

NM1 - 23

**5 Year VZ
MONITORING
REPORT**

YEAR(S):

2014



August 19, 2014

Brad Jones, Environmental Engineer
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: J&L Landfarm 2014 Vadose Zone Monitoring Report

Mr. Jones:

Please find the attached J&L Landfarm Soil Sampling Analytical Results Summary Report that presents the results of soil samples collected from beneath the landfarm cells as part of the five-year vadose zone monitoring demonstration and follow-up sampling and analysis required in response to the J&L Landfarm 3rd Quarter vadose zone monitoring results. This report also includes commitments as part of a response action plan required under Paragraph (5) of 19.15.36.15.E NMAC.

If you have any questions or need further information please contact either Skip Tabor with J&L Landfarm at (505) 250-3981, taborskip505@gmail.com or Matthew Lane with GL Environmental, Inc. at (505) 454-0830, glmatt@flash.net.

Regards,

Matthew Lane
GL Environmental, Inc.

RECEIVED OGD
2014 AUG 20 P 2:30

Soil Sampling Analytical Result Summary

J&L Landfarm

NMOCD Permit NM-01-0023

PREPARED FOR:

J&L Landfarm

August 19, 2014

BY:



GL Environmental, Inc.
P.O. Box 1746
Las Vegas, NM 87701
(505) 454-0830

Table of Contents

Introduction..... 3

Description of Sampling Activities 4

Analytical Results 5

Response Action Plan 6

Table of Figures

Figure 1. Location Map 3

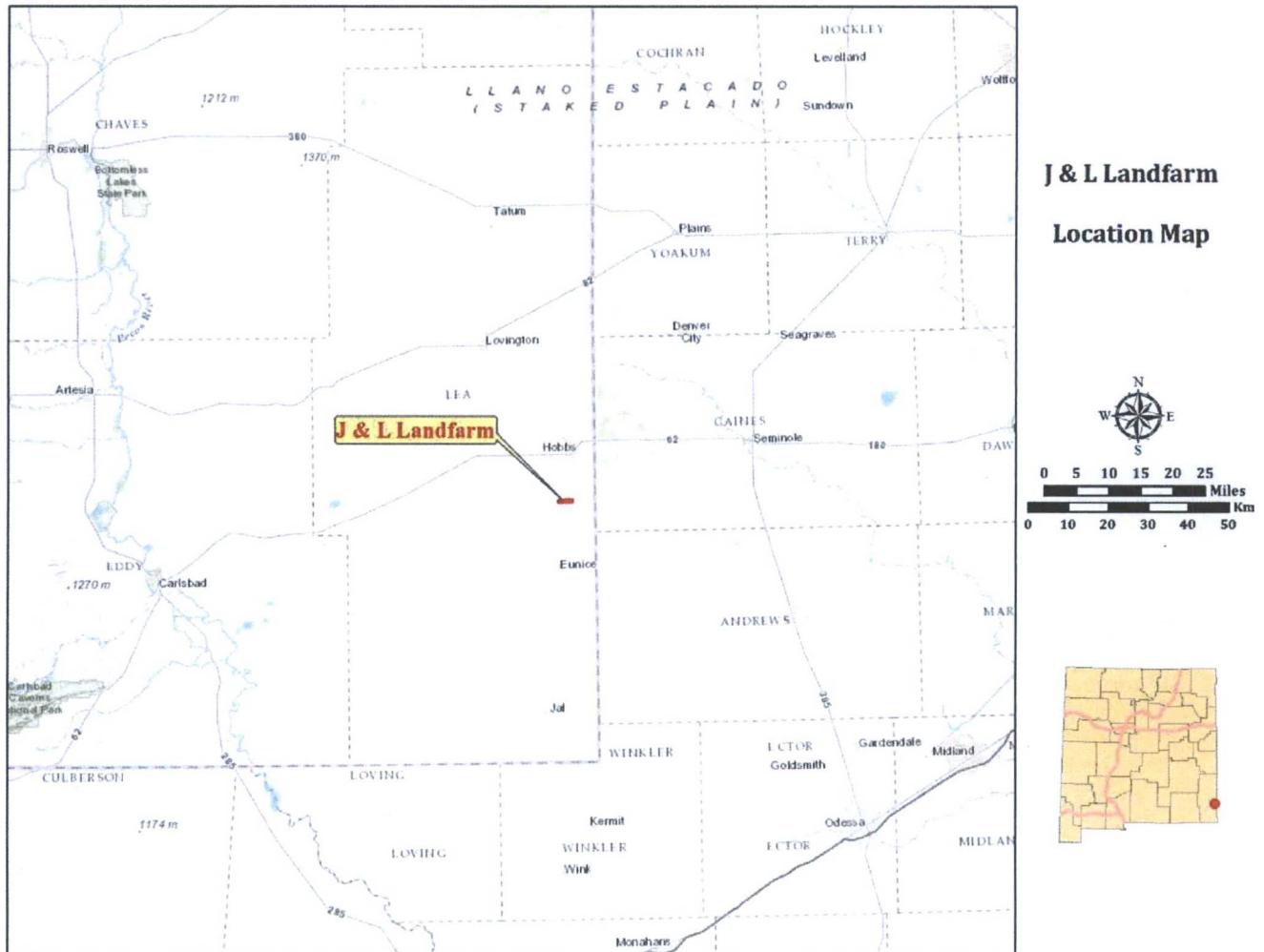
Figure 2. Site Map 4

Introduction

This report has been generated by GL Environmental, Inc. in response to the letter from New Mexico Oil Conservation Division (NMOCD) representative Mr. Brad Jones that was addressed to J&L Landfarm and dated April 10, 2014. This report summarizes the analytical results of soil samples collected from beneath the landfarm cells as part of the five-year vadose zone monitoring demonstration and follow-up sampling and analysis required in response to the J&L Landfarm 3rd Quarter vadose zone monitoring results. This report also includes commitments as part of a response action plan required under Paragraph (5) of 19.15.36.15.E NMAC.

The J&L Landfarm is located in the N ½ of the N ½ of Section 9 and the N ½ of the N ½ of Section 10, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico (Figure 1). The facility is operated under NMOCD Permit NM-1-23.

Figure 1. Location Map



Description of Sampling Activities

Included in this report are the analytical results from the 2013 quarterly vadose zone monitoring conducted in August 2013, the five-year vadose zone monitoring conducted in June and July 2014, and additional follow-up monitoring of selected landfarm cells conducted in June and July 2014. The vadose soil samples were collected by J&L Landfarm representative Skip Tabor with the aid of a tractor mounted auger from 2-3 feet below the original surface of the landfarm cells. Samples were collected and shipped under standard chain-of-custody procedure to Summit Environmental Technologies, Inc. and Hall Environmental Analysis Laboratory for analysis. Due to the nature of auguring through unconsolidated material, with the resulting sloughing off of overlying soils, some contamination may have occurred during the collection of samples from the desired depth. Future sampling efforts will attempt to collect discrete samples from the intended depth.

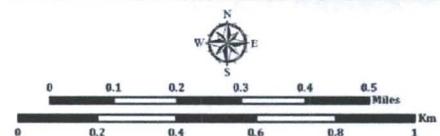
Baseline soil analyte concentrations are the result of a composite soil sample collected by J&L Landfarm personnel in March, 1999 and analyzed by Cardinal Laboratories, Inc.

Figure 2. Site Map



J & L Landfarm - Site Map

- Property Boundary
- Treatment cell



Analytical Results

A summary of analytical results from additional follow-up monitoring of selected landfarm cells conducted in June and July 2014 as requested in the April, 2014 NMOCD letter are presented in Table 1. The table includes a comparison of the results to baseline analyte concentrations. A list of analytical results resulting from the five year vadose zone monitoring has been included in Attachment 1.

Table 1. Vadose Zone Monitoring Results

All values are reported as mg/kg. Values highlighted in green are baseline data. Rows highlighted in yellow are 2013 measurements. The remaining, unhighlighted rows are the four replicates measured in 2014 for each cell. Values highlighted in red exceeded baseline. Values with a "-" were not analyzed. ND = Not detected.

Cell	Benzene	Toluene	Ethylbenzene	m-p-Xylene	o-Xylene	Xylenes - T	TPH - DRO	TPH - GRO	TPH - TR	Chloride	Mercury	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Selenium	Silver	Zinc	Calcium	Magnesium	Phosphorous	Potassium	Sodium	Fluoride	Nitrate	Phosphate	Sulfate	Date Sampled						
Baseline	<0.002	<0.002	<0.002			<0.002		11	95	<0.002	1.2	<5	1.3	<1		460	<1		0.3	4.2			282	83		150	0			0	3/26/1999							
3	ND	ND	ND	ND	ND	ND	ND	ND	122.6	ND	ND	86	ND	6.9	0.4	3700	0.42	23	ND	ND	ND	7.3	51000	3800		2400	440	32.5	8.2	ND	23.1	8/20/2013						
	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	76	ND	4.5	1.1	3100	0.33	49	ND	ND	ND	6.6										6/11/2014						
	ND	ND	ND	ND	ND	ND	ND	ND	280	ND	ND	3.5	100	ND	3.6	1.1	3100	0.33	49	ND	ND	6.6											6/11/2014					
	ND	ND	ND	ND	ND	ND	ND	ND	290	ND	ND	83	ND	5.2	0.48	5300	ND	44	ND	ND	ND	9.7											6/11/2014					
7	ND	ND	ND	ND	ND	ND	ND	ND	300	ND	ND	76	ND	9.3	0.74	11000	ND	49	ND	ND	19												8/19/2013					
	ND	ND	ND	ND	ND	ND	ND	ND	178.1	ND	ND	45	ND	7.8		4800	ND		ND	ND	15	21000	2600		2200	450	93.1	7.1	ND	35.5			8/19/2013					
	ND	ND	ND	ND	ND	ND	ND	ND	100	ND	ND	76	ND	4.1	1.3	3900	0.73	41	ND	ND	8.7													6/11/2014				
	ND	ND	ND	ND	ND	ND	ND	ND	440	ND	ND	6.6	300	ND	1.6	2.1	1100	ND	17	ND	ND	3.6												6/11/2014				
12	ND	ND	ND	ND	ND	ND	ND	ND	43	57	ND	9.3	310	ND	1.9	1.1	1600	ND	17	ND	ND	4.8												8/27/2013				
	ND	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	83	ND	4.5	1.9	4600	0.82	50	ND	ND	9.8														6/2/2014			
	ND	ND	ND	ND	ND	ND	ND	ND	173.8	ND	ND	140	ND	7.4		5100	ND		ND	ND	ND	70000	2800	100	2000	1100	81.4	8.9		193.1			8/27/2013					
	ND	ND	ND	ND	ND	ND	ND	ND	770	220	ND	60	ND	ND	4.2	5700	1.3	65	ND	ND	12													6/2/2014				
14	ND	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	58	ND	4.3	2.3	5200	98.3	59	ND	ND	11														8/27/2013			
	ND	ND	ND	ND	ND	ND	ND	ND	49	ND	ND	69	ND	3.8	3.3	4300	1.1	54	ND	ND	9.1														6/2/2014			
	ND	ND	ND	ND	ND	ND	ND	ND	250	ND	ND	45	ND	6.5	4.2	8600	1.7	92	ND	ND	17														8/27/2013			
	ND	ND	ND	ND	ND	ND	ND	ND	1973.9	ND	ND	460	ND	13		8600	ND		ND	ND	ND	120000	19000	150	4200	7400	91.7	3.5		1406.6				8/27/2013				
21	ND	ND	ND	ND	ND	ND	ND	ND	180	420	ND	300	ND	2.5	1.5	2400	ND	20	ND	ND	5.1														6/2/2014			
	ND	ND	ND	ND	ND	ND	ND	ND	87	4800	ND	140	ND	4	2.3	4500	0.27	38	ND	ND	10															8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	3000	ND	3.1	47	ND	8	2.6	9700	1.1	64	ND	ND	20															6/2/2014		
	ND	ND	ND	ND	ND	ND	ND	ND	220	42	ND	160	ND	4.9	2.7	5400	1.5	52	ND	ND	11															8/27/2013		
22	ND	ND	ND	ND	ND	ND	ND	ND	145.6	ND	ND	68	ND	9.4		8300	ND		ND	ND	ND	21000	3600	140	2900	830	62.8	22.7		112.5				8/27/2013				
	ND	ND	ND	ND	ND	ND	ND	ND	91	55	ND	82	ND	4.6	3.2	5500	1.3	64	ND	ND	11															6/2/2014		
	ND	ND	ND	ND	ND	ND	ND	ND	2500	690	ND	72	ND	4.3	2.9	5100	3.1	54	ND	ND	14															8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	69	160	ND	110	ND	4.3	3	5100	1.7	51	ND	ND	12															6/2/2014		
23	ND	ND	ND	ND	ND	ND	ND	ND	440	54	ND	76	ND	7.6	2.3	4900	1.7	49	ND	ND	12															8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	88.6	112.4	ND	45	ND	4.1		2500	ND		ND	ND	ND	30000	2900	60	880	460	115.7	7.1		170.8					6/3/2014			
	ND	ND	ND	ND	ND	ND	ND	ND	200	120	ND	47	ND	5	3.3	5700	1.5	66	ND	ND	12															8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	48	ND	ND	65	ND	4.3	2.2	5500	3.8	58	ND	ND	11															6/10/2014		
24	ND	ND	ND	ND	ND	ND	ND	ND	48	48	ND	2.8	80	ND	3.5	3.1	4000	1.2	56	ND	8.4															8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	160	ND	ND	41	ND	6.3	3.8	7700	1.7	91	ND	ND	16																6/10/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	738	ND	ND	19	ND	2.6		1600	ND		ND	ND	ND	7600	790	38	400	300	95.4	6.3		66.9						8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	410	ND	ND	38	ND	4.4	2.5	4300	1.1	61	ND	ND	12																6/10/2014	
25	ND	ND	ND	ND	ND	ND	ND	ND	160	ND	6.4	200	ND	2.4	2.1	2200	ND	28	ND	ND	6.2																8/27/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	130	170	ND	4.3	160	ND	3.4	2.7	3600	1.1	42	ND	ND	9.4															6/3/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	23	1100	0.072	ND	44	ND	6	3.7	7100	1.8	82	ND	ND	16															8/27/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	117	ND	ND	100	ND	4.1		3500	ND		ND	ND	ND	64000	1700	62	1300	820	61.9	42.1		73.6						6/3/2014		
26	ND	ND	ND	ND	ND	ND	ND	ND	180	120	ND	39	ND	6	1.9	4300	1.2	42	ND	ND	12																8/27/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	240	46	ND	77	ND	8.3	5.1	11000	3.4	120	ND	ND	22																6/3/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	110	140	ND	60	ND	6.7	4.8	8000	4.4	110	ND	ND	19																	8/27/2013
	ND	ND	ND	ND	ND	ND	ND	ND	47	31	ND	56	ND	5.6	4	6300	1.7	86	ND	ND	16																	6/3/2014
30	ND	ND	ND	ND	ND	ND	ND	ND	112.8	ND	ND	36	ND	6.2		4900	ND		ND	ND	ND	3500	1500	80	1600	710	91.2	2.9		44.6						8/27/2013		
	ND	ND	ND	ND	ND	ND	ND	ND	68	ND	ND	79	ND	5.5	4.3	7200	3.4	96	ND	ND	18																	6/3/2014
	ND	ND	ND	ND	ND	ND	ND	ND	75	38	ND	89	ND	4.5	3.3	5600	2.1	58	ND	ND	14																	8/27/2013
	ND	ND	ND	ND	ND	ND	ND	ND	23	22	ND	76	ND	6.8	5.2	9100	2.7	100	ND	ND	18																	

Table 2. Vadose Zone Monitoring Results (continued)

All values are reported as mg/kg. Values highlighted in green are baseline data. Rows highlighted in yellow are 2013 measurements. The remaining, unhighlighted rows are the four replicates measured in 2014 for each cell. Values highlighted in red exceeded baseline. Values with a "-" were not analyzed. ND = Not detected.

