

0072601

SAF-RC-021
100-BC Burial Grounds –
Soil Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Jeanette Duncan

H4-21

KW 3/28/07
INITIAL/DATE

COMMENTS:

SDG K0294

SAF-RC-021

Rad only

☒ Chem only

Rad & Chem

☒ Complete

Partial

**ADD-ON METHYL MERCURY TO SAMPLES J11VF4 &
J11VF6**

Waste Site: 118-B-1 (Mercury site trench #23)

RECEIVED
APR 02 2007
EDMC

SOUTHWEST RESEARCH INSTITUTE®

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Chemistry and Chemical Engineering Division
Department of Analytical and Environmental Chemistry

July 18, 2006

Lionville Laboratory, Inc.
208 Welsh Pool Road
Lionville, PA 19341-1333

Attn: Orlette Johnson



Subject: Metals Analysis
SwRI Project Number: 10780.05.00X
SwRI SDG Number: 280208(J11VF4)
SwRI Task Order Number: 060601-7
SwRI Sample Receipt Number: 29233
Samples Received: May 30, 2006

Dear Ms. Johnson:

Enclosed please find the analytical data for the above referenced project. If you should have any questions, please do not hesitate to call me at (210) 522-2159.

Sincerely,

for 
Thomas A. Farias
Research Scientist

APPROVED:



Reza Karimi, Ph.D.
Director

TAF: ma



DETROIT, MICHIGAN (248) 353-2550 • HOUSTON, TEXAS (713) 977-1377 • WASHINGTON, DC (301) 881-0226

000001

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

NARRATIVE

Client: LIONVILLE LABORATORY, INC.
Project No: 10780.05.00X
SDG Number: 280208(J11VF4)
SwRI Task Order(s): 060601-7
Page: 1

000002

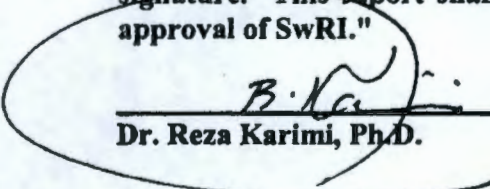
SwRI Case Narrative

1. Two (2) Soil samples were received for Metals analysis:

SwRI ID	Customer ID
280208	J11VF4
280209	J11VF6

2. The samples were received at SwRI on May 30, 2006.
3. QC Sample Identification:
J11VF4 Dup
J11VF6 S/SD
LCSW

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Director or his designee, as verified by the following signature. This report shall not be reproduced except in full without the written approval of SwRI."



Dr. Reza Karimi, Ph.D.

7/18/06
Date

Client: Lionville Laboratory, Inc.
SDG: 280208
SwRI Project Number: 10780.05.00X
SwRI Task Order Number: 060601-7

002003

METHYL MERCURY ANALYSIS

Methyl mercury was determined using a modified EPA Method 1630. This method is "performance based" and may be modified as long as the method equivalency is established. Method 1630 is applicable to the analysis of waters, but our method modification was applied to soils. Instead of distilling the methyl mercury as described in 1630, the methyl mercury in the sample was extracted with dichloromethane (DCM), which was then back extracted into de-ionized water. The ethylation step was performed according to method 1630. An atomic absorption instrument was used instead of a cold vapor atomic fluorescence spectrometer for the analysis. The method equivalence of the modification was confirmed by analyzing OPRs and MS/MSDs with the samples. All OPR and MS/MSD recoveries were within the limits specified in Table 2 "Quality Control Acceptance Criteria for Performance Tests In EPA Method 1630 Appendix" of Method 1630.

According to the method, acid-preserved samples are stable for 6 months. Since Method 1630 is a water method, there is no holding time specified for solid samples.

The sample matrices were not comparable to soils. Both samples consisted mainly of rock. Portions of each sample were pulverized using a ball mill prior to extraction. The samples are reported on a dry weight basis. Methyl mercury was not detected in the procedure blank above the laboratory's reporting limit. The laboratory control sample recovery was within 70-130%. Both samples were QC'd. SwRI system id 280208 was prepared and analyzed in duplicate. The RPD was less than 20%. The matrix spike and matrix spike duplicate analyses were performed on SwRI system id 280209. The recoveries were within 65-135%. The RPD between the MS and MSD was less than 35% RPD.

