl	fl	fl	fl
Phenol		340 U	68 %	87 %	350 U	340 U	330 U
bis(2-Chloroethyl)ether		340 U	63 %	79 %	350 U	340 U	330 U
2-Chlorophenol		340 U	59 %	78 %	350 U	340 U	330 U
1,3-Dichlorobenzene		340 U	53 %	68 %	350 U	340 U	330 U
1,4-Dichlorobenzene		340 U	52 %	70 %	350 U	340 U	330 U
1,2-Dichlorobenzene		340 U	54 %	70 %	350 U	340 U	330 U
2-Methylphenol		340 U	73 %	97 %	350 U	340 U	330 U
2,2'-oxybis(1-Chloropropane)		340 U	69 %	91 %	350 U	340 U	330 U
3/4-Methylphenol		340 U	68 %	88 %	350 U	340 U	330 U
N-Nitroso-di-n-propylamine		340 U	69 %	86 %	350 U	340 U	330 U
Hexachloroethane		340 U	50 %	69 %	350 U	340 U	330 U
Nitrobenzene		340 U	63 %	79 %	350 U	340 U	330 U
Isophorone		340 U	62 %	77 %	350 U	340 U	330 U
2-Nitrophenol		340 U	61 %	76 %	350 U	340 U	330 U
2,4-Dimethylphenol		340 U	71 %	86 %	350 U	340 U	330 U
bis(2-Chloroethoxy)methane		340 U	65 %	81 %	350 U	340 U	330 U
2,4-Dichlorophenol		340 U	66 %	80 %	350 U	340 U	330 U
1,2,4-Trichlorobenzene		340 U	55 * %	71 %	350 U	340 U	330 U
Naphthalene		340 U	57 %	72 %	350 U	340 U	330 U
4-Chloroaniline		850 U	46 %	68 %	880 U	850 U	830 U
Hexachlorobutadiene		340 U	58 %	74 %	350 U	340 U	330 U
4-Chloro-3-methylphenol		340 U	77 %	91 %	350 U	340 U	330 U
2-Methylnaphthalene		340 U	61 %	76 %	350 U	340 U	330 U
Hexachlorocyclopentadiene		340 U	9 * %	15 * %	350 U	340 U	330 U
2,4,6-Trichlorophenol		340 U	60 %	61 %	350 U	340 U	330 U
2,4,5-Trichlorophenol		340 U	72 %	82 %	350 U	340 U	330 U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 0807L462 Client: TNUHANFORD F08-101 H3795 Work Order: 11343606001 Page: 1b