Cell	Benzene	Toluene	Ethylbenzene	m-p Xylene	o-Xylene	Xylenes - T	TPH - DRO	TPH - GRO	TPH - TR	Chloride	Mercury	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Selenium	Silver	Zinc	Calcium	Magnesium	Phosphorous	Potassium	Sodium	Fluoride	Nitrate	Phosphate	Sulfate	Date Sampled			
31	ND	ND	ND	ND	ND	ND	ND	ND	396	ND	ND	120	ND	10	ND	5600	ND	ND	ND	ND	ND	40000	5700	3200	1400	1400	37.4	0.8	ND	392.8	8/29/2013				
	ND	ND	ND	ND	ND	ND	ND	64	210	ND	3.5	99	ND	4.5	3.2	5400	0.87	66	ND	ND	11											6/3/2014			
	ND	ND	ND	ND	ND	ND	ND	37	160	0.12	3.5	94	ND	4.6	3.1	5300	0.74	63	ND	ND	12												6/3/2014		
	ND	ND	ND	ND	ND	ND	ND	ND	2000	ND	8.1	170	ND	2.3	2	2700	ND	27	ND	ND	4.8												6/3/2014		
32	ND	ND	ND	ND	ND	ND	ND	ND	660	ND	3.6	140	ND	3.8	2.5	4500	ND	48	ND	ND	9.1												8/29/2013		
	ND	ND	ND	ND	ND	ND	ND	310	ND	ND	130	ND	6.2	ND	4100	ND	ND	ND	ND	12														8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	290	110	ND	3.8	99	ND	4.5	3.5	5600	0.88	61	ND	ND	12	62000	3000	1600	1200	21.3	16.8	ND	1770.6				8/29/2013		
	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	5.7	310	ND	1.7	1.3	1700	ND	18	ND	ND	4.5													6/10/2014	
33	ND	ND	ND	ND	ND	ND	ND	23	21	ND	5.7	370	ND	2.3	1.9	2300	ND	32	ND	ND	6.4													8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	ND	88	ND	9.9	6.3	11000	3.2	160	ND	ND	30														8/29/2013
	ND	ND	ND	ND	ND	ND	ND	163.6	ND	ND	36	ND	5	ND	4400	ND	ND	ND	ND	13000	2100	1300	580	25	19	ND	96.4							8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	75	71	ND	6.5	760	ND	2.7	2.2	2800	ND	36	ND	ND	7.1														6/10/2014
33	ND	ND	ND	ND	ND	ND	ND	27	660	ND	7.4	600	ND	1.8	1.1	1700	ND	23	ND	ND	5														6/10/2014
	ND	ND	ND	ND	ND	ND	ND	220	ND	5.8	340	ND	2.3	1.3	2200	ND	29	ND	ND	5.9															6/10/2014

Response Action Plan

J&L Landfarm proposes the following steps as part of a Response Action Plan required under Paragraph (5) of 19.15.36.15.E NMAC.

- Develop a facility operational plan in order to prevent environmental contamination that will include written procedures for accepting petroleum hydrocarbon contaminated soils, soil management (lift thickness, disking, etc.), stormwater management, regulatory compliance monitoring and employee training
- Completion of any additional compliance monitoring while employing sampling procedures that will collect discrete samples from the intended depth
- Schedule a meeting with the NMOCD to discuss the results of recent monitoring activity presented in this report and determine future actions to characterize any potential releases at the J&L Landfarm facility and propose a strategy for remediating existing contamination (if necessary).

Attachment 1 – J&L Landfarm Five Year Vadose Zone Monitoring

All values are reported in mg/kg. Values highlighted in green are baseline data. Rows highlighted in yellow are 2013 measurements. The remaining, unhighlighted rows are the four replicates measured in 2014 for each cell. Values highlighted in red exceeded baseline. Values with a "-" were not analyzed. ND = Not detected.

Sample ID	Benzene	Toluene	Ethylbenzene	m-p Xylene	o-Xylene	Xylenes - T	TPH - DRO	TPH - GRO	TPH - TR	Chloride	Mercury	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Selenium	Silver	Zinc	Calcium	Magnesium	Phosphorous	Potassium	Sodium	Fluoride	Nitrate	Phosphate	Sulfate	Date							
Baseline	<0.002	<0.002	<0.002			<0.002			11	95	<0.002	1.15	<5	1.25	<1		6500	<1		0.25	4.15		282	83	150	0				0	0	3/26/1999							
Cell #1	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	240	ND	8.1		6500	ND	ND	ND	ND	26	23000	3300	3400	380	49.9	35.6	2.2	197	8/20/2013								
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	67	ND	5.4	2.8	5400	2.1	68	ND	ND	13									6/26/2014								
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	43	ND	4.6	0.52	4300	ND	28	ND	ND	9										6/26/2014							
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	61	ND	5.2	2.8	5200	2	66	ND	ND	13											6/26/2014						
Cell #2	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	160	ND	4.4	0.59	4100	1.3	37	ND	ND	8.5	160000	9200	2900	400	132.2	5.9	ND	60.2	8/20/2013								
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	100	ND	4.5	1.2	4200	ND	68	ND	ND	10										6/26/2014							
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	36	ND	9	0.42	9400	ND	42	ND	ND	19											6/26/2014						
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	91	ND	4.1	0.99	3700	ND	62	ND	ND	9.3											6/26/2014						
Cell #3	ND	ND	ND	ND	ND		ND	ND		122.6	ND	ND	86	ND	6.9		4000	ND	ND	ND	21	51000	3800	2400	440	32.5	8.2	ND	23.1	8/20/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	110	ND	7.6	0.5	3700	0.42	23	ND	ND	7.3										6/11/2014							
	ND	ND	ND	ND	ND		ND	ND		280	ND	ND	100	ND	3.6	1.1	3100	0.33	49	ND	ND	6.6											6/11/2014						
	ND	ND	ND	ND	ND		ND	ND		290	ND	ND	83	ND	5.2	0.48	5300	ND	44	ND	ND	9.7											6/11/2014						
Cell #4	ND	ND	ND	ND	ND		ND	ND		63.2	ND	ND	80	ND	ND		3600	ND	ND	ND	11	75000	2800	2200	350	28.4	16.9	ND	31	8/20/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	45	ND	2.9	0.52	2500	0.25	42	ND	ND	5.6											6/26/2014						
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	96	ND	3.6	0.56	3100	0.32	46	ND	ND	6.8												6/26/2014					
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	49	ND	3.1	0.8	2600	0.31	42	ND	ND	5.9												6/26/2014					
Cell #5	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	80	ND	4		2400	ND	ND	ND	7.8	52000	2300	1100	200	85.8	3.6	ND	59.9	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	130	ND	3.1	0.76	2800	0.36	27	ND	ND	6												6/26/2014					
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	61	ND	3.5	0.63	3100	0.35	32	ND	ND	6.7													6/26/2014				
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	110	ND	3.2	0.83	2800	0.57	26	ND	ND	6													6/26/2014				
Cell #6	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	100	ND	6.6		4800	ND	ND	ND	16	85000	3700	2700	350	52.5	4.8	ND	222.8	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	61	ND	4	1.2	3700	ND	44	ND	ND	8												6/26/2014					
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	160	ND	3.7	0.91	3100	ND	26	ND	ND	7													6/26/2014				
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	63	ND	4.1	1.4	3800	ND	44	ND	ND	8.7													6/26/2014				
Cell #7	ND	ND	ND	ND	ND		ND	ND		178.1	ND	ND	45	ND	7.8		4800	ND	ND	ND	15	21000	2600	2200	450	93.1	7.1	ND	35.5	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		38	100	ND	76	ND	4.1	1.3	3900	0.73	41	ND	ND	8.7													6/11/2014				
	ND	ND	ND	ND	ND		ND	ND		440	ND	ND	300	ND	1.6	2.1	1100	ND	17	ND	ND	3.6													6/11/2014				
	ND	ND	ND	ND	ND		ND	ND		43	57	ND	9.3	310	ND	1.9	1.1	1600	ND	17	ND	ND	4.8													6/11/2014			
Cell #8	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	310	ND	6		3100	ND	ND	ND	11	67000	4400	1500	210	148	3.3	ND	50.8	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	140	ND	4.5	2.4	4900	ND	67	ND	ND	12													6/26/2014				
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	150	ND	2.9	1.1	2500	ND	32	ND	ND	6														6/26/2014			
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	110	ND	5.1	2.6	5700	ND	74	ND	ND	14														6/26/2014			
Cell #9	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	65	ND	5		3300	ND	ND	ND	10	62000	2400	1700	420	73.6	3	ND	86.2	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	68	ND	4.8	1.7	4300	ND	51	ND	ND	11														6/26/2014			
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	69	ND	3.8	0.37	3400	ND	34	ND	ND	7.6														6/26/2014			
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	83	ND	4.7	1.5	4200	ND	48	ND	ND	10															6/26/2014		
Cell #10	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	70	ND	6		4000	ND	ND	ND	12	58000	3300	2200	300	89.8	2.9	ND	45.8	8/19/2013									
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	110	ND	5.7	1.7	5800	ND	46	ND	ND	13															6/26/2014		
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	79	ND	3.7	1.1	3600	ND	38	ND	ND	8															6/26/2014		
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	62	ND	3.9	1.1	3800	0.41	39	ND	ND	8.2															6/26/2014		
Cell #11	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	50	ND	4.7	1.1	5000	ND	38	ND	ND	9.5															6/26/2014		
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	47	ND	6.3	0.45	7600	ND	38	ND	ND	12																6/26/2014	
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	49	ND	4.7	1.1	5400	ND	40	ND	ND	9.5																	6/26/2014
	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	51	ND	6.6	0.58	7900	ND	38	ND	ND	13																	6/26/2014
Cell #12	ND	ND	ND	ND	ND		ND	ND		173.8	ND	ND	140	ND	7.4		5100	ND	ND	ND	ND	70000	2800	100	2000	1100	81.4	8.9	ND	193.1	8/27/2013								
	ND	ND	ND	ND	ND		ND	ND		770	220	ND	60	ND	ND	4.2	5700	1.3	65	ND	ND	12																6/2/2014	
	ND	ND	ND	ND	ND		ND	ND		46	ND	ND	58	ND	4.3	2.3	5200	98.3																					

All values are reported in mg/kg. Values highlighted in green are baseline data. Rows highlighted in yellow are 2013 measurements. The remaining, unhighlighted rows are the four replicates measured in 2014 for each cell. Values highlighted in red exceeded baseline. Values with a "-" were not analyzed. ND= Not detected.

Sample ID	Benzene	Toluene	Ethylbenzene	m-p-Xylene	o-Xylene	Xylenes - T	TPH - DRO	TPH - GRO	TPH - TR	Chloride	Mercury	Arsenic	Barium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Selenium	Silver	Zinc	Calcium	Magnesium	Phosphorous	Potassium	Sodium	Fluoride	Nitrate	Phosphate	Sulfate	Date
Cell #31	ND	ND	ND	ND	ND	ND	ND	ND	ND	39%	ND	ND	120	ND	10	5600	ND	ND	ND	ND	ND	ND	40000	5700	3200	1400	37.4	0.8	ND	392.8	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	64	210	ND	3.5	99	ND	4.5	3.2	5400	0.87	66	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/3/2014
	ND	ND	ND	ND	ND	ND	ND	ND	37	160	0.12	3.5	94	ND	4.6	3.1	5300	0.74	63	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/3/2014
	ND	ND	ND	ND	ND	ND	ND	ND	ND	2000	ND	8.1	170	ND	2.3	2	2700	ND	27	ND	ND	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/3/2014
Cell #32	ND	ND	ND	ND	ND	ND	ND	ND	ND	660	ND	3.6	140	ND	3.8	2.5	4500	ND	48	ND	ND	9.1	62000	3000	1600	1200	21.3	16.8	ND	1770.6	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	290	110	ND	3.8	99	ND	4.5	3.5	5600	0.88	61	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	5.7	310	ND	1.7	1.3	1700	ND	18	ND	ND	4.5	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	23	21	ND	5.7	370	ND	2.3	1.9	2300	ND	32	ND	ND	6.4	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
Cell #33	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	ND	88	ND	9.9	6.3	11000	3.2	160	ND	ND	30	13000	2100	1300	580	25	19	ND	96.4	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	163.6	ND	ND	36	ND	5	4400	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	59	ND	6.6	410	ND	1.6	0.66	1600	ND	15	ND	ND	7.1	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	75	71	ND	6.5	760	ND	2.7	2.2	2800	ND	36	ND	ND	5.9	ND	ND	ND	ND	ND	ND	ND	ND	6/10/2014	
Cell #34	ND	ND	ND	ND	ND	ND	ND	ND	ND	220	ND	5.8	340	ND	2.3	1.3	2200	ND	29	ND	ND	5.9	41000	3400	1300	420	13.3	10.4	ND	2485.7	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	440	ND	2.5	0.62	2400	ND	28	ND	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	280	ND	2.7	1.4	2500	ND	25	ND	ND	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	320	ND	3.4	1.1	3200	ND	36	ND	ND	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
Cell #35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	290	ND	2.7	1.5	2500	ND	25	ND	ND	7	28000	3000	660	360	130.7	6.3	ND	45.3	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	310	ND	3.4	0.59	3300	ND	21	ND	ND	7.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	420	ND	1.9	0.43	1700	ND	19	ND	ND	3.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	250	ND	3.2	0.56	3000	ND	20	ND	ND	6.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
Cell #36	ND	ND	ND	ND	ND	ND	ND	ND	ND	93.9	ND	ND	290	ND	5.4	3400	ND	ND	ND	ND	ND	8.2	72000	5600	1500	480	133.4	8	ND	1136.8	8/29/2013	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	ND	3.9	0.61	3800	ND	31	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	240	ND	3.9	0.59	4100	ND	29	ND	ND	8.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	410	ND	3.5	0.52	4100	ND	27	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	
											ND	ND	180	ND	4.1	0.59	4200	ND	31	ND	ND	9	ND	ND	ND	ND	ND	ND	ND	ND	6/24/2014	



CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ___ of ___

Company Name: JEL LAND FARM, INC.		Project Manager: JUDY L. Roberts		BILL TO		PO #:		ANALYSIS REQUEST																	
Address: P.O. Box 356		City: HOBBBS		State: NM		Zip: 88241-0356		Company: JEL LAND FARM, INC.		Attn: JUDY L. Roberts		Address: P.O. Box 356		City: HOBBBS		State: NM		Zip: 88241-0356		Phone #: 505-393-9697		Fax #:			
Project #: 1		Project Owner: JUDY L. Roberts		Project Name: BACKGROUND SAMPLE		Project Location: SEC 9 / SEC 10 T20 R38E		FOR LAB USE ONLY		LAB I.D.		Sample I.D.		# GRAB OR (COMP. # CONTAINERS)		MATRIX		PRES.		SAMPLING		DATE		TIME	



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
J&L LANDFARM, INC.
ATTN: JUDY L. ROBERTS
P.O. BOX 356
HOBBS, NM 88241-0356
FAX TO:

Receiving Date: 03/26/99
Reporting Date: 03/29/99
Project Owner: JUDY L. ROBERTS
Project Name: BACKGROUND SAMPLE
Project Location: SEC 9/SEC 10 T20 R38E

Sampling Date: 03/26/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NO.	SAMPLE ID	TPH (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
	ANALYSIS DATE:	03/26/99	03/26/99	03/26/99	03/26/99	03/26/99
H4085-1	BACKGROUND COMPOSITE	11.0	<0.002	<0.002	<0.002	<0.006
	Quality Control	255	0.091	0.099	0.098	0.293
	True Value QC	240	0.100	0.100	0.100	0.300
	% Recovery	106	90.5	98.8	98.3	97.5
	Relative Percent Difference	0.1	1.3	0.2	1.8	1.6

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846 8260

Bryant J. Coche
Chemist

3/29/99
Date

H4085BT.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 J&L LANDFARM, INC.
 ATTN: JUDY L. ROBERTS
 P.O. BOX 356
 HOBBS, NM 88241-0356
 FAX TO:

Receiving Date: 03/26/99
 Reporting Date: 03/30/99
 Project Owner: JUDY L. ROBERTS
 Project Name: BACKGROUND SAMPLE
 Project Location: SEC 9/SEC 10 T20 R38E

Sampling Date: 03/26/99
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: BC
 Analyzed By: AH

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K Conductivity* (mg/L) (u mhos/cm)	T-Alkalinity (mgCaCO ₃ /L)
------------	-----------	--------------	--------------	--------------	---------------------------------------	--

ANALYSIS DATE:	03/30/99	03/30/99	03/30/99	03/30/99	03/30/99	03/30/99
H4085-1 BACKGROUND	0	282	83	150	514	816
COMPOSITE						
Quality Control	NR	40	51	9.65	1402	NR
True Value QC	NR	50	50	8	1413	NR
% Accuracy	NR	80	102	119	99	NR
Relative Percent Difference	NR	0.2	9.8	-	0.1	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
----------	-------------	-----------	------	-------	-------

Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH* (s.u.)
---------------------------	---------------------------	---------------------------	----------------------------	---------------

ANALYSIS DATE:	03/30/99	03/30/99	03/30/99	03/30/99	03/30/99
H4085-1 BACKGROUND	95	0	0	996	7.87
COMPOSITE					
Quality Control	1127	48.87	112	221	7.03
True Value QC	1319	50.00	124	259	7.00
% Accuracy	85	98	90	85	100
Relative Percent Difference	1.8	1.6	-	-	1.4

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1
----------	-------------	-------	-------	-------	-------

*Analyses performed on a 1:4 w:v aqueous extract.

Burgess J. Coche
 Chemist

3/30/99
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 J&L LANDFARM, INC.
 ATTN: JUDY L. ROBERTS
 P.O. BOX 356
 HOBBS, NM 88241-0356
 FAX TO:

Receiving Date: 03/26/99
 Reporting Date: 04/01/99
 Project Owner: JUDY L. ROBERTS
 Project Name: BACKGROUND SAMPLE
 Project Location: SEC 9/SEC 10 T20 R38E

Sampling Date: 03/26/99
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: BC
 Analyzed By: AH

RCRA METALS

LAB NUMBER SAMPLE ID As Ag Ba Cd Cr Pb Hg Se
 ppm ppm ppm ppm ppm ppm ppm ppm ppm

ANALYSIS DATE:	03/31/99	03/31/99	03/31/99	03/31/99	03/31/99	03/29/99	04/01/99	03/31/99
H4085-1 BACKGROUND COMPOSITE	1.15	4.15	<5	1.25	<1	<1	<0.002	0.25
Quality Control	0.053	4.653	21.45	0.932	5.448	4.884	0.0095	0.047
True Value QC	0.050	5.000	20.00	1.000	5.000	5.000	0.0100	0.050
% Recovery	106	93	107	93	109	98	95	94
Relative Percent Difference	1.72	0.17	2.06	1.69	6.16	3.13	2.4	2.19

METHODS: EPA 600/4-79-020	206.2	272.1	208.1	213.1	218.1	239.1	245.1	270.2
METHODS: SW-846	7060A	7760A	7080A	7130	7190	7420	7470A	7740

Burgess J. Cochrane
 Chemist

4/5/99
 Date

H4085M.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #1

OrderNo.: 1406C85

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C85

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #1 #1

Project: Vadose Zone 5 Yr Metals Cell #1

Collection Date: 6/26/2014 5:15:00 AM

Lab ID: 1406C85-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:32:14 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Barium	67	0.10		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Chromium	5.4	0.30		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Copper	2.8	0.30		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Iron	5400	50		mg/Kg	50	7/2/2014 3:58:19 PM	13972
Lead	2.1	1.2		mg/Kg	5	7/9/2014 8:07:25 AM	13972
Manganese	68	0.10		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/3/2014 10:48:57 AM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:34:15 PM	13972
Zinc	13	2.5		mg/Kg	1	7/2/2014 1:34:15 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C85

Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1
Lab ID: 1406C85-002

Client Sample ID: Cell #1 #2
Collection Date: 6/26/2014 5:26:00 AM
Received Date: 6/27/2014 8:50:00 AM

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:34:05 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Barium	43	0.099		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Chromium	4.6	0.30		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Copper	0.52	0.30		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Iron	4300	49		mg/Kg	50	7/2/2014 3:59:43 PM	13972
Lead	ND	1.2		mg/Kg	5	7/9/2014 8:11:12 AM	13972
Manganese	28	0.099		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:38:39 PM	13972
Zinc	9.0	2.5		mg/Kg	1	7/2/2014 1:38:39 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C85

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #1 #3

Project: Vadose Zone 5 Yr Metals Cell #1

Collection Date: 6/26/2014 5:33:00 AM

Lab ID: 1406C85-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 4:36:07 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Barium	61	0.097		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Chromium	5.2	0.29		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Copper	2.8	0.29		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Iron	5200	48		mg/Kg	50	7/2/2014 4:01:04 PM	13972
Lead	2.0	1.2		mg/Kg	5	7/9/2014 8:12:25 AM	13972
Manganese	66	0.097		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Selenium	ND	2.4		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Silver	ND	0.24		mg/Kg	1	7/2/2014 1:40:02 PM	13972
Zinc	13	2.4		mg/Kg	1	7/2/2014 1:40:02 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C85

Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1
Lab ID: 1406C85-004

Client Sample ID: Cell #1 #4
Collection Date: 6/26/2014 5:44:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:38:20 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Barium	57	0.10		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Chromium	4.4	0.30		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Copper	0.59	0.30		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Iron	4100	50		mg/Kg	50	7/2/2014 4:02:30 PM	13972
Lead	1.3	1.3		mg/Kg	5	7/9/2014 8:13:39 AM	13972
Manganese	37	0.10		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:41:22 PM	13972
Zinc	8.5	2.5		mg/Kg	1	7/2/2014 1:41:22 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 4 of 8
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C85

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1

Sample ID	MB-13997	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13997	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568743	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	105	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C85

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1

Sample ID	MB-13972	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569716	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13972	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.4	80	120			
Barium	24	0.10	25.00	0	97.3	80	120			
Cadmium	24	0.10	25.00	0	97.1	80	120			
Chromium	24	0.30	25.00	0	97.5	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	104	80	120			
Lead	23	0.25	25.00	0	92.0	80	120			
Manganese	24	0.10	25.00	0	97.0	80	120			
Selenium	23	2.5	25.00	0	90.4	80	120			
Silver	5.0	0.25	5.000	0	100	80	120			
Zinc	24	2.5	25.00	0	95.9	80	120			

Sample ID	1406C85-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569800	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.34	0	95.6	75	125			
Barium	93	0.10	25.34	66.95	104	75	125			
Cadmium	22	0.10	25.34	0	88.6	75	125			
Chromium	28	0.30	25.34	5.384	88.1	75	125			
Copper	26	0.30	25.34	2.821	92.7	75	125			
Manganese	88	0.10	25.34	67.52	82.8	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C85

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1

Sample ID	1406C85-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569800	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	4.5	0.25	5.069	0	89.7	75	125			
Zinc	34	2.5	25.34	13.34	81.3	75	125			

Sample ID	1406C85-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569801	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	24.62	0	94.2	75	125	4.37	20	
Barium	92	0.098	24.62	66.95	102	75	125	1.33	20	
Cadmium	22	0.098	24.62	0	88.7	75	125	2.79	20	
Chromium	27	0.30	24.62	5.384	87.9	75	125	2.51	20	
Copper	26	0.30	24.62	2.821	92.5	75	125	2.85	20	
Manganese	87	0.098	24.62	67.52	78.8	75	125	1.79	20	
Silver	4.4	0.25	4.923	0	89.2	75	125	3.44	20	
Zinc	33	2.5	24.62	13.34	80.8	75	125	2.12	20	

Sample ID	1406C85-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571152	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	20	2.5	25.34	0	77.8	75	125			

Sample ID	1406C85-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571153	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	18	2.5	24.62	0	74.4	75	125	7.43	20	S

Sample ID	1406C85-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574049	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	26	1.3	25.34	2.094	94.9	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C85

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #1

Sample ID	1406C85-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #1 #1	Batch ID:	13972	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574050	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	26	1.2	24.62	2.094	97.0	75	125	0.732	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C85

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Celina Sessa 6/27/2014 8:50:00 AM Celina Sessa

Completed By: Celina Sessa 6/27/2014 9:41:52 AM Celina Sessa

Reviewed By: AS 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

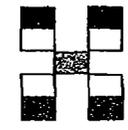
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J+L heartfarm
 Mailing Address: PO Box 356 Hobbs, NM 88241
 Phone #: 575-631-5765
 email or Fax#: jloob 9697@aol.com

Turn-Around Time:
 Standard Rush
 Project Name: Vadose zone
5 yr metals cell #1
 Project #



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____

Project Manager: Judy Roberts
 Sampler: Spjsh
 On Ice: Yes No
 Sample Temperature: 5.5°

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
<u>6/26/14</u>	<u>0515</u>	<u>Soil</u>	<u>Cell # 1 # 1</u>	<u>1 bagless</u>	<u>ice</u>	<u>1406085</u>
	<u>0526</u>		<u># 2</u>			<u>-002</u>
	<u>0533</u>		<u># 3</u>			<u>-003</u>
	<u>0544</u>		<u># 4</u>			<u>-004</u>

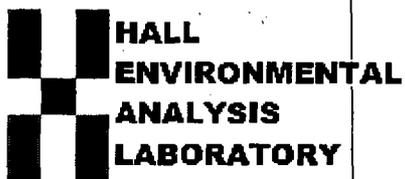
BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
											<u>X</u>	
											<u>X</u>	
											<u>X</u>	
											<u>X</u>	

Date: 6/26 Time: 1130 Relinquished by: Spjsh

Received by: Celine Surr Date: 06/27/14 Time: 0850

Remarks: suite of 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #2

OrderNo.: 1406C86

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C86

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #2 #1

Project: Vadose Zone 5 Yr Metals Cell #2

Collection Date: 6/26/2014 6:00:00 AM

Lab ID: 1406C86-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:36:44 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Barium	100	0.10		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Chromium	4.5	0.30		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Copper	1.2	0.30		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Iron	4200	50		mg/Kg	50	7/2/2014 4:03:54 PM	13972
Lead	ND	25		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Manganese	68	0.10		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:47:47 PM	13972
Zinc	10	2.5		mg/Kg	1	7/2/2014 1:47:47 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm	Client Sample ID: Cell #2 #2
Project: Vadose Zone 5 Yr Metals Cell #2	Collection Date: 6/26/2014 6:09:00 AM
Lab ID: 1406C86-002	Matrix: SOIL Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 10:38:30 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Barium	36	0.098		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Chromium	9.0	0.29		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Copper	0.42	0.29		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Iron	9400	98		mg/Kg	100	7/2/2014 4:05:09 PM	13972
Lead	ND	24		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Manganese	42	0.098		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Selenium	ND	2.4		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Silver	ND	0.24		mg/Kg	1	7/2/2014 1:49:14 PM	13972
Zinc	19	2.4		mg/Kg	1	7/2/2014 1:49:14 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSD limit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C86

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #2 #3

Project: Vadose Zone 5 Yr Metals Cell #2

Collection Date: 6/26/2014 6:14:00 AM

Lab ID: 1406C86-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:40:16 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Barium	91	0.10		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Chromium	4.1	0.31		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Copper	0.99	0.31		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Iron	3700	51		mg/Kg	50	7/2/2014 4:06:33 PM	13972
Lead	ND	25		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Manganese	62	0.10		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:50:35 PM	13972
Zinc	9.3	2.5		mg/Kg	1	7/2/2014 1:50:35 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C86

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #2 #4

Project: Vadose Zone 5 Yr Metals Cell #2

Collection Date: 6/26/2014 6:25:00 AM

Lab ID: 1406C86-004

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:42:02 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Barium	40	0.10		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Chromium	9.6	0.30		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Copper	0.50	0.30		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Iron	10000	100		mg/Kg	100	7/2/2014 4:07:47 PM	13972
Lead	ND	25		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Manganese	45	0.10		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:51:55 PM	13972
Zinc	21	2.5		mg/Kg	1	7/2/2014 1:51:55 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C86

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #2

Sample ID	MB-14019	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570947	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14019	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C86

14-Jul-14

Client: J & L Landfarm
 Project: Vadose Zone 5 Yr Metals Cell #2

Sample ID	MB-13972	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569716	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13972	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.4	80	120			
Barium	24	0.10	25.00	0	97.3	80	120			
Cadmium	24	0.10	25.00	0	97.1	80	120			
Chromium	24	0.30	25.00	0	97.5	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	104	80	120			
Lead	23	0.25	25.00	0	92.0	80	120			
Manganese	24	0.10	25.00	0	97.0	80	120			
Selenium	23	2.5	25.00	0	90.4	80	120			
Silver	5.0	0.25	5.000	0	100	80	120			
Zinc	24	2.5	25.00	0	95.9	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C86

ReptNo: 1

Received by/date: CS 06/27/14

Logged By: Cellna Sessa 6/27/2014 8:50:00 AM *Cellina Sessa*

Completed By: Cellna Sessa 6/27/2014 9:58:15 AM *Cellina Sessa*

Reviewed By: A 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Client:

Standard Rush

J.L. Landfarm

Project Name:

Mailing Address:

Vadose zone
5 yr metals cell #2

PO Box 356 Hobbs, NM 88241

Project #:

Phone #: 575-631-5765

email or Fax#: jlandfarm997@aol.com

Project Manager:

QA/QC Package:

Standard Level 4 (Full Validation)

Judy Roberts

Accreditation

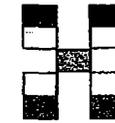
NELAP Other _____

Sampler: *Spj*

EDD (Type) _____

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/26/14	0600	Soil	Cell #2 #1	1 bagless	ice	1406086 -001												X	
	0609		#2			-002												X	
	0614		#3			-003												X	
	0625		#4			-004												X	

Date: 6/26 Time: 1130 Relinquished by: *Spj*

Received by: *Clara Siva* Date: 06/27/14 Time: 0850

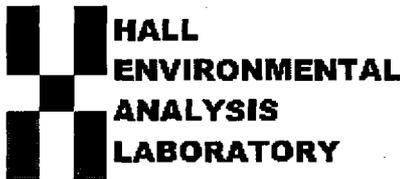
Remarks: *suite of 12 metals*

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr Metals Cell #4

OrderNo.: 1406C88

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #4 #1

Project: Vadose Zone 5 yr Metals Cell #4

Collection Date: 6/26/2014 7:10:00 AM

Lab ID: 1406C88-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:43:49 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Barium	45	0.10		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Chromium	2.9	0.30		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Copper	0.52	0.30		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Iron	2500	20		mg/Kg	20	7/2/2014 4:09:13 PM	13972
Lead	0.25	0.25		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Manganese	42	0.10		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:53:26 PM	13972
Zinc	5.6	2.5		mg/Kg	1	7/2/2014 1:53:26 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C88