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Manager

2/14/06

Date

000004

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

CHAIN OF CUSTODY

BHI-EE-011 (08/29/2005)

SAMPLE LOG-IN SHEET

000008

Lab Name

Southwest Research Institute

Received By (Print Name)

DINO ROMAN

Received By (Signature)

Page 1 of 1

Log-in Date

05/30/2006

Case Number

WCH

Sample Delivery Group No

SAS Number

Remarks: 10780.05.00X

Corresponding

Remarks:
Condition of Sample
Shipment, etc

	EPA Sample #	Sample Tag #	Assigned Lab #	
1. Custody Seal(s)	Present/ Absent* Intact/Broken	J11VF4	None	280208 Intact
2. Custody Seal Nos.	N/A	J11VF6	None	280209 Intact
3. Chain-of Custody Records	Present Absent*			
4. Traffic Reports or Packing Lists	Present Absent			
5. Airbill	Airbill/Sticker Present Absent*			
6. Airbill No.	7377 3569 3450			
7. Sample Tags	Present Absent			
Sample Tag Numbers	Listed Not listed on Chain of Custody			
8. Sample Condition	Intact /Broken*/ Leaking			
9. Cooler Temperature	22.0C			
10. Does Information on custody records, traffic reports, and sample tags agree?	Yes No*			
11. Date Received at Lab	05/30/2006			
12. Time Received	14:30:00			

Sample Transfer

Fraction

Fraction

Area #

Area #

By

By

DINO ROMAN

On

On

05/30/2006

* Contact SMO and attach record of resolution

Reviewed By

Date

Logbook No.

Logbook Page No.

Sample Receipt (29233)

5818 Section 1 of 2

010001

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

METALS ANALYSIS

010002

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

SAMPLE DATA

SOUTHWEST RESEARCH INSTITUTE

SAMPLE ANALYSIS DATA SHEET

010008

Lab Name: Southwest Research Institute

Client: Lionville Laboratory, Inc.

Lab Code: SwRI

Project No.: 10780.05.00X

Matrix: Soil

Date Received: 05/30/06

Task Order: 060601-7

SRR: 29233

Sample ID	Lab System ID	Methyl Mercury Results (ng/g)	Q	Reporting Limit
Prep Blank	Blank1	0.250	U	0.250
Lab Control	LCSW1	1.44		0.250
True Value	-----	2.00		-----
Recovery	-----	72.0%		-----
J11VF4	280208	358		2.51
Duplicate result	280208D	317		2.47
RPD	-----	12.1%		-----
J11VF6	280209	233		2.66
Spike result	280209S	376		2.72
Spike added	-----	174		-----
Recovery	-----	82.3%		-----
Spike Dup result	280209SD	385		2.57
Spike added	-----	165		-----
Recovery	-----	92.3%		-----

Q - data qualifier code

U - Less than RL

110004

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

RAW DATA

Lionville Labs

10780.05.006

TO# 060601-7

Matrix: Soils

Method: 1630 Modified

Date: 07/13/2006

Methyl Mercury

	blk corr	conc.(ng/L)	F.V.	conc. ng	Dil. Factor	Wt. (G)	% solids	Conc.	Report		qual	TV	% Rec.	RL
	pk ht		L		see below*			ng/G	ng/G	Units		ng/G		ng/G
blank-1	0.0001	-0.1000	0.050	-0.00500	5	0.50000	100	-0.050	0.250	ng/G	U			0.250
lcs-1	0.0044	2.8800	0.050	0.14400	5	0.50000	100	1.440	1.44	ng/G		2.00	72.0	0.250
280209	0.0042	2.7400	0.050	0.13700	80	0.05256	89.35	233.378	233	ng/G				2.66
280209ms	0.0065	4.3300	0.050	0.21650	80	0.05152	89.35	376.251	376	ng/G		173.79	82.2	2.72
280209msd	0.0070	4.6800	0.050	0.23400	80	0.05439	89.35	385.205	385	ng/G		164.62	92.2	2.57
280208	0.0131	8.9100	0.050	0.44550	40	0.05109	97.32	358.401	358	ng/G				2.51
280208d	0.0118	8.0000	0.050	0.40000	40	0.05191	97.32	316.714	317	ng/G				2.47