Cust ID:	B1VDX3		B1VDX3		B1VDX3		B1V9P5		B1VDX6		SBLKWK	
RFW#:	001		001 MS		001 MSD		002		003		08LE0345-MB1	
2-Chloronaphthalene	340	U	61	%	75	%	350	U	340	U	330	U
2-Nitroaniline	850	U	79	%	92	%	880	U	850	U	830	U
Dimethylphthalate	340	U	64	%	77	%	350	U	340	U	330	U
Acenaphthylene	340	U	62	%	76	%	350	U	340	U	330	U
2,6-Dinitrotoluene	340	U	69	%	82	%	350	U	340	U	330	U
3-Nitroaniline	850	U	61	%	75	%	880	U	850	U	830	U
Acenaphthene	340	U	63	%	75	%	350	U	340	U	330	U
2,4-Dinitrophenol	1700	U	37	%	81	%	1800	U	1700	U	1700	U
4-Nitrophenol	850	U	73	%	83	%	880	U	850	U	830	U
Dibenzofuran	340	U	60	%	71	%	350	U	340	U	330	U
2,4-Dinitrotoluene	340	U	63	%	74	%	350	U	340	U	330	U
Diethylphthalate	340	U	64	%	77	%	350	U	340	U	330	U
4-Chlorophenyl-phenylether	340	U	62	%	76	%	350	U	340	U	330	U
Fluorene	340	U	62	%	75	%	350	U	340	U	330	U
4-Nitroaniline	850	U	66	%	77	%	880	U	850	U	830	U
4,6-Dinitro-2-methylphenol	850	U	51	%	86	%	880	U	850	U	830	U
N-Nitrosodiphenylamine (1)	340	U	58	%	68	%	350	U	340	U	330	U
4-Bromophenyl-phenylether	340	U	61	%	73	%	350	U	340	U	330	U
Hexachlorobenzene	340	U	69	%	83	%	350	U	340	U	330	U
Pentachlorophenol	850	U	60	%	94	%	880	U	850	U	830	U
Phenanthrene	340	U	63	%	76	%	350	U	340	U	330	U
Anthracene	340	U	64	%	78	%	350	U	340	U	330	U
Carbazole	340	U	69	%	81	%	350	U	340	U	330	U
Di-n-butylphthalate	340	U	68	%	79	%	47	JB	340	U	27	J
Fluoranthene	340	U	66	%	82	%	350	U	340	U	330	U
Pyrene	340	U	69	%	81	%	350	U	340	U	330	U
Butylbenzylphthalate	340	U	66	%	77	%	350	U	340	U	330	U
3,3-Dichlorobenzidine	340	U	60	%	54	%	350	U	340	U	330	U
Benzo(a)anthracene	340	U	68	%	83	%	350	U	340	U	330	U
Chrysene	340	U	67	%	79	%	350	U	340	U	330	U
bis(2-Ethylhexyl)phthalate	72	J	66	%	76	%	53	J	89	J	330	U
Di-n-octyl phthalate	340	U	61	%	75	%	350	U	340	U	330	U
Benzo(b)fluoranthene	340	U	64	%	79	%	350	U	340	U	330	U
Benzo(k)fluoranthene	340	U	60	%	73	%	350	U	340	U	330	U
Benzo(a)pyrene	340	U	63	%	80	%	350	U	340	U	330	U
Indeno(1,2,3-cd)pyrene	340	U	68	%	88	%	350	U	340	U	330	U
Dibenz(a,h)anthracene	340	U	70	%	92	%	350	U	340	U	330	U
Benzo(g,h,i)perylene	340	U	77	%	99	%	350	U	340	U	330	U
Dimethoate	340	U	340	U	340	U	350	U	340	U	330	U
Phorate	340	U	340	U	340	U	350	U	340	U	330	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 0807L462 Client: TNUHANFORD F08-101 H3795 Work Order: 11343606001 Page: 1c

Cust ID:	B1VDX3	B1VDX3	B1VDX3	B1V9P5	B1VDX6	SBLKWK
RFW#:	001	001 MS	001 MSD	002	003	08LE0345-MB1
2,3,4,6-Tetrachlorophenol	340 U	47 * %	59 %	350 U	340 U	330 U
Tributylphosphate	30 J	31 J	42 J	350 U	39 J	330 U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

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Cust ID: SBLKWK BS

Sample Information
RFW#: 08LE0345-MB1
Matrix: SOIL
D.F.: 1.00
Units: ug/Kg

Surrogate Recovery	Nitrobenzene-d5	68	%
	2-Fluorobiphenyl	69	%
	Terphenyl-d14	77	%
	Phenol-d5	72	%
	2-Fluorophenol	69	%
	2,4,6-Tribromophenol	59	%

Phenol	71	%
bis(2-Chloroethyl)ether	67	%
2-Chlorophenol	69	%
1,3-Dichlorobenzene	64	%
1,4-Dichlorobenzene	64	%
1,2-Dichlorobenzene	63	%
2-Methylphenol	68	%
2,2'-oxybis(1-Chloropropane)	71	%
3/4-Methylphenol	71	%
N-Nitroso-di-n-propylamine	72	%
Hexachloroethane	62	%
Nitrobenzene	67	%
Isophorone	64	%
2-Nitrophenol	70	%
2,4-Dimethylphenol	63	%
bis(2-Chloroethoxy)methane	69	%
2,4-Dichlorophenol	70	%
1,2,4-Trichlorobenzene	64	%
Naphthalene	67	%
4-Chloroaniline	61	%
Hexachlorobutadiene	70	%
4-Chloro-3-methylphenol	72	%
2-Methylnaphthalene	70	%
Hexachlorocyclopentadiene	46	%
2,4,6-Trichlorophenol	56	%
2,4,5-Trichlorophenol	65	%

*= Outside of EPA CLP QC limits.