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #4 #2

Project: Vadose Zone 5 yr Metals Cell #4

Collection Date: 6/26/2014 7:17:00 AM

Lab ID: 1406C88-002

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.031		mg/Kg	1	7/3/2014 10:49:19 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Barium	96	0.098		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Chromium	3.6	0.29		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Copper	0.56	0.29		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Iron	3100	20		mg/Kg	20	7/2/2014 4:10:23 PM	13972
Lead	0.32	0.25		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Manganese	46	0.098		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:54:48 PM	13972
Zinc	6.8	2.5		mg/Kg	1	7/2/2014 1:54:48 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C88

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #4 #3

Project: Vadose Zone 5 yr Metals Cell #4

Collection Date: 6/26/2014 7:28:00 AM

Lab ID: 1406C88-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:54:56 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Barium	49	0.10		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Chromium	3.1	0.30		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Copper	0.80	0.30		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Iron	2600	20		mg/Kg	20	7/2/2014 4:16:30 PM	13972
Lead	0.31	0.25		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Manganese	42	0.10		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:56:11 PM	13972
Zinc	5.9	2.5		mg/Kg	1	7/2/2014 1:56:11 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406C88

Date Reported: 7/11/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #4 #4

Project: Vadose Zone 5 yr Metals Cell #4

Collection Date: 6/26/2014 7:33:00 AM

Lab ID: 1406C88-004

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 10:56:46 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Barium	87	0.098		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Chromium	3.4	0.29		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Copper	0.36	0.29		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Iron	2900	20		mg/Kg	20	7/2/2014 4:22:46 PM	13972
Lead	0.39	0.24		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Manganese	42	0.098		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Selenium	ND	2.4		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Silver	ND	0.24		mg/Kg	1	7/2/2014 1:57:33 PM	13972
Zinc	6.2	2.4		mg/Kg	1	7/2/2014 1:57:33 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C88

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #4

Sample ID	MB-14019	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570947	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14019	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.4	80	120			

Sample ID	1406C88-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #4 #1	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570954	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1657	0	96.7	75	125			

Sample ID	1406C88-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #4 #1	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570955	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1661	0	96.1	75	125	0.361	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C88

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #4

Sample ID	MB-13972	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569716	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13972	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.4	80	120			
Barium	24	0.10	25.00	0	97.3	80	120			
Cadmium	24	0.10	25.00	0	97.1	80	120			
Chromium	24	0.30	25.00	0	97.5	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	104	80	120			
Lead	23	0.25	25.00	0	92.0	80	120			
Manganese	24	0.10	25.00	0	97.0	80	120			
Selenium	23	2.5	25.00	0	90.4	80	120			
Silver	5.0	0.25	5.000	0	100	80	120			
Zinc	24	2.5	25.00	0	95.9	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C88

RcptNo: 1

Received by/date: CS 06/27/14
CS detctd

Logged By: **Celina Sessa** 6/26/2014 8:50:00 AM *Celina Sessa*

Completed By: **Celina Sessa** 6/27/2014 9:57:45 AM *Celina Sessa*

Reviewed By: At 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client:

J.L. Kaufman
Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlkab977@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

Vadose zone
5 yr metals cell #4

Project #:

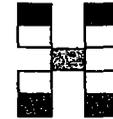
Project Manager:

Judy Roberts

Sampler: JLR

On Ice: Yes No

Sample Temperature: 5.50



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
											X	
											X	
											X	
											X	

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
6/26/14	0710	Soil	Cell #4 #1	1 zip glass	ice	1406088-001
	0717		#2			-002
	0728		#3			-003
	0733		#4			-004

Date: 6/26 Time: 1130 Relinquished by: JLR

Received by: Celina Serna Date: 06/27/14 Time: 0850

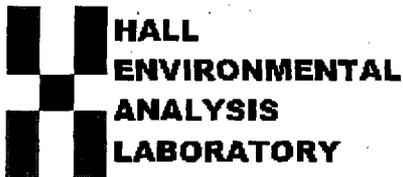
Remarks:

Date: Time: Relinquished by:

Received by: Date: Time:

* Suite of 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell 20

OrderNo.: 1406C93

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C93

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #20 #1

Project: Vadose Zone 5 yr metals Cell 20

Collection Date: 6/24/2014 6:45:00 AM

Lab ID: 1406C93-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.034		mg/Kg	1	7/1/2014 4:40:12 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:27:13 AM	13972
Barium	150	0.098		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Chromium	4.1	0.30		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Copper	4.6	0.30		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Iron	4100	49		mg/Kg	50	7/2/2014 4:23:56 PM	13972
Lead	3.4	0.25		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Manganese	63	0.098		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 1:58:58 PM	13972
Zinc	15	2.5		mg/Kg	1	7/2/2014 1:58:58 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406C93

Date Reported: 7/11/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #20 #2

Project: Vadose Zone 5 yr metals Cell 20

Collection Date: 6/24/2014 6:56:00 AM

Lab ID: 1406C93-002

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 4:45:30 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 8:28:29 AM	13972
Barium	79	0.10		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Chromium	4.6	0.30		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Copper	3.6	0.30		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Iron	4700	50		mg/Kg	50	7/2/2014 4:25:07 PM	13972
Lead	0.69	0.25		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Manganese	65	0.10		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:00:20 PM	13972
Zinc	11	2.5		mg/Kg	1	7/2/2014 2:00:20 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #20 #3

Project: Vadose Zone 5 yr metals Cell 20

Collection Date: 6/24/2014 7:08:00 AM

Lab ID: 1406C93-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:51:00 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:29:43 AM	13972
Barium	140	0.098		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Chromium	3.9	0.29		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Copper	4.8	0.29		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Iron	4300	49		mg/Kg	50	7/2/2014 4:26:19 PM	13972
Lead	3.5	0.24		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Manganese	62	0.098		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:06:48 PM	13972
Zinc	17	2.4		mg/Kg	1	7/2/2014 2:06:48 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406C93

Date Reported: 7/11/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #20 #4

Project: Vadose Zone 5 yr metals Cell 20

Collection Date: 6/24/2014 7:18:00 AM

Lab ID: 1406C93-004

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:52:46 PM	13997
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:30:58 AM	13972
Barium	83	0.098		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Chromium	4.0	0.29		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Copper	3.4	0.29		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Iron	4100	49		mg/Kg	50	7/2/2014 4:27:31 PM	13972
Lead	0.80	0.24		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Manganese	66	0.098		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:08:14 PM	13972
Zinc	13	2.4		mg/Kg	1	7/2/2014 2:08:14 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C93

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 20

Sample ID	MB-13997	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13997	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568743	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	105	80	120			

Sample ID	1406C93-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #20 #1	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568761	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.032	0.1633	0.01360	95.9	75	125			

Sample ID	1406C93-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #20 #1	Batch ID:	13997	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568762	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1691	0.01360	95.2	75	125	2.53	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C93

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 20

Sample ID	MB-13972	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569716	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13972	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.4	80	120			
Barium	24	0.10	25.00	0	97.3	80	120			
Cadmium	24	0.10	25.00	0	97.1	80	120			
Chromium	24	0.30	25.00	0	97.5	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	104	80	120			
Lead	23	0.25	25.00	0	92.0	80	120			
Manganese	24	0.10	25.00	0	97.0	80	120			
Selenium	23	2.5	25.00	0	90.4	80	120			
Silver	5.0	0.25	5.000	0	100	80	120			
Zinc	24	2.5	25.00	0	95.9	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C93

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:19:53 AM *Michelle Garcia*

Reviewed By: At 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: _____

Mailing Address: **J+L Landform**

Phone #: **575-631-5765**

email or Fax#: **j11069697@aol.com**

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: **Vadose Zone**
5 yr metals Cell 20

Project #:

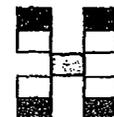
Project Manager:

Judy Roberts

Sampler: **Sho Jim**

On Ice: Yes No

Sample Temperature: **5.50**



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Ruthies (Y or N)	
6/24/14	0645	soil	cell # 20 #1	14965	ice	1466293-001														
	0656		#2			-002														
	0708		#3			-003														
	0718		#4			-004														

Date: **6/26** Time: **1130** Relinquished by: **Sho Jim**

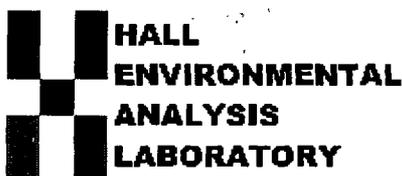
Received by: **Allina Suro** Date: **06/27/14** Time: **0850**

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks: *** As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn**

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell #27

OrderNo.: 1406C96

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #27 #1

Project: Vadose Zone 5 yr metals Cell #27

Collection Date: 6/24/2014 7:35:00 AM

Lab ID: 1406C96-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 4:58:07 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:40:52 AM	13973
Barium	140	0.10		mg/Kg	1	7/3/2014 10:54:31 AM	13973
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:15:12 PM	13973
Chromium	5.2	0.30		mg/Kg	1	7/2/2014 2:15:12 PM	13973
Copper	1.6	0.30		mg/Kg	1	7/2/2014 2:15:12 PM	13973
Iron	5500	50		mg/Kg	50	7/2/2014 5:06:50 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:15:12 PM	13973
Manganese	45	0.10		mg/Kg	1	7/3/2014 10:54:31 AM	13973
Selenium	ND	2.5		mg/Kg	1	7/3/2014 10:54:31 AM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:15:12 PM	13973
Zinc	12	2.5		mg/Kg	1	7/2/2014 2:15:12 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406C96

Date Reported: 7/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #27 #2

Project: Vadose Zone 5 yr metals Cell #27

Collection Date: 6/24/2014 7:44:00 AM

Lab ID: 1406C96-002

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 4:59:55 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:44:33 AM	13973
Barium	240	0.096		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Cadmium	ND	0.096		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Chromium	1.6	0.29		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Copper	1.3	0.29		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Iron	1600	9.6		mg/Kg	10	7/2/2014 5:08:02 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Manganese	13	0.096		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:19:31 PM	13973
Zinc	4.3	2.4		mg/Kg	1	7/2/2014 2:19:31 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C96

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #27 #3

Project: Vadose Zone 5 yr metals Cell #27

Collection Date: 6/24/2014 7:52:00 AM

Lab ID: 1406C96-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:01:43 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:45:48 AM	13973
Barium	170	0.098		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Chromium	4.6	0.30		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Copper	1.3	0.30		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Iron	5000	49		mg/Kg	50	7/2/2014 5:09:12 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Manganese	38	0.098		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:27:43 PM	13973
Zinc	11	2.5		mg/Kg	1	7/2/2014 2:27:43 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank.
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C96

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell #27

Sample ID	MB-13998	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568768	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13998	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568769	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	95.7	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C96

14-Jul-14

Client: J & L Landfarm
 Project: Vadose Zone 5 yr metals Cell #27

Sample ID	MB-13973	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13973	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	97.9	80	120			
Barium	24	0.10	25.00	0	95.8	80	120			
Cadmium	24	0.10	25.00	0	96.9	80	120			
Chromium	24	0.30	25.00	0	96.1	80	120			
Copper	25	0.30	25.00	0	99.8	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	92.2	80	120			
Manganese	24	0.10	25.00	0	95.3	80	120			
Selenium	24	2.5	25.00	0	95.1	80	120			
Silver	5.0	0.25	5.000	0	99.3	80	120			
Zinc	24	2.5	25.00	0	97.8	80	120			

Sample ID	1406C96-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	570024	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	22	0.10	24.89	0	90.3	75	125			
Chromium	27	0.30	24.89	5.182	85.7	75	125			
Copper	25	0.30	24.89	1.639	93.6	75	125			
Lead	ND	25	24.89	0	77.8	75	125			
Silver	4.6	0.25	4.977	0	91.7	75	125			
Zinc	32	2.5	24.89	12.39	78.8	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C96

14-Jul-14

Client: J & L Landfarm

Project: Vadose Zone 5 yr metals Cell #27

Sample ID	1406C96-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	570025	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	22	0.097	24.15	0	90.3	75	125	2.95	20	
Chromium	26	0.29	24.15	5.182	86.7	75	125	1.52	20	
Copper	24	0.29	24.15	1.639	94.2	75	125	2.22	20	
Lead	ND	24	24.15	0	78.3	75	125	0	20	
Silver	4.5	0.24	4.830	0	92.2	75	125	2.47	20	
Zinc	32	2.4	24.15	12.39	79.7	75	125	1.11	20	

Sample ID	1406C96-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571156	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	170	0.10	24.89	143.6	121	75	125			
Manganese	62	0.10	24.89	44.68	69.5	75	125			S
Selenium	18	2.5	24.89	0	74.1	75	125			S

Sample ID	1406C96-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571157	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	260	0.097	24.15	143.6	489	75	125	40.3	20	ERS
Manganese	66	0.097	24.15	44.68	89.7	75	125	6.83	20	
Selenium	18	2.4	24.15	0	75.9	75	125	0.657	20	

Sample ID	1406C96-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574075	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	27	12	24.89	0	109	75	125			

Sample ID	1406C96-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #27 #1	Batch ID:	13973	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574076	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	12	24.15	0	101	75	125	10.3	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C96

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:23:31 AM *Michelle Garcia*

Reviewed By: At 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address: PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: j11069697@aol.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: vadose zone

5 yr metals Cell # 27

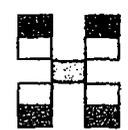
Project #:

Project Manager: Judy Roberts

Sampler: Shi Jn

On ice: Yes No

Sample Temperature: 5.50



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

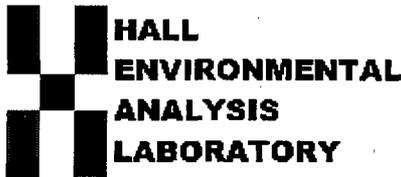
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Bubbles (Y or N)
6/21/14	0735	soil	cell #27 #1	1 bag	ice	1406C96 - 001												X	
	0744		#2			- 002												X	
	0752		#3			- 003												X	
	0801		#4			- 004												X	

Date: 6/26 Time: 1130 Relinquished by: Shi Jn

Received by: Celina Sano Date: 06/27/14 Time: 0850

Remarks: * suite of 12

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell 28

OrderNo.: 1406C98

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406C98
 Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #28 #1

Project: Vadose Zone 5 yr metals Cell 28

Collection Date: 6/24/2014 8:18:00 AM

Lab ID: 1406C98-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:05:22 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Barium	61	0.099		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Chromium	3.4	0.30		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Copper	ND	0.30		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Iron	2800	20		mg/Kg	20	7/2/2014 5:11:35 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Manganese	34	0.099		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:30:28 PM	13973
Zinc	5.7	2.5		mg/Kg	1	7/2/2014 2:30:28 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #28 #2

Project: Vadose Zone 5 yr metals Cell 28

Collection Date: 6/24/2014 8:28:00 AM

Lab ID: 1406C98-002

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:07:12 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:53:17 AM	13973
Barium	270	0.19		mg/Kg	2	7/2/2014 5:12:46 PM	13973
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Chromium	2.5	0.29		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Copper	1.4	0.29		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Iron	2200	19		mg/Kg	20	7/2/2014 5:13:52 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Manganese	23	0.097		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:31:52 PM	13973
Zinc	6.1	2.4		mg/Kg	1	7/2/2014 2:31:52 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406C98
 Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #28 #3