#280209msd 4.68 ng/L * 0.05 L = 0.23400 ng * 80 d.f. / 0.05439 G / (89.35%/100) = 385.205 ng/G

8 ng TV MS

1 ng TV LCS

*0.5 G of soil was extracted into 10 mL of DCM. 2 mL of the 10 mL DCM was ethylated in a 50 mL final volume, giving a dilution factor of 5.

*0.05 G of soil was extracted into 10 mL of DCM. 0.25 mL of the 10 mL DCM was ethylated in a 50 mL final volume, giving a dilution factor of 40.

*0.05 G of soil was extracted into 10 mL of DCM. 0.125 mL of the 10 mL DCM was ethylated in a 50 mL final volume, giving a dilution factor of 80.

Detect Limit 0.5 ng/L * 0.05 L = .025 ng * 5 d.f. = 0.125 ng / 0.5 g = 0.250 ng/g

1/14/06

1/14/06

010005

010006

☐ EPA 600 Hg 245.1
TAP No. 01-0406-112 Rev2/July 05

☐ SW-846 Hg 7470A
TAP No. 01-0406-048 Rev5/July 05

☐ SW-846 Hg 7471A
TAP No. 01-0406-047 Rev7/July 05

☒ Other M1630 modified

CVAA CALIB. & QC STD. ID's

Refer to Mercury Standards Prep Log
Logbook Pg(s) : 07-237

True Values: ICV 3.47 ng/L
CCV 3.47 ng/L
CRA 1.0 ng/L
LCSW \ S \ SD 4.0 ng/L
LCSS

ANALYSIS**CH3Hg**

PROJ. NO.	PROJECT	TO#	DATE	MATRIX	LOGBK PG
10780.05.006	Lionville Labs	060601-7	13-Jul-2006	Soil	17-118
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

INSTRUMENT: PE FIMS 400

FILENAME: 060713h1.DAT

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7/14/06

010007

PK-1	PK-2	PK-Area less blk	Conc. ng/L	CF	ng
0.0003	0.0002	0.00025	0		
0.0016	0.0016	0.00135	1	0.00135	0.05
0.0053	0.0042	0.0045	2.5	0.0018	0.125
0.0077	0.0070	0.0071	5	0.00142	0.25
0.0128	0.0148	0.01355	10	0.001355	0.5
0.0277	0.0244	0.0258	20	0.00129	1

CFm 0.001443
CFm(SD) 0.00018318
RSD 12.6945924 PASS

If the RSD of the CFm is less than or equal to 15%
use the CFm to calculate sample concentration.
If the RSD of the CFm is greater than 15% recalibrate.

	pk-lt	ng/L	T.V. ng/L	% Rec.
opr	0.0039	2.53	3.48	73 67-133%
ethylation blk	0.0002	-0.03		
pbw	0.0001	-0.10		
lcsw-1	0.0044	2.88	4	72
carbo tube burn	0.0038	2.46		
280208 250 ul	0.0131	8.91		
carbo tube burn	0.0053	3.50		
280209 125 ul	0.0042	2.74		
280209s 125 ul	0.0065	4.33	2	79.7 65-135%
280209sd 125 ul	0.0070	4.68	2	97.0 65-135%
280208d 250 ul	0.0118	8.00		
carbo tube burn	0.0024	1.49		
opr	0.0044	2.88	3.48	83 67-133%
ethylation blk	0.0002	-0.03		

Handwritten: 7/13/06

Handwritten: 7/14/06

=====

Method Name: CH3Hg
Method Description: Hg
Element: Hg

010008

Date: 07/14/2006
Technique: FI-MHS
Calibration Type:
Hg, Zero Intercept: Linear
Wavelength: 253.7 nm
Sample Info Name:

Results Data Set Name: 060713h1

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7/14/06

Handwritten signature
7/14/06

010009

Element: Hg Seq. No.: 17 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0188	0.2289	0.0188	01:54:17	No