Cust ID: SBLKWK BS

RFW#: 08LE0345-MB1

2-Chloronaphthalene	65	%
2-Nitroaniline	74	%
Dimethylphthalate	69	%
Acenaphthylene	65	%
2,6-Dinitrotoluene	69	%
3-Nitroaniline	69	%
Acenaphthene	66	%
2,4-Dinitrophenol	59	%
4-Nitrophenol	62	%
Dibenzofuran	65	%
2,4-Dinitrotoluene	66	%
Diethylphthalate	69	%
4-Chlorophenyl-phenylether	68	%
Fluorene	66	%
4-Nitroaniline	65	%
4,6-Dinitro-2-methylphenol	66	%
N-Nitrosodiphenylamine (1)	61	%
4-Bromophenyl-phenylether	65	%
Hexachlorobenzene	74	%
Pentachlorophenol	69	%
Phenanthrene	70	%
Anthracene	70	%
Carbazole	68	%
Di-n-butylphthalate	70	%
Fluoranthene	75	%
Pyrene	67	%
Butylbenzylphthalate	73	%
3,3-Dichlorobenzidine	60	%
Benzo(a)anthracene	72	%
Chrysene	72	%
bis(2-Ethylhexyl)phthalate	77	%
Di-n-octyl phthalate	75	%
Benzo(b)fluoranthene	71	%
Benzo(k)fluoranthene	73	%
Benzo(a)pyrene	68	%
Indeno(1,2,3-cd)pyrene	70	%
Dibenz(a,h)anthracene	73	%
Benzo(g,h,i)perylene	73	%
Dimethoate	330	U
Phorate	330	U

*= Outside of EPA CLP QC limits.

Cust ID: SBLKWK BS

RFW#: 08LE0345-MB1

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2,3,4,6-Tetrachlorophenol	43 *	%
Tributylphosphate	330	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B1VDX3

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD F08-101 H3795

Matrix: (soil/water) SOIL

Lab Sample ID: 0807L462-001

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: C080709

Level: (low/med) LOW

Date Received: 07/17/08

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 07/22/08

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 08/07/08

Injection Volume: 2.0 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.266	500	JB
2.	ALDOL CONDENSATE	7.714	2000	JAB
3.	UNKNOWN	8.360	50000	JB
4.	UNKNOWN	9.841	400	J
5.	UNKNOWN	22.693	400	JB

FORM 1 SV-TIC RFW (v3.3)

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B1V9P5

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD F08-101 H3795

Matrix: (soil/water) SOIL

Lab Sample ID: 0807L462-002

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: C080710

Level: (low/med) LOW

Date Received: 07/17/08

% Moisture: 5 decanted: (Y/N)__

Date Extracted: 07/22/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 08/07/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.268	400	JB
2.	ALDOL CONDENSATE	7.708	2000	JAB
3.	UNKNOWN	8.328	40000	JB
4.	UNKNOWN	43.721	300	J
5.	UNKNOWN	44.488	200	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B1VDX6

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD F08-101 H3795

Matrix: (soil/water) SOIL

Lab Sample ID: 0807L462-003

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: C080711

Level: (low/med) LOW

Date Received: 07/17/08

% Moisture: 2 decanted: (Y/N)__

Date Extracted: 07/22/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 08/07/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	8.350	40000	JB
2.	UNKNOWN	16.774	2000	J
3.	UNKNOWN	16.800	3000	J
4.	UNKNOWN	17.067	2000	J
5.	UNKNOWN	17.084	6000	J

FORM 1 SV-TIC RFW (v3.3)

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKWK

Lab Name: Lionville Labs, Inc. Work Order: 11343606001

Client: TNUHANFORD F08-101 H3795

Matrix: (soil/water) SOIL

Lab Sample ID: 08LE0345-MB1

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: C080606

Level: (low/med) LOW

Date Received: 07/22/08

% Moisture: _____ decanted: (Y/N)__

Date Extracted: 07/22/08

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 08/06/08

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: _____

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.283	300	J
2.	ALDOL CONDENSATE	7.722	2000	JA
3.	UNKNOWN	8.359	50000	J
4.	ALDOL CONDENSATE	9.858	600	JA
5.	UNKNOWN	22.727	200	J

FORM 1 SV-TIC RFW (v3.3)