Project: Vadose Zone 5 yr metals Cell 28

Collection Date: 6/24/2014 8:37:00 AM

Lab ID: 1406C98-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:12:46 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Barium	63	0.098		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Chromium	3.4	0.29		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Copper	ND	0.29		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Iron	2800	20		mg/Kg	20	7/2/2014 5:15:06 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Manganese	35	0.098		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:33:19 PM	13973
Zinc	5.6	2.4		mg/Kg	1	7/2/2014 2:33:19 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C98

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #28 #4

Project: Vadose Zone 5 yr metals Cell 28

Collection Date: 6/24/2014 8:46:00 AM

Lab ID: 1406C98-004

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:14:31 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Barium	57	0.097		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Chromium	3.4	0.29		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Copper	ND	0.29		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Iron	2900	19		mg/Kg	20	7/2/2014 5:16:16 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Manganese	34	0.097		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:34:41 PM	13973
Zinc	5.6	2.4		mg/Kg	1	7/2/2014 2:34:41 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C98

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 28

Sample ID MB-13998	SampType: MBLK	TestCode: EPA Method 7471: Mercury								
Client ID: PBS	Batch ID: 13998	RunNo: 19615								
Prep Date: 7/1/2014	Analysis Date: 7/1/2014	SeqNo: 568768	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID LCS-13998	SampType: LCS	TestCode: EPA Method 7471: Mercury								
Client ID: LCSS	Batch ID: 13998	RunNo: 19615								
Prep Date: 7/1/2014	Analysis Date: 7/1/2014	SeqNo: 568769	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	95.7	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C98

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 28

Sample ID	MB-13973	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13973	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	97.9	80	120			
Barium	24	0.10	25.00	0	95.8	80	120			
Cadmium	24	0.10	25.00	0	96.9	80	120			
Chromium	24	0.30	25.00	0	96.1	80	120			
Copper	25	0.30	25.00	0	99.8	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	92.2	80	120			
Manganese	24	0.10	25.00	0	95.3	80	120			
Selenium	24	2.5	25.00	0	95.1	80	120			
Silver	5.0	0.25	5.000	0	99.3	80	120			
Zinc	24	2.5	25.00	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406C98

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:41:55 AM *Michelle Garcia*

Reviewed By: AK 06/30/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
13. Are matrices correctly identified on Chain of Custody? Yes No
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client:

J+L Landfarm

Mailing Address:

PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: jllnob9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: vadose zone

5 yr metals Cell 28

Project #:

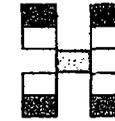
Project Manager:

Judy Roberts

Sampler: Shy Jim

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)	
6/24/14	0818	soil	cell #28 #1	1 bags	ice	1406098-001													X	
	0828		#2			-002													X	
	0837		#3			-003													X	
	0846		#4			-004													X	

Date: Time: Relinquished by:

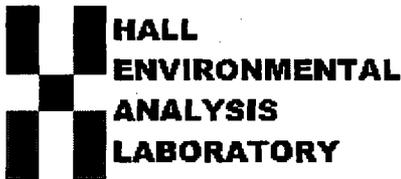
Received by: *Celine Sano* Date Time: 06/27/14 0850

Remarks: * Suite of 12

Date: Time: Relinquished by:

Received by: Date Time:

As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Se, Ag, Zn



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell 29

OrderNo.: 1406C99

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #29 #1

Project: Vadose Zone 5 yr metals Cell 29

Collection Date: 6/24/2014 9:01:00 AM

Lab ID: 1406C99-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:16:14 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:56:59 AM	13973
Barium	120	0.098		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Chromium	6.6	0.29		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Copper	4.7	0.29		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Iron	7600	49		mg/Kg	50	7/2/2014 5:23:26 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Manganese	280	0.20		mg/Kg	2	7/2/2014 5:17:26 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:36:04 PM	13973
Zinc	17	2.5		mg/Kg	1	7/2/2014 2:36:04 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #29 #2

Project: Vadose Zone 5 yr metals Cell 29

Collection Date: 6/24/2014 9:13:00 AM

Lab ID: 1406C99-002

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:17:59 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:58:12 AM	13973
Barium	330	0.20		mg/Kg	2	7/2/2014 5:24:41 PM	13973
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Chromium	3.1	0.30		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Copper	1.9	0.30		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Iron	3000	20		mg/Kg	20	7/2/2014 5:25:48 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Manganese	39	0.099		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:42:38 PM	13973
Zinc	8.4	2.5		mg/Kg	1	7/2/2014 2:42:38 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406C99

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #29 #3

Project: Vadose Zone 5 yr metals Cell 29

Collection Date: 6/24/2014 9:22:00 AM

Lab ID: 1406C99-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:19:44 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:59:24 AM	13973
Barium	340	0.20		mg/Kg	2	7/2/2014 5:26:58 PM	13973
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Chromium	2.6	0.30		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Copper	1.7	0.30		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Iron	2500	20		mg/Kg	20	7/2/2014 5:28:06 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Manganese	32	0.10		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:44:06 PM	13973
Zinc	6.9	2.5		mg/Kg	1	7/2/2014 2:44:06 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406C99

Date Reported: 7/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #29 #4

Project: Vadose Zone 5 yr metals Cell 29

Collection Date: 6/24/2014 9:31:00 AM

Lab ID: 1406C99-004

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:21:30 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:00:39 AM	13973
Barium	120	0.098		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Chromium	6.4	0.29		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Copper	4.4	0.29		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Iron	7000	49		mg/Kg	50	7/2/2014 5:29:19 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Manganese	170	0.098		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:45:31 PM	13973
Zinc	16	2.4		mg/Kg	1	7/2/2014 2:45:31 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C99
 14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 29

Sample ID MB-13998	SampType: MBLK	TestCode: EPA Method 7471: Mercury								
Client ID: PBS	Batch ID: 13998	RunNo: 19615								
Prep Date: 7/1/2014	Analysis Date: 7/1/2014	SeqNo: 568768	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID LCS-13998	SampType: LCS	TestCode: EPA Method 7471: Mercury								
Client ID: LCSS	Batch ID: 13998	RunNo: 19615								
Prep Date: 7/1/2014	Analysis Date: 7/1/2014	SeqNo: 568769	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	95.7	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406C99
 14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 29

Sample ID	MB-13973	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13973	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	97.9	80	120			
Barium	24	0.10	25.00	0	95.8	80	120			
Cadmium	24	0.10	25.00	0	96.9	80	120			
Chromium	24	0.30	25.00	0	96.1	80	120			
Copper	25	0.30	25.00	0	99.8	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	92.2	80	120			
Manganese	24	0.10	25.00	0	95.3	80	120			
Selenium	24	2.5	25.00	0	95.1	80	120			
Silver	5.0	0.25	5.000	0	99.3	80	120			
Zinc	24	2.5	25.00	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client Name: J & L LANDFARM

Work Order Number: 1406C99

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:48:03 AM *Michelle Garcia*

Reviewed By: At 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

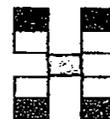
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm
 Mailing Address: PO Box 356 Hobbs NM 88241
 Phone #: 575-631-5765
 email or Fax#: j1nob9697@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: vadose zone
5 yr metals Cell 29
 Project #:
 Project Manager: Judy Roberts
 Sampler: Shy Jh
 On Ice: Yes No
 Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

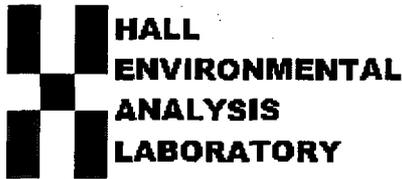
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Rishles (Y or N)	
6/24/14	0901	soil	cell # 29 #1	1 bag	ice	1406099-001													X	
	0913		#2			-002													X	
	0922		#3			-003													X	
	0931		#4			-004													X	

Date: 6/26 Time: 1130 Relinquished by: Shy Jh
 Date: _____ Time: _____ Relinquished by: _____

Received by: Adriana Sierra Date Time: 06/27/14 0850
 Received by: _____ Date Time: _____

Remarks: * suite of 12
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn
m-06/27

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr Metals Cell #10

OrderNo.: 1406D00

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D00

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #10 #1

Project: Vadose Zone 5 yr Metals Cell #10

Collection Date: 6/26/2014 11:10:00 AM

Lab ID: 1406D00-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 10:58:35 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:01:54 AM	13973
Barium	110	0.096		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Cadmium	ND	0.096		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Chromium	5.7	0.29		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Copper	1.7	0.29		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Iron	5800	48		mg/Kg	50	7/2/2014 5:30:33 PM	13973
Lead	ND	0.24		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Manganese	46	0.096		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:46:57 PM	13973
Zinc	13	2.4		mg/Kg	1	7/2/2014 2:46:57 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D00

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Project: Vadose Zone 5 yr Metals Cell #10

Lab ID: 1406D00-002

Matrix: SOIL

Client Sample ID: Cell #10 #2

Collection Date: 6/26/2014 11:19:00 AM

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:00:25 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:03:09 AM	13973
Barium	79	0.099		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Chromium	3.7	0.30		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Copper	1.1	0.30		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Iron	3600	20		mg/Kg	20	7/2/2014 5:31:42 PM	13973
Lead	ND	0.25		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Manganese	38	0.099		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:48:23 PM	13973
Zinc	8.0	2.5		mg/Kg	1	7/2/2014 2:48:23 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D00

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #10 #3

Project: Vadose Zone 5 yr Metals Cell #10

Collection Date: 6/26/2014 11:27:00 AM

Lab ID: 1406D00-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.031		mg/Kg	1	7/3/2014 11:02:16 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:04:22 AM	13973
Barium	62	0.10		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Chromium	3.9	0.30		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Copper	1.1	0.30		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Iron	3800	20		mg/Kg	20	7/2/2014 5:32:52 PM	13973
Lead	0.41	0.25		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Manganese	39	0.10		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:49:47 PM	13973
Zinc	8.2	2.5		mg/Kg	1	7/2/2014 2:49:47 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D00
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #10
Lab ID: 1406D00-004 **Matrix:** SOIL

Client Sample ID: Cell #10 #4
Collection Date: 6/26/2014 11:35:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:04:08 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:09:23 AM	13973
Barium	83	0.099		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Chromium	6.1	0.30		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Copper	1.9	0.30		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Iron	6300	50		mg/Kg	50	7/2/2014 5:34:05 PM	13973
Lead	ND	0.25		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Manganese	51	0.099		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:51:10 PM	13973
Zinc	14	2.5		mg/Kg	1	7/2/2014 2:51:10 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D00

11-Jul-14

Client: J & L Landfarm

Project: Vadose Zone 5 yr Metals Cell #10

Sample ID	MB-14019	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570947	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14019	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D00
 11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #10

Sample ID	MB-13973	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13973	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	97.9	80	120			
Barium	24	0.10	25.00	0	95.8	80	120			
Cadmium	24	0.10	25.00	0	96.9	80	120			
Chromium	24	0.30	25.00	0	96.1	80	120			
Copper	25	0.30	25.00	0	99.8	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	92.2	80	120			
Manganese	24	0.10	25.00	0	95.3	80	120			
Selenium	24	2.5	25.00	0	95.1	80	120			
Silver	5.0	0.25	5.000	0	99.3	80	120			
Zinc	24	2.5	25.00	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D00

RcptNo: 1

Received by/date:

L.S.

Logged By:

Ashley Gallegos

6/27/2014 8:50:00 AM

AG

Completed By:

Ashley Gallegos

6/27/2014 10:52:17 AM

AG

Reviewed By:

AT 06/30/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? Client

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met? Yes No Checked by:
- (If no, notify customer for authorization.)

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:

Date:

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Not Present			

Chain-of-Custody Record

Client:

JLH healthfarm

Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlrub 9197@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name:

vadose zone
5 yr metals cell #10

Project #

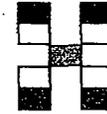
Project Manager:

Judy Roberts

Sampler: *[Signature]*

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

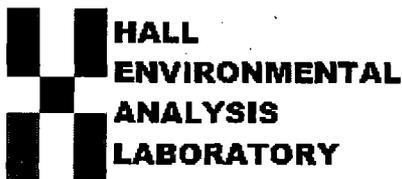
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Bubbles (Y or N)	
6/26/14	1110	Spil	Cell # 10 # 1	1 4oz glass	ice	1406000-001													X	
	1119		# 2			-002													X	
	1127		# 3			-003													X	
	1135		# 4			-004													X	

Date: 6/26 Time: 1130 Relinquished by: *[Signature]*

Received by: *[Signature]* Date Time: 06/27/14 0850

Remarks: *suite of 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn*

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell 34

OrderNo.: 1406D01

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D01

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #34 #1

Project: Vadose Zone 5 yr metals Cell 34

Collection Date: 6/24/2014 9:50:00 AM

Lab ID: 1406D01-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:23:16 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:10:39 AM	13973
Barium	440	0.20		mg/Kg	2	7/2/2014 5:40:09 PM	13973
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Chromium	2.5	0.30		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Copper	0.62	0.30		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Iron	2400	20		mg/Kg	20	7/2/2014 5:41:17 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Manganese	28	0.099		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:52:33 PM	13973
Zinc	5.7	2.5		mg/Kg	1	7/2/2014 2:52:33 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D01
 Date Reported: 7/14/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 34
Lab ID: 1406D01-002 **Matrix:** SOIL

Client Sample ID: Cell #34 #2
Collection Date: 6/24/2014 9:58:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	7/1/2014 5:28:38 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:11:53 AM	13973
Barium	280	0.20		mg/Kg	2	7/2/2014 5:42:28 PM	13973
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Chromium	2.7	0.30		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Copper	1.4	0.30		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Iron	2500	20		mg/Kg	20	7/2/2014 5:43:35 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Manganese	25	0.10		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:53:59 PM	13973
Zinc	6.6	2.5		mg/Kg	1	7/2/2014 2:53:59 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D01

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #34 #3

Project: Vadose Zone 5 yr metals Cell 34

Collection Date: 6/24/2014 10:07:00 AM

Lab ID: 1406D01-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.031		mg/Kg	1	7/1/2014 5:34:08 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:13:06 AM	13973
Barium	320	0.20		mg/Kg	2	7/2/2014 5:44:49 PM	13973
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Chromium	3.4	0.29		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Copper	1.1	0.29		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Iron	3200	20		mg/Kg	20	7/2/2014 5:45:56 PM	13973
Lead	ND	24		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Manganese	36	0.098		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Selenium	ND	2.4		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Silver	ND	0.24		mg/Kg	1	7/2/2014 2:55:25 PM	13973
Zinc	7.6	2.4		mg/Kg	1	7/2/2014 2:55:25 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D01
 Date Reported: 7/14/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 34
Lab ID: 1406D01-004 **Matrix:** SOIL

Client Sample ID: Cell #34 #4
Collection Date: 6/24/2014 10:16:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	7/1/2014 5:35:57 PM	13998
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:14:21 AM	13973
Barium	290	0.20		mg/Kg	2	7/2/2014 5:47:10 PM	13973
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Chromium	2.7	0.30		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Copper	1.5	0.30		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Iron	2500	20		mg/Kg	20	7/2/2014 5:48:16 PM	13973
Lead	ND	25		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Manganese	25	0.10		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:01:57 PM	13973
Zinc	7.0	2.5		mg/Kg	1	7/2/2014 3:01:57 PM	13973