Element: Hg Seq. No.: 18 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0248	0.2779	0.0248	01:58:52	No

Element: Hg Seq. No.: 19 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0003	0.0031	0.0003	02:06:15	No

Element: Hg Seq. No.: 20 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0006	0.0071	0.0006	02:11:24	No

Element: Hg Seq. No.: 21 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0002	0.0023	0.0002	02:16:08	No

Element: Hg Seq. No.: 22 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0039	0.0446	0.0039	02:30:37	No

Element: Hg Seq. No.: 23 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0016	0.0187	0.0016	03:16:44	No

Element: Hg Seq. No.: 24 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0016	0.0210	0.0016	03:21:35	No

Element: Hg		Seq. No.: 25	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0053	0.0638	0.0053	03:26:26	No
0.125 ng							

Element: Hg		Seq. No.: 26	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0042	0.0499	0.0042	03:31:38	No
0.125 ng							

Element: Hg		Seq. No.: 27	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0077	0.0883	0.0077	04:51:02	No
0.250 ng							

Element: Hg		Seq. No.: 28	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0070	0.0828	0.0070	04:55:46	No
0.250 ng							

Element: Hg		Seq. No.: 29	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0128	0.1404	0.0128	05:00:30	No
0.500 ng							

Element: Hg		Seq. No.: 30	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0148	0.1671	0.0148	05:04:53	No
0.500 ng							

Element: Hg		Seq. No.: 31	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0277	0.3092	0.0277	05:09:43	No
1.000 ng							

Element: Hg		Seq. No.: 32	AS Loc.: ---	Date: 07/13/2006			
Sample ID: Sample							
Repl #	SampleConc µg/L	StndConc µg/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0244	0.2297	0.0244	05:18:13	No
1.000 ng							

Element: Hg Seq. No.: 33 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

OPR-1

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0039	0.0232	0.0039	05:34:16	No

010011

Element: Hg Seq. No.: 34 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

ethylene BLK-1

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0002	0.0011	0.0002	05:39:28	No

Element: Hg Seq. No.: 35 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

PSW

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0001	-0.0018	0.0001	05:44:13	No

Element: Hg Seq. No.: 36 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

LCSW-1

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0044	0.0479	0.0044	05:51:13	No

Element: Hg Seq. No.: 37 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

DATA NOT USED OLD CANON TUBE 7/13/06

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0038	0.0484	0.0038	05:56:37	No

Element: Hg Seq. No.: 38 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

280208

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0131	0.1556	0.0131	06:39:45	No

Element: Hg Seq. No.: 39 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

7/13/06

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0014	0.0000	06:44:05	No

ADDITIONAL TUBE BLIND DATA NOT USED

Element: Hg Seq. No.: 40 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0001	0.0007	0.0001	06:47:10	No

Element: Hg Seq. No.: 41 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0053	0.0685	0.0053	06:52:02	No

Element: Hg Seq. No.: 42 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	0.0021	0.0000	06:57:55	No

Element: Hg Seq. No.: 43 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0009	0.0000	07:02:01	No

Element: Hg Seq. No.: 44 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0042	0.0494	0.0042	07:06:47	No

Element: Hg Seq. No.: 45 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0117	0.0000	07:10:28	No

Element: Hg Seq. No.: 46 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0011	0.0000	07:14:58	No

Element: Hg Seq. No.: 47 AS Loc.: --- Date: 07/13/2006
 Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0065	0.0766	0.0065	07:20:02	No

Element: Hg Seq. No.: 48 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0043	0.0000	07:24:27	No

010013

Element: Hg Seq. No.: 49 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0017	0.0000	07:28:02	No

7/13/06

Element: Hg Seq. No.: 50 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0013	0.0000	07:31:29	No

Additional BlkCorr same tube

Element: Hg Seq. No.: 51 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0070	0.0832	0.0070	07:36:27	No

280209 SD

Element: Hg Seq. No.: 52 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0032	0.0000	07:41:13	No

7/13/06

Element: Hg Seq. No.: 53 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	0.0003	0.0000	07:44:04	No