INORGANICS

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F08-101 H3795

DATE RECEIVED: 07/17/08 LVL LOT # :0807L462

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1VDX3						
% SOLIDS	001	S	08L%S064	07/09/08	07/18/08	07/20/08
% SOLIDS	001 REP	S	08L%S064	07/09/08	07/18/08	07/20/08
CHROMIUM VI	001	S	08LVI057	07/09/08	08/01/08	08/01/08
CHROMIUM VI	001 REP	S	08LVI057	07/09/08	08/01/08	08/01/08
CHROMIUM VI	001 MS	S	08LVI057	07/09/08	08/01/08	08/01/08
CHROMIUM VI	001 MSD	S	08LVI057	07/09/08	08/01/08	08/01/08
NITRATE NITRITE	001	S	08LN3S24	07/09/08	08/22/08	08/22/08
NITRATE NITRITE	001 REP	S	08LN3S24	07/09/08	08/22/08	08/22/08
NITRATE NITRITE	001 MS	S	08LN3S24	07/09/08	08/22/08	08/22/08
B1V9P5						
% SOLIDS	002	S	08L%S064	07/10/08	07/18/08	07/20/08
CHROMIUM VI	002	S	08LVI057	07/10/08	08/01/08	08/01/08
NITRATE NITRITE	002	S	08LN3S24	07/10/08	08/22/08	08/22/08
B1VDX6						
% SOLIDS	003	S	08L%S064	07/09/08	07/18/08	07/20/08
CHROMIUM VI	003	S	08LVI057	07/09/08	08/01/08	08/01/08
NITRATE NITRITE	003	S	08LN3S24	07/09/08	08/22/08	08/22/08

LAB QC:

CHROMIUM VI	MB1	S	08LVI057	N/A	08/01/08	08/01/08
CHROMIUM VI	MB1 BS	S	08LVI057	N/A	08/01/08	08/01/08
CHROMIUM VI	MB1 BSD	S	08LVI057	N/A	08/01/08	08/01/08
NITRATE NITRITE	MB1	S	08LN3S24	N/A	08/25/08	08/25/08
NITRATE NITRITE	MB1 BS	S	08LN3S24	N/A	08/22/08	08/22/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD F08-101 H3795
LVL#: 0807L462

W.O.#: 11343-606-001-9999-00
Date Received: 07-17-08

INORGANIC NARRATIVE

1. This narrative covers the analyses of 3 soil samples.

2. The samples were 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 times as required by the method and/or contract were met.

4. The results presented in this report are derived from samples that did not meet LvLI's sample acceptance policy as 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.

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.

for Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

8/29/08
Date

njp\i07-462

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 13 pages.

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WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% 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)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		__ 9095A	

Other: Nitrate Nitrite **Method:** EPA 353.2 (mod.)

Other: **Method**

L-WI-034/B-01/01

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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 08/28/08

CLIENT: TNUHANFORD F08-101 H3795 LVL LOT #: 0807L462

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1VDX3	% Solids	98.3	%	0.01	1.0
		Chromium VI	0.20 u	MG/KG	0.20	1.0
		Nitrate Nitrite	1.5	MG/KG	0.20	1.0
-002	B1V9P5	% Solids	94.5	%	0.01	1.0
		Chromium VI	0.21 u	MG/KG	0.21	1.0
		Nitrate Nitrite	4.0	MG/KG	0.18	1.0
-003	B1VDX6	% Solids	98.4	%	0.01	1.0
		Chromium VI	0.20 u	MG/KG	0.20	1.0
		Nitrate Nitrite	1.6	MG/KG	0.22	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 08/28/08

CLIENT: TNUHANFORD F08-101 H3795 LVL LOT #: 0807L462
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	08LVI057-MB1	Chromium VI	0.20 u	MG/KG	0.20	1.0
BLANK10	08LN3S24-MB1	Nitrate Nitrite	0.20 u	MG/KG	0.20	1.0

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Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 08/28/08

CLIENT: TNUHANFORD F08-101 H3795 LVL LOT #: 0807L462
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B1VDX3	Soluble Chromium VI	3.7	0.20u	4.1	89.7	1.0
		Insoluble Chromium VI	1460	0.20u	1190	122.9	100
		Nitrate Nitrite	7.5	1.5	5.7	105.9	1.0
BLANK10	08LVI057-MB1	Soluble Chromium VI	3.8	0.20u	4.0	94.3	1.0
		Insoluble Chromium VI	1110	0.20u	947	117.3	100
BLANK10	08LN3S24-MB1	Nitrate Nitrite	6.5	0.20u	6.4	101.5	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 08/28/08

CLIENT: TNUHANFORD F08-101 H3795 LVL LOT #: 0807L462

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B1VDX3	% Solids	98.3	98.4	0.031	1.0
		Chromium VI	0.20u	0.20u	NC	1.0
		Nitrate Nitrite	1.5	1.4	7.5	1.0

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