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D01

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 34

Sample ID	MB-13998	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568768	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13998	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568769	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	95.7	80	120			

Sample ID	1406D01-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #34 #1	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568785	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.13	0.031	0.1587	0	79.7	75	125			

Sample ID	1406D01-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #34 #1	Batch ID:	13998	RunNo:	19615					
Prep Date:	7/1/2014	Analysis Date:	7/1/2014	SeqNo:	568786	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.13	0.033	0.1680	0	79.7	75	125	5.61	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D01
 14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 34

Sample ID	MB-13973	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569718	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13973	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13973	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569719	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	97.9	80	120			
Barium	24	0.10	25.00	0	95.8	80	120			
Cadmium	24	0.10	25.00	0	96.9	80	120			
Chromium	24	0.30	25.00	0	96.1	80	120			
Copper	25	0.30	25.00	0	99.8	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	92.2	80	120			
Manganese	24	0.10	25.00	0	95.3	80	120			
Selenium	24	2.5	25.00	0	95.1	80	120			
Silver	5.0	0.25	5.000	0	99.3	80	120			
Zinc	24	2.5	25.00	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Client Name: J & L LANDFARM

Work Order Number: 1406D01

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:52:27 AM *Michelle Garcia*

Reviewed By: AK 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____

By Whom: _____ Via: eMail Phone Fax In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

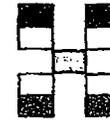
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm
 Mailing Address: PO Box 356 Hobbs NM 88241
 Phone #: 575-631-5765
 email or Fax#: jlrob9697@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: variance zone
5 yr metals Cell 34
 Project #:
 Project Manager: Judy Roberts
 Sampler: Shy J
 On Ice: Yes No
 Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Pollution V or M	
6/24/14	0950	soil	cell # 34 #1	1 bags	ice	1406D01-001													X	
	0958		#2			-002													X	
	1007		#3			-003													X	
	1016		#4			-004													X	

Date: 6/26 Time: 1130 Relinquished by: Shy J
 Date: _____ Time: _____ Relinquished by: _____

Received by: Celina Sano Date Time: 06/27/14 0850
 Received by: _____ Date Time: _____

Remarks: * suite of 12
As Ba Cd Cr Cu R Pb Mn Hg Se Ag Zn
if req'd



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr metals Cell 35

OrderNo.: 1406D02

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #35 #1

Project: Vadose Zone 5 yr metals Cell 35

Collection Date: 6/24/2014 10:44:00 AM

Lab ID: 1406D02-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:05:51 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:15:34 AM	13974
Barium	310	0.20		mg/Kg	2	7/3/2014 11:10:53 AM	13974
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:03:27 PM	13974
Chromium	3.4	0.31		mg/Kg	1	7/2/2014 3:03:27 PM	13974
Copper	0.59	0.31		mg/Kg	1	7/2/2014 3:03:27 PM	13974
Iron	3300	20		mg/Kg	20	7/3/2014 11:16:25 AM	13974
Lead	ND	5.1		mg/Kg	20	7/3/2014 11:16:25 AM	13974
Manganese	21	0.10		mg/Kg	1	7/2/2014 3:03:27 PM	13974
Selenium	ND	2.6		mg/Kg	1	7/3/2014 11:05:09 AM	13974
Silver	ND	0.26		mg/Kg	1	7/2/2014 3:03:27 PM	13974
Zinc	7.1	2.6		mg/Kg	1	7/2/2014 3:03:27 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D02

Date Reported: 7/14/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 35
Lab ID: 1406D02-002 **Matrix:** SOIL

Client Sample ID: Cell #35 #2
Collection Date: 6/24/2014 10:53:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY						Analyst: TES	
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:07:36 AM	14019
EPA METHOD 6010B: SOIL METALS						Analyst: ELS	
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:19:15 AM	13974
Barium	420	0.49		mg/Kg	5	7/3/2014 11:17:49 AM	13974
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Chromium	1.9	0.29		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Copper	0.43	0.29		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Iron	1700	9.7		mg/Kg	10	7/3/2014 11:24:59 AM	13974
Lead	ND	0.24		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Manganese	19	0.097		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:07:43 PM	13974
Zinc	3.9	2.4		mg/Kg	1	7/2/2014 3:07:43 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D02

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #35 #3

Project: Vadose Zone 5 yr metals Cell 35

Collection Date: 6/24/2014 11:01:00 AM

Lab ID: 1406D02-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:09:21 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:20:29 AM	13974
Barium	250	0.19		mg/Kg	2	7/3/2014 11:26:38 AM	13974
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Chromium	3.2	0.29		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Copper	0.56	0.29		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Iron	3000	19		mg/Kg	20	7/3/2014 11:27:57 AM	13974
Lead	ND	4.9		mg/Kg	20	7/3/2014 11:27:57 AM	13974
Manganese	20	0.097		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:09:13 PM	13974
Zinc	6.7	2.4		mg/Kg	1	7/2/2014 3:09:13 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 8
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D02

Date Reported: 7/14/2014

CLIENT: J & L Landfarm

Project: Vadose Zone 5 yr metals Cell 35

Lab ID: 1406D02-004

Matrix: SOIL

Client Sample ID: Cell #35 #4

Collection Date: 6/24/2014 11:09:00 AM

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:11:07 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:24:03 AM	13974
Barium	460	0.48		mg/Kg	5	7/3/2014 11:29:18 AM	13974
Cadmium	ND	0.096		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Chromium	1.5	0.29		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Copper	0.41	0.29		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Iron	1300	9.6		mg/Kg	10	7/3/2014 11:30:41 AM	13974
Lead	ND	0.24		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Manganese	14	0.096		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:10:39 PM	13974
Zinc	3.2	2.4		mg/Kg	1	7/2/2014 3:10:39 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D02

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 35

Sample ID	MB-14019	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570947	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14019	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D02
14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 35

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19602					
Prep Date:	6/30/2014	Analysis Date:	7/1/2014	SeqNo:	568216	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13974	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13974	RunNo:	19602					
Prep Date:	6/30/2014	Analysis Date:	7/1/2014	SeqNo:	568217	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	101	80	120			
Barium	25	0.10	25.00	0	98.6	80	120			
Cadmium	25	0.10	25.00	0	99.1	80	120			
Chromium	25	0.30	25.00	0	100	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Lead	24	0.25	25.00	0	96.1	80	120			
Manganese	25	0.10	25.00	0	98.5	80	120			
Selenium	23	2.5	25.00	0	93.6	80	120			
Silver	5.1	0.25	5.000	0	102	80	120			
Zinc	24	2.5	25.00	0	98.0	80	120			

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D02
14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 35

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13974	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569721	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	97.2	80	120			
Cadmium	24	0.10	25.00	0	96.7	80	120			
Chromium	24	0.30	25.00	0	97.3	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	91.7	80	120			
Manganese	24	0.10	25.00	0	97.3	80	120			
Selenium	23	2.5	25.00	0	90.9	80	120			
Silver	5.0	0.25	5.000	0	101	80	120			
Zinc	24	2.5	25.00	0	96.4	80	120			

Sample ID	1406D02-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	570053	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	23	0.10	25.55	0	91.5	75	125			
Chromium	25	0.31	25.55	3.434	84.0	75	125			
Copper	26	0.31	25.55	0.5920	97.5	75	125			
Manganese	45	0.10	25.55	21.31	91.8	75	125			
Silver	4.7	0.26	5.109	0	91.6	75	125			
Zinc	28	2.6	25.55	7.128	80.2	75	125			

Sample ID	1406D02-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	570054	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	22	0.098	24.48	0	91.5	75	125	4.30	20	
Chromium	24	0.29	24.48	3.434	83.2	75	125	4.49	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D02

14-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr metals Cell 35

Sample ID	1406D02-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	570054	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	24	0.29	24.48	0.5920	97.0	75	125	4.66	20	
Manganese	42	0.098	24.48	21.31	82.8	75	125	7.37	20	
Silver	4.5	0.24	4.896	0	91.7	75	125	4.15	20	
Zinc	26	2.4	24.48	7.128	78.3	75	125	4.90	20	

Sample ID	1406D02-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571162	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	18	2.6	25.55	0	72.1	75	125			S

Sample ID	1406D02-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19675					
Prep Date:	6/30/2014	Analysis Date:	7/3/2014	SeqNo:	571163	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	16	2.4	24.48	0	65.8	75	125	13.4	20	S

Sample ID	1406D02-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574101	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	29	13	25.55	0	114	75	125			

Sample ID	1406D02-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #35 #1	Batch ID:	13974	RunNo:	19760					
Prep Date:	6/30/2014	Analysis Date:	7/9/2014	SeqNo:	574102	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	28	12	24.48	0	113	75	125	4.44	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysts Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D02

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Michelle Garcia 6/27/2014 8:50:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/27/2014 10:54:29 AM *Michelle Garcia*

Reviewed By: AS 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client:

J+L Landfarm

PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: jll@ob 9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name:

5 yr vadose zone metals Cell #35

Project #:

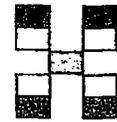
Project Manager:

Judy Roberts

Sampler: Shj Jm

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals	Air Bubbles (Y or N)	
6/24/14	1044	soil	cell # 35 #1	1 bag	ice	1400002 -001													X	
	1053					-002													X	
	1101					-003													X	
	1109					-004													X	

Date: 6/26 Time: 1130 Relinquished by: Shj Jm

Received by: Celina Serna Date: 06/27/14 Time: 0850

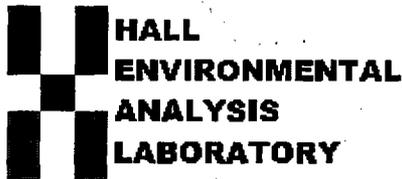
Remarks: * suite of 12

Date: Time: Relinquished by:

Received by: Date: Time:

As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Se, Ag, Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr Metals Cell #36

OrderNo.: 1406D03

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #36 #1

Project: Vadose Zone 5 yr Metals Cell #36

Collection Date: 6/24/2014 11:30:00 AM

Lab ID: 1406D03-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:16:35 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:25:18 AM	13974
Barium	500	0.51		mg/Kg	5	7/3/2014 11:32:03 AM	13974
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Chromium	3.9	0.30		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Copper	0.61	0.30		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Iron	3800	20		mg/Kg	20	7/3/2014 11:33:23 AM	13974
Lead	ND	1.3		mg/Kg	5	7/3/2014 11:32:03 AM	13974
Manganese	31	0.10		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:12:04 PM	13974
Zinc	8.2	2.5		mg/Kg	1	7/2/2014 3:12:04 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D03
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #36
Lab ID: 1406D03-002 **Matrix:** SOIL

Client Sample ID: Cell #36 #2
Collection Date: 6/24/2014 11:38:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:18:21 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:26:33 AM	13974
Barium	240	0.10		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Chromium	3.9	0.30		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Copper	0.59	0.30		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Iron	4100	20		mg/Kg	20	7/3/2014 11:34:46 AM	13974
Lead	ND	5.1		mg/Kg	20	7/3/2014 11:34:46 AM	13974
Manganese	29	0.10		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:13:32 PM	13974
Zinc	8.8	2.5		mg/Kg	1	7/2/2014 3:13:32 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #36 #3

Project: Vadose Zone 5 yr Metals Cell #36

Collection Date: 6/24/2014 11:49:00 AM

Lab ID: 1406D03-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.034		mg/Kg	1	7/3/2014 11:20:07 AM	14019
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:27:46 AM	13974
Barium	410	0.50		mg/Kg	5	7/3/2014 11:36:26 AM	13974
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Chromium	3.5	0.30		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Copper	0.52	0.30		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Iron	4100	20		mg/Kg	20	7/3/2014 11:37:45 AM	13974
Lead	ND	1.2		mg/Kg	5	7/3/2014 11:36:26 AM	13974
Manganese	27	0.099		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:14:59 PM	13974
Zinc	7.2	2.5		mg/Kg	1	7/2/2014 3:14:59 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D03

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Project: Vadose Zone 5 yr Metals Cell #36

Lab ID: 1406D03-004

Matrix: SOIL

Client Sample ID: Cell #36 #4

Collection Date: 6/24/2014 11:58:00 AM

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:21:54 AM	14019
EPA METHOD 6010B: SOIL METALS							
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:28:59 AM	13974
Barium	180	0.099		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Chromium	4.1	0.30		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Copper	0.59	0.30		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Iron	4200	20		mg/Kg	20	7/3/2014 11:44:10 AM	13974
Lead	ND	5.0		mg/Kg	20	7/3/2014 11:44:10 AM	13974
Manganese	31	0.099		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:21:35 PM	13974
Zinc	9.0	2.5		mg/Kg	1	7/2/2014 3:21:35 PM	13974

Analyst: TES

Analyst: ELS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D03

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #36

Sample ID	MB-14019	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570947	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14019	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14019	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570948	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D03
 11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #36

Sample ID **MB-13974** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
 Client ID: **PBS** Batch ID: **13974** RunNo: **19602**
 Prep Date: **6/30/2014** Analysis Date: **7/1/2014** SeqNo: **568216** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID **LCS-13974** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**
 Client ID: **LCSS** Batch ID: **13974** RunNo: **19602**
 Prep Date: **6/30/2014** Analysis Date: **7/1/2014** SeqNo: **568217** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	101	80	120			
Barium	25	0.10	25.00	0	98.6	80	120			
Cadmium	25	0.10	25.00	0	99.1	80	120			
Chromium	25	0.30	25.00	0	100	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Lead	24	0.25	25.00	0	96.1	80	120			
Manganese	25	0.10	25.00	0	98.5	80	120			
Selenium	23	2.5	25.00	0	93.6	80	120			
Silver	5.1	0.25	5.000	0	102	80	120			
Zinc	24	2.5	25.00	0	98.0	80	120			

Sample ID **MB-13974** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
 Client ID: **PBS** Batch ID: **13974** RunNo: **19639**
 Prep Date: **6/30/2014** Analysis Date: **7/2/2014** SeqNo: **569720** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D03

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #36

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13974	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569721	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	97.2	80	120			
Cadmium	24	0.10	25.00	0	96.7	80	120			
Chromium	24	0.30	25.00	0	97.3	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	91.7	80	120			
Manganese	24	0.10	25.00	0	97.3	80	120			
Selenium	23	2.5	25.00	0	90.9	80	120			
Silver	5.0	0.25	5.000	0	101	80	120			
Zinc	24	2.5	25.00	0	96.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D03

RcptNo: 1

Received by/date: CS 06/27/14
 Logged By: Michelle Garcia 6/27/2014 8:50:00 AM
 Completed By: Michelle Garcia 6/27/2014 11:44:25 AM
 Reviewed By: AR 06/30/14

Michelle Garcia
Michelle Garcia

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:		Date:	
By Whom:		Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address: PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: j1106 9697@aol.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: 5 yr metals cell #36

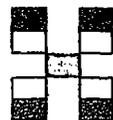
Project #: _____

Project Manager: Judy Roberts

Sampler: Shi Ja

On Ice: Yes No

Sample Temperature: 5.50



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals	Air Bubbles (Y or N)	
6/24/14	1130	soil	cell #36 #1	1 bag	ice	1406203-001													X	
	1138		#2			-002													X	
	1147		#3			-003													X	
	1158		#4			-004													X	

Date: 6/26 Time: 1130 Relinquished by: Shi Ja

Received by: Celia Serna Date Time: 06/27/14 0850

Remarks: *suite of 12
As, Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn
M, 06/27

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr Metals Cell #11

OrderNo.: 1406D16

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D16
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #11 #1