Additional BlkCorr same tube

Element: Hg Seq. No.: 54 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0118	0.1358	0.0118	07:48:57	No

280208 d

Element: Hg Seq. No.: 55 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StdConc µg/L	BlkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0027	0.0000	07:52:21	No

Additional BlkCorr same tube 7/13/06

Element: Hg Seq. No.: 56 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0000	-0.0010	0.0000	07:55:57	No

Additional Sample 7/13/06 **010014**

Element: Hg Seq. No.: 57 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0024	0.0294	0.0024	08:01:00	No

add 0.0024 µg/L

Element: Hg Seq. No.: 58 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0044	0.0417	0.0044	08:07:08	No

OPR-2

Element: Hg Seq. No.: 59 AS Loc.: --- Date: 07/13/2006
Sample ID: Sample

Repl #	SampleConc µg/L	StndConc µg/L	Blncorr Signal	Peak Area	Peak Height	Time	Peak Stored
1			0.0002	0.0019	0.0002	08:13:02	No

ethylation BLK-2

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc. 010015

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

PREP/DIGESTION SHEETS

BOOK/PAGE:

010035

SOUTHWEST RESEARCH INSTITUTE® - SAN ANTONIO TX
MERCURY PREPARATION DAILY LOG

MERCURY PREPARATION DAILY LOG

CLIENT(S):	Lionville Labs	METHOD: 1630-Modif	DATE: 13-Jul-06
PROJ. NO.(S)	10780.05.006	MATRIX: Soil	
TASK ORDERS(S)	060601-7	SDG: 280208	
TASK ORDERS(S)			
INST:PE FIMS 400 <u>X</u>	HNO3 #	H2SO4 #	5% KMnO4:
	HCL #	HCLO4 #	5% K2S2O8:
			12% NH2OH-HCL:
INST:PE4100	OVEN #	TEMP:	TIME IN: OUT:

sample ID	pH	wt(G)	I.V. (ml)	F.V.(ml)	Dil.
pbw		-----		50	
lcsw-1 *		-----		50	
280208		0.05109		50	
280208d		0.05191		50	
280209		0.05256		50	
280209s **		0.05152		50	
280209sd **		0.05439		50	

7/13/06

* SPIKED	250	UL OF A	4	PPB HG STK MSSPL	07-237***	SPK LVL=	0.004	PPB
	** 2000	UL OF A	4	PPB HG STK MSSPL	07-237***	SPK LVL=	0.004	PPB

*** FIMS400 INST LOG. (Spk LvL at the Instrument)

PREPARED BY:

DATE: 7/13/06

REVIEWED BY:

DATE: 7-14-06

010017

SOUTHWEST RESEARCH INSTITUTE

CLIENT: Lionville Laboratory Inc.

TASK ORDER: 060601-7

SRR: 29233

SDG: 280208

VTSR: May 30, 2006

PROJECT: 10780.05.00X

PERCENT SOLIDS

Southwest Research Institute - %Solids

(Space provided for % Solids Spreadsheet)

Southwest Research Institute

Electronic Bench Sheet

% Solids

Project #: 10780.05.006
Client: Lionville Labs
Method: CVAA-HG_1630
WO#: 060601-7

Date: 07/13/07
Analyst: Villasenor

Seq #	Sample ID	A Tare Wt(g)	B Wet Sample + Tare Wt(g)	(B - A) Wet Sample Wt(g)	C Dried Sample + Tare Wt(g)	(C - A) Dried Sample Wt(g)	% Solids	RPD
1	Blank	0.9885	0.9885	0.000	0.9885	0.000	<0.05	
2	280208	0.9861	1.6271	0.641	1.6099	0.624	97.32	
3	280209	0.9831	1.5342	0.551	1.4755	0.492	89.35	
4	280209d	0.9865	1.5104	0.524	1.4464	0.460	87.78	

% Solids = Dried Sample Wt(g)*100 / Wet Sample Wt(g)

Logbook# / Page#

07 013

00019

Date and Time Samples removed from Oven: 7-11-2006 13:58

[illegible]

* If necessary

Date: 7-14-06