Project: Vadose Zone 5 yr Metals Cell #11

Collection Date: 6/26/2014 11:55:00 AM

Lab ID: 1406D16-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:27:18 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Barium	50	0.10		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Chromium	4.7	0.30		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Copper	1.1	0.30		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Iron	5000	51		mg/Kg	50	7/3/2014 11:45:50 AM	13974
Lead	ND	13		mg/Kg	50	7/3/2014 11:45:50 AM	13974
Manganese	38	0.10		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:23:00 PM	13974
Zinc	9.5	2.5		mg/Kg	1	7/2/2014 3:23:00 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 7
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D16
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #11
Lab ID: 1406D16-002 **Matrix:** SOIL

Client Sample ID: Cell #11 #2
Collection Date: 6/26/2014 12:05:00 PM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:29:07 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Barium	47	0.10		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Chromium	6.3	0.30		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Copper	0.45	0.30		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Iron	7600	50		mg/Kg	50	7/3/2014 11:47:11 AM	13974
Lead	ND	13		mg/Kg	50	7/3/2014 11:47:11 AM	13974
Manganese	38	0.10		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:24:24 PM	13974
Zinc	12	2.5		mg/Kg	1	7/2/2014 3:24:24 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D16
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
 Project: Vadose Zone 5 yr Metals Cell #11
 Lab ID: 1406D16-003 Matrix: SOIL

Client Sample ID: Cell #11 #3
 Collection Date: 6/26/2014 12:16:00 PM
 Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:30:56 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Barium	49	0.097		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Chromium	4.7	0.29		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Copper	1.1	0.29		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Iron	5400	48		mg/Kg	50	7/3/2014 11:48:33 AM	13974
Lead	ND	12		mg/Kg	50	7/3/2014 11:48:33 AM	13974
Manganese	40	0.097		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:25:47 PM	13974
Zinc	9.5	2.4		mg/Kg	1	7/2/2014 3:25:47 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 7
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D16

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Project: Vadose Zone 5 yr Metals Cell #11

Lab ID: 1406D16-004

Matrix: SOIL

Client Sample ID: Cell #11 #4

Collection Date: 6/26/2014 12:31:00 PM

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.031		mg/Kg	1	7/3/2014 11:32:47 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Barium	51	0.098		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Cadmium	ND	0.098		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Chromium	6.6	0.29		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Copper	0.58	0.29		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Iron	7900	49		mg/Kg	50	7/3/2014 12:08:53 PM	13974
Lead	ND	12		mg/Kg	50	7/3/2014 12:08:53 PM	13974
Manganese	38	0.098		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:27:11 PM	13974
Zinc	13	2.5		mg/Kg	1	7/2/2014 3:27:11 PM	13974

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D16

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #11

Sample ID	MB-14020	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14020	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	104	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D16
11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #11

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19602					
Prep Date:	6/30/2014	Analysis Date:	7/1/2014	SeqNo:	568216	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13974	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13974	RunNo:	19602					
Prep Date:	6/30/2014	Analysis Date:	7/1/2014	SeqNo:	568217	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	101	80	120			
Barium	25	0.10	25.00	0	98.6	80	120			
Cadmium	25	0.10	25.00	0	99.1	80	120			
Chromium	25	0.30	25.00	0	100	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Lead	24	0.25	25.00	0	96.1	80	120			
Manganese	25	0.10	25.00	0	98.5	80	120			
Selenium	23	2.5	25.00	0	93.6	80	120			
Silver	5.1	0.25	5.000	0	102	80	120			
Zinc	24	2.5	25.00	0	98.0	80	120			

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D16
11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #11

Sample ID	MB-13974	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569720	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13974	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13974	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569721	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	97.2	80	120			
Cadmium	24	0.10	25.00	0	96.7	80	120			
Chromium	24	0.30	25.00	0	97.3	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	103	80	120			
Lead	23	0.25	25.00	0	91.7	80	120			
Manganese	24	0.10	25.00	0	97.3	80	120			
Selenium	23	2.5	25.00	0	90.9	80	120			
Silver	5.0	0.25	5.000	0	101	80	120			
Zinc	24	2.5	25.00	0	96.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D16

RcptNo: 1

Received by/date:

C.S. 06/27/2014

Logged By:

Ashley Gallegos

6/27/2014 8:50:00 AM

Completed By:

Ashley Gallegos

6/27/2014 2:02:37 PM

Reviewed By:

A 06/30/14

AG
AG

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? Client

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Not Present			

Chain-of-Custody Record

Client: J&L haulform

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jloob 1097@aol.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: Vadose zone
5 yr metals cell #11

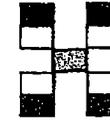
Project #: _____

Project Manager: Judy Roberts

Sampler: SLJ

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)	
1/26/14	1155	Spil	Cell # 11 # 1	1 4oz glass	ice	1406D16-001													X	
	1205		# 2			-002													X	
	1216		# 3			-003													X	
	1231		# 4			-004													X	

Date: 1/26 Time: 1130 Relinquished by: SLJ

Received by: Celine Sano Date: 06/27/14 Time: 0850

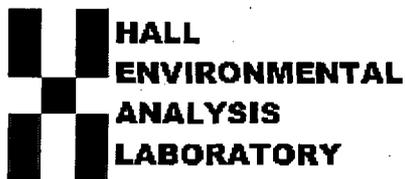
Remarks: Suite of 12 metals

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

* As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 24, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 yr Metals Cell #19

OrderNo.: 1406D18

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm
 Project: Vadose Zone 5 yr Metals Cell #19
 Lab ID: 1406D18-001 Matrix: SOIL

Client Sample ID: Cell #19 #1
 Collection Date: 6/24/2014 6:02:00 AM
 Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:38:21 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 8:32:12 AM	13972
Barium	370	0.20		mg/Kg	2	7/2/2014 4:28:44 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Chromium	1.6	0.30		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Copper	1.7	0.30		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Iron	1300	10		mg/Kg	10	7/2/2014 4:29:51 PM	13972
Lead	ND	0.25		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Manganese	22	0.10		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:09:38 PM	13972
Zinc	4.7	2.5		mg/Kg	1	7/2/2014 2:09:38 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D18
 Date Reported: 7/24/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #19
Lab ID: 1406D18-002 **Matrix:** SOIL

Client Sample ID: Cell #19 #2
Collection Date: 6/24/2014 6:11:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:40:12 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 8:37:11 AM	13972
Barium	360	0.20		mg/Kg	2	7/2/2014 4:31:04 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Chromium	1.5	0.30		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Copper	1.6	0.30		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Iron	1200	10		mg/Kg	10	7/2/2014 4:32:10 PM	13972
Lead	ND	0.25		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Manganese	18	0.10		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:11:01 PM	13972
Zinc	4.2	2.5		mg/Kg	1	7/2/2014 2:11:01 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D18
 Date Reported: 7/24/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #19 #3

Project: Vadose Zone 5 yr Metals Cell #19

Collection Date: 6/24/2014 6:19:00 AM

Lab ID: 1406D18-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:41:55 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 8:38:26 AM	13972
Barium	81	0.10		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Chromium	6.0	0.30		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Copper	3.1	0.30		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Iron	6400	100		mg/Kg	100	7/2/2014 4:41:10 PM	13972
Lead	0.74	0.25		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Manganese	72	0.10		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:12:25 PM	13972
Zinc	21	2.5		mg/Kg	1	7/2/2014 2:12:25 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D18
 Date Reported: 7/24/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #19
Lab ID: 1406D18-004 **Matrix:** SOIL

Client Sample ID: Cell #19 #4
Collection Date: 6/24/2014 6:28:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:43:38 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 8:39:39 AM	13972
Barium	76	0.10		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Chromium	5.8	0.30		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Copper	2.9	0.30		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Iron	6200	100		mg/Kg	100	7/2/2014 4:42:33 PM	13972
Lead	0.92	0.25		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Manganese	72	0.10		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Selenium	ND	2.5		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Silver	ND	0.25		mg/Kg	1	7/2/2014 2:13:48 PM	13972
Zinc	20	2.5		mg/Kg	1	7/2/2014 2:13:48 PM	13972

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D18
 24-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #19

Sample ID	MB-14020	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14020	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	104	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D18
24-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 yr Metals Cell #19

Sample ID	MB-13972	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569716	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13972	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13972	RunNo:	19639					
Prep Date:	6/30/2014	Analysis Date:	7/2/2014	SeqNo:	569717	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.4	80	120			
Barium	24	0.10	25.00	0	97.3	80	120			
Cadmium	24	0.10	25.00	0	97.1	80	120			
Chromium	24	0.30	25.00	0	97.5	80	120			
Copper	26	0.30	25.00	0	103	80	120			
Iron	26	1.0	25.00	0	104	80	120			
Lead	23	0.25	25.00	0	92.0	80	120			
Manganese	24	0.10	25.00	0	97.0	80	120			
Selenium	23	2.5	25.00	0	90.4	80	120			
Silver	5.0	0.25	5.000	0	100	80	120			
Zinc	24	2.5	25.00	0	95.9	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM Work Order Number: 1406D18 RcptNo: 1

Received by/date: CS. 06/27/14

Logged By: Ashley Gallegos 6/27/2014 8:50:00 AM *AG*

Completed By: Ashley Gallegos 6/27/2014 2:09:21 PM *AG*

Reviewed By: A 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? Client

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	5.5	Good	Not Present			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address: PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: j11069697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: radon zone

5 yr metals cell # 19

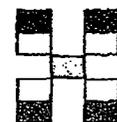
Project #:

Project Manager: Judy Roberts

Sampler: Shi Jm

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Ruthles (Y or N)	
6/24/14	0602	soil	cell # 19	1 bag	ice	1406D18-001														
	0611					-002														
	0619					-003														
	0628					-004														

Date: 6/26 Time: 1130 Relinquished by: Shi Jm

Received by: Celina Serna Date: 06/27/14 Time: 0850

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any subcontracted data will be clearly indicated.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #5

OrderNo.: 1406D30

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #5 #1

Project: Vadose Zone 5 Yr Metals Cell #5

Collection Date: 6/26/2014 7:50:00 AM

Lab ID: 1406D30-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:45:22 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:35:09 AM	13999
Barium	130	0.097		mg/Kg	1	7/3/2014 12:10:12 PM	13999
Cadmium	ND	0.097		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Chromium	3.1	0.29		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Copper	0.76	0.29		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Iron	2800	19		mg/Kg	20	7/3/2014 12:15:43 PM	13999
Lead	0.36	0.24		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Manganese	27	0.097		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:28:33 PM	13999
Zinc	6.0	2.4		mg/Kg	1	7/2/2014 3:28:33 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D30
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5
Lab ID: 1406D30-002 **Matrix:** SOIL

Client Sample ID: Cell #5 #2
Collection Date: 6/26/2014 7:58:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.031		mg/Kg	1	7/3/2014 11:47:10 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:42:37 AM	13999
Barium	61	0.10		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Chromium	3.5	0.31		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Copper	0.63	0.31		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Iron	3100	20		mg/Kg	20	7/3/2014 12:22:07 PM	13999
Lead	0.35	0.25		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Manganese	32	0.10		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:32:58 PM	13999
Zinc	6.7	2.5		mg/Kg	1	7/2/2014 3:32:58 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 2 of 8

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D30
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #5 #3

Project: Vadose Zone 5 Yr Metals Cell #5

Collection Date: 6/26/2014 8:10:00 AM

Lab ID: 1406D30-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:48:57 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	13		mg/Kg	5	7/9/2014 9:43:51 AM	13999
Barium	110	0.10		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Chromium	3.2	0.30		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Copper	0.83	0.30		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Iron	2800	20		mg/Kg	20	7/3/2014 12:23:30 PM	13999
Lead	0.57	0.25		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Manganese	26	0.10		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:34:21 PM	13999
Zinc	6.0	2.5		mg/Kg	1	7/2/2014 3:34:21 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:		
*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E	Value above quantitation range	H Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D30
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5
Lab ID: 1406D30-004 **Matrix:** SOIL

Client Sample ID: Cell #5 #4
Collection Date: 6/26/2014 8:16:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.031		mg/Kg	1	7/3/2014 11:50:43 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:45:05 AM	13999
Barium	76	0.095		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Cadmium	ND	0.095		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Chromium	3.4	0.29		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Copper	0.66	0.29		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Iron	3000	19		mg/Kg	20	7/3/2014 12:24:52 PM	13999
Lead	0.29	0.24		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Manganese	35	0.095		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:40:49 PM	13999
Zinc	6.9	2.4		mg/Kg	1	7/2/2014 3:40:49 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D30

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5

Sample ID	MB-14020	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14020	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	104	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit.
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D30

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5

Sample ID	MB-13999		SampType:	MBLK		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	PBS		Batch ID:	13999		RunNo:	19639				
Prep Date:	7/1/2014		Analysis Date:	7/2/2014		SeqNo:	569724		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	ND	2.5									
Barium	ND	0.10									
Cadmium	ND	0.10									
Chromium	ND	0.30									
Copper	ND	0.30									
Iron	ND	1.0									
Lead	ND	0.25									
Manganese	ND	0.10									
Selenium	ND	2.5									
Silver	ND	0.25									
Zinc	ND	2.5									

Sample ID	LCS-13999		SampType:	LCS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	LCSS		Batch ID:	13999		RunNo:	19639				
Prep Date:	7/1/2014		Analysis Date:	7/2/2014		SeqNo:	569725		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	25	2.5	25.00	0	98.8	80	120				
Barium	24	0.10	25.00	0	96.0	80	120				
Cadmium	24	0.10	25.00	0	97.2	80	120				
Chromium	24	0.30	25.00	0	97.0	80	120				
Copper	25	0.30	25.00	0	98.9	80	120				
Iron	26	1.0	25.00	0	102	80	120				
Lead	23	0.25	25.00	0	93.0	80	120				
Manganese	24	0.10	25.00	0	95.5	80	120				
Selenium	24	2.5	25.00	0	94.5	80	120				
Silver	4.9	0.25	5.000	0	99.0	80	120				
Zinc	25	2.5	25.00	0	98.6	80	120				

Sample ID	1406D30-001AMS		SampType:	MS		TestCode:	EPA Method 6010B: Soil Metals				
Client ID:	Cell #5 #1		Batch ID:	13999		RunNo:	19639				
Prep Date:	7/1/2014		Analysis Date:	7/2/2014		SeqNo:	570069		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cadmium	23	0.10	25.51	0	91.7	75	125				
Chromium	25	0.31	25.51	3.137	87.6	75	125				
Copper	25	0.31	25.51	0.7554	94.6	75	125				
Lead	21	0.26	25.51	0.3624	82.7	75	125				
Manganese	49	0.10	25.51	27.40	84.7	75	125				
Selenium	21	2.6	25.51	0	80.4	75	125				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D30

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5

Sample ID	1406D30-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19639					
Prep Date:	7/1/2014	Analysis Date:	7/2/2014	SeqNo:	570069	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	4.8	0.26	5.102	0	94.4	75	125			
Zinc	27	2.6	25.51	5.950	83.2	75	125			

Sample ID	1406D30-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19639					
Prep Date:	7/1/2014	Analysis Date:	7/2/2014	SeqNo:	570070	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	23	0.10	25.26	0	91.8	75	125	0.919	20	
Chromium	26	0.30	25.26	3.137	88.6	75	125	0.184	20	
Copper	25	0.30	25.26	0.7554	95.3	75	125	0.223	20	
Lead	21	0.25	25.26	0.3624	83.0	75	125	0.622	20	
Manganese	49	0.10	25.26	27.40	84.2	75	125	0.719	20	
Selenium	20	2.5	25.26	0	81.1	75	125	0.136	20	
Silver	4.8	0.25	5.051	0	95.5	75	125	0.205	20	
Zinc	27	2.5	25.26	5.950	83.9	75	125	0.161	20	

Sample ID	1406D30-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19675					
Prep Date:	7/1/2014	Analysis Date:	7/3/2014	SeqNo:	571191	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	130	0.10	25.51	135.0	-19.5	75	125			S

Sample ID	1406D30-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19675					
Prep Date:	7/1/2014	Analysis Date:	7/3/2014	SeqNo:	571192	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	120	0.10	25.26	135.0	-43.6	75	125	4.77	20	S

Sample ID	1406D30-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19760					
Prep Date:	7/1/2014	Analysis Date:	7/9/2014	SeqNo:	574119	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	13	25.51	0	103	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D30
 11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #5

Sample ID	1406D30-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #5 #1	Batch ID:	13999	RunNo:	19760					
Prep Date:	7/1/2014	Analysis Date:	7/9/2014	SeqNo:	574120	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	28	13	25.26	0	110	75	125	6.07	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D30

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: **Celina Sessa** 6/27/2014 8:50:00 AM *Celina Sessa*

Completed By: **Celina Sessa** 6/27/2014 3:29:23 PM *Celina Sessa*

Reviewed By: A 06/30/14

Chain of Custody

- Custody seals intact on sample bottles? Yes No Not Present
- Is Chain of Custody complete? Yes No Not Present
- How was the sample delivered? FedEx

Log In

- Was an attempt made to cool the samples? Yes No NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- Sample(s) in proper container(s)? Yes No
- Sufficient sample volume for indicated test(s)? Yes No
- Are samples (except VOA and ONG) properly preserved? Yes No
- Was preservative added to bottles? Yes No NA
- VOA vials have zero headspace? Yes No No VOA Vials
- Were any sample containers received broken? Yes No
- Does paperwork match bottle labels? Yes No
- Are matrices correctly identified on Chain of Custody? Yes No
- Is it clear what analyses were requested? Yes No
- Were all holding times able to be met? Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J&L hand farm

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlrub 9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: Vadose zone
5 yr metals cell # 5

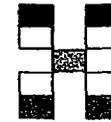
Project # _____

Project Manager: Judy Roberts

Sampler: Shi

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/26/14	0750	Soil	Cell # 5 # 1	1 vial glass	ice	14068D30-001												X	
	0758		# 2			-002												X	
	0810		# 3			-003												X	
	0816		# 4			-004												X	

Date: 6/26 Time: 1130 Relinquished by: [Signature]

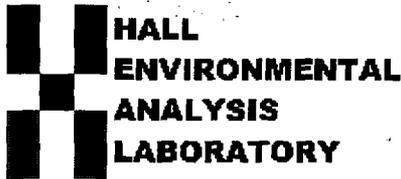
Date: _____ Time: _____ Relinquished by: _____

Received by: Celine Serna Date: 06/27/14 Time: 0850

Received by: _____ Date: _____ Time: _____

Remarks: suite of 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #6

OrderNo.: 1406D32

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406D32

Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #6 #1

Project: Vadose Zone 5 Yr Metals Cell #6

Collection Date: 6/26/2014 8:35:00 AM

Lab ID: 1406D32-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:52:29 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Barium	61	0.099		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Chromium	4.0	0.30		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Copper	1.2	0.30		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Iron	3700	20		mg/Kg	20	7/3/2014 12:26:13 PM	13999
Lead	ND	5.0		mg/Kg	20	7/3/2014 12:26:13 PM	13999
Manganese	44	0.099		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:42:13 PM	13999
Zinc	8.0	2.5		mg/Kg	1	7/2/2014 3:42:13 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D32
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #6
Lab ID: 1406D32-002 **Matrix:** SOIL

Client Sample ID: Cell #6 #2
Collection Date: 6/26/2014 8:42:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 11:54:16 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Barium	160	0.099		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Cadmium	ND	0.099		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Chromium	3.7	0.30		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Copper	0.91	0.30		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Iron	3100	20		mg/Kg	20	7/3/2014 12:27:36 PM	13999
Lead	ND	5.0		mg/Kg	20	7/3/2014 12:27:36 PM	13999
Manganese	26	0.099		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:43:36 PM	13999
Zinc	7.0	2.5		mg/Kg	1	7/2/2014 3:43:36 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D32
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #6 #3

Project: Vadose Zone 5 Yr Metals Cell #6

Collection Date: 6/26/2014 8:55:00 AM

Lab ID: 1406D32-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 11:59:47 AM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Barium	63	0.10		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Cadmium	ND	0.10		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Chromium	4.1	0.31		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Copper	1.4	0.31		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Iron	3800	20		mg/Kg	20	7/3/2014 12:28:56 PM	13999
Lead	ND	5.1		mg/Kg	20	7/3/2014 12:28:56 PM	13999
Manganese	44	0.10		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Selenium	ND	2.5		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Silver	ND	0.25		mg/Kg	1	7/2/2014 3:44:59 PM	13999
Zinc	8.7	2.5		mg/Kg	1	7/2/2014 3:44:59 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D32
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #6
Lab ID: 1406D32-004 **Matrix:** SOIL

Client Sample ID: Cell #6 #4
Collection Date: 6/26/2014 9:11:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 12:01:34 PM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Barium	180	0.096		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Cadmium	ND	0.096		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Chromium	3.9	0.29		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Copper	1.1	0.29		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Iron	3200	19		mg/Kg	20	7/3/2014 12:30:20 PM	13999
Lead	ND	4.8		mg/Kg	20	7/3/2014 12:30:20 PM	13999
Manganese	31	0.096		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Selenium	ND	2.4		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Silver	ND	0.24		mg/Kg	1	7/2/2014 3:46:23 PM	13999
Zinc	7.3	2.4		mg/Kg	1	7/2/2014 3:46:23 PM	13999

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D32

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #6

Sample ID	MB-14020	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14020	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	104	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D32
11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #6

Sample ID	MB-13999	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13999	RunNo:	19639					
Prep Date:	7/1/2014	Analysis Date:	7/2/2014	SeqNo:	569724	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	ND	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13999	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13999	RunNo:	19639					
Prep Date:	7/1/2014	Analysis Date:	7/2/2014	SeqNo:	569725	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0	98.8	80	120			
Barium	24	0.10	25.00	0	96.0	80	120			
Cadmium	24	0.10	25.00	0	97.2	80	120			
Chromium	24	0.30	25.00	0	97.0	80	120			
Copper	25	0.30	25.00	0	98.9	80	120			
Iron	26	1.0	25.00	0	102	80	120			
Lead	23	0.25	25.00	0	93.0	80	120			
Manganese	24	0.10	25.00	0	95.5	80	120			
Selenium	24	2.5	25.00	0	94.5	80	120			
Silver	4.9	0.25	5.000	0	99.0	80	120			
Zinc	25	2.5	25.00	0	98.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D32

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: **Celina Sessa** 6/27/2014 8:50:00 AM *Celina Sessa*

Completed By: **Celina Sessa** 6/27/2014 3:32:30 PM *Celina Sessa*

Reviewed By: AK 06/30/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
13. Are matrices correctly identified on Chain of Custody? Yes No
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Client: J&L haul farm

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jrobb1697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: Vadose zone
5 yr metals cell # 6

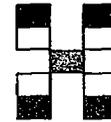
Project #:

Project Manager: Judy Roberts

Sampler: [Signature]

On Ice: Yes No

Sample Temperature: 5.5°



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/26/11	0835	Spil	Cell # 6 # 1	1 4oz glass	ice	1406D32 -001												X	
	0842		# 2			-002												X	
	0855		# 3			-003												X	
	0911		# 4			-004												X	

Date: 6/26 Time: 1130 Relinquished by: [Signature]

Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: 06/27/11 Time: 0850

Received by: _____ Date: _____ Time: _____

Remarks: suited 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 15, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #8

OrderNo.: 1406D34

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D34
 Date Reported: 7/15/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8
Lab ID: 1406D34-002 **Matrix:** SOIL

Client Sample ID: Cell #8 #2
Collection Date: 6/26/2014 9:37:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 12:08:51 PM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:58:42 AM	14031
Barium	150	0.096		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Cadmium	ND	0.096		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Chromium	2.9	0.29		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Copper	1.1	0.29		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Iron	2500	19		mg/Kg	20	7/3/2014 1:02:28 PM	14031
Lead	ND	24		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Manganese	32	0.096		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Selenium	ND	2.4		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Silver	ND	0.24		mg/Kg	1	7/3/2014 12:42:21 PM	14031
Zinc	6.0	2.4		mg/Kg	1	7/3/2014 12:42:21 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #8 #3

Project: Vadose Zone 5 Yr Metals Cell #8

Collection Date: 6/26/2014 9:48:00 AM

Lab ID: 1406D34-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 12:10:41 PM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 9:59:55 AM	14031
Barium	110	0.099		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Cadmium	ND	0.099		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Chromium	5.1	0.30		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Copper	2.6	0.30		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Iron	5700	50		mg/Kg	50	7/3/2014 1:03:49 PM	14031
Lead	ND	25		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Manganese	74	0.099		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Selenium	ND	2.5		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Silver	ND	0.25		mg/Kg	1	7/3/2014 12:43:45 PM	14031
Zinc	14	2.5		mg/Kg	1	7/3/2014 12:43:45 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D34
 Date Reported: 7/15/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8
Lab ID: 1406D34-004 **Matrix:** SOIL

Client Sample ID: Cell #8 #4
Collection Date: 6/26/2014 10:02:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 12:12:24 PM	14020
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 10:01:09 AM	14031
Barium	180	0.097		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Cadmium	ND	0.097		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Chromium	2.5	0.29		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Copper	1.1	0.29		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Iron	2000	19		mg/Kg	20	7/3/2014 1:05:13 PM	14031
Lead	ND	24		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Manganese	27	0.097		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Selenium	ND	2.4		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Silver	ND	0.24		mg/Kg	1	7/3/2014 12:45:07 PM	14031
Zinc	5.5	2.4		mg/Kg	1	7/3/2014 12:45:07 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D34
15-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8

Sample ID	MB-14020	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570975	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14020	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	104	80	120			

Sample ID	1406D34-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #8 #1	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570998	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.032	0.1611	0.009056	79.2	75	125			

Sample ID	1406D34-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #8 #1	Batch ID:	14020	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	570999	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.032	0.1619	0.009056	78.3	75	125	0.526	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D34

15-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8

Sample ID	SampType: LCS		TestCode: EPA Method 6010B: Soil Metals							
Client ID:	Batch ID: 14031		RunNo: 19675							
Prep Date:	Analysis Date: 7/3/2014		SeqNo: 571138 Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	93.6	80	120			
Barium	22	0.10	25.00	0	89.5	80	120			
Cadmium	23	0.10	25.00	0	90.2	80	120			
Chromium	23	0.30	25.00	0	90.0	80	120			
Copper	23	0.30	25.00	0	93.0	80	120			
Iron	24	1.0	25.00	0	96.3	80	120			B
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	22	0.10	25.00	0	89.3	80	120			
Selenium	22	2.5	25.00	0	86.8	80	120			
Silver	4.7	0.25	5.000	0	93.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID	SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals							
Client ID:	Batch ID: 14031		RunNo: 19675							
Prep Date:	Analysis Date: 7/3/2014		SeqNo: 571141 Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	1.1	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	SampType: MS		TestCode: EPA Method 6010B: Soil Metals							
Client ID:	Batch ID: 14031		RunNo: 19675							
Prep Date:	Analysis Date: 7/3/2014		SeqNo: 571205 Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	150	0.10	24.88	142.2	36.4	75	125			S
Cadmium	22	0.10	24.88	0	88.2	75	125			
Chromium	26	0.30	24.88	4.477	86.7	75	125			
Copper	25	0.30	24.88	2.403	92.2	75	125			
Lead	ND	25	24.88	0.2220	78.7	75	125			
Manganese	93	0.10	24.88	66.83	106	75	125			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D34
 15-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8

Sample ID	1406D34-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19675						
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571205	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	4.5	0.25	4.977	0	89.7	75	125				
Zinc	33	2.5	24.88	11.83	84.8	75	125				

Sample ID	1406D34-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19675						
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571206	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	160	0.097	24.30	142.2	92.6	75	125	8.52	20		
Cadmium	22	0.097	24.30	0	88.8	75	125	1.68	20		
Chromium	25	0.29	24.30	4.477	85.5	75	125	3.06	20		
Copper	26	0.29	24.30	2.403	95.5	75	125	1.13	20		
Lead	ND	24	24.30	0.2220	78.4	75	125	0	20		
Manganese	93	0.097	24.30	66.83	107	75	125	0.356	20		
Silver	4.4	0.24	4.861	0	89.7	75	125	2.38	20		
Zinc	32	2.4	24.30	11.83	81.4	75	125	4.10	20		

Sample ID	1406D34-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19736						
Prep Date:	7/2/2014	Analysis Date:	7/8/2014	SeqNo:	573346	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Selenium	18	2.5	24.88	0	71.5	75	125			S	

Sample ID	1406D34-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19736						
Prep Date:	7/2/2014	Analysis Date:	7/8/2014	SeqNo:	573347	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Selenium	17	2.4	24.30	0	71.0	75	125	2.99	20	S	

Sample ID	1406D34-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19760						
Prep Date:	7/2/2014	Analysis Date:	7/9/2014	SeqNo:	574131	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	25	12	24.88	0	102	75	125				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D34
 15-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #8

Sample ID	1406D34-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #8 #1	Batch ID:	14031	RunNo:	19760					
Prep Date:	7/2/2014	Analysis Date:	7/9/2014	SeqNo:	574132	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	28	12	24.30	0	117	75	125	11.7	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D34

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: **Celina Sessa** 6/27/2014 8:50:00 AM *Celina Sessa*

Completed By: **Celina Sessa** 6/27/2014 3:34:56 PM *Celina Sessa*

Reviewed By: A 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

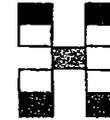
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Standard Rush



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:

J&L hwy farm

Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlobb 9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Project Name:

vadose zone

5 yr metals cell #8

Project #:

Project Manager:

Judy Roberts

Sampler: [Signature]

On Ice: Yes No

Sample Temperature: 5.6°

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/26/14	0930	Spil	Cell # 8 # 1	1 4oz glass	ice	1406D34-001												X	
	0937		# 2			-002												X	
	0948		# 3			-003												X	
	1002		# 4			-004												X	

Date: 6/26 Time: 1130 Relinquished by: [Signature]

Received by: Celina Sano Date: 06/27/14 Time: 0850

Remarks:

Date: Time: Relinquished by:

Received by: Date: Time:

Suite of 12 metals

* As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone 5 Yr Metals Cell #9

OrderNo.: 1406D36

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/27/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D36
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #9 #1

Project: Vadose Zone 5 Yr Metals Cell #9

Collection Date: 6/26/2014 10:28:00 AM

Lab ID: 1406D36-001

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 12:21:56 PM	14021
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 10:02:22 AM	14031
Barium	68	0.099		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Cadmium	ND	0.099		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Chromium	4.8	0.30		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Copper	1.7	0.30		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Iron	4300	20		mg/Kg	20	7/3/2014 1:06:35 PM	14031
Lead	ND	4.9		mg/Kg	20	7/3/2014 1:06:35 PM	14031
Manganese	51	0.099		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Selenium	ND	2.5		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Silver	ND	0.25		mg/Kg	1	7/3/2014 12:46:35 PM	14031
Zinc	11	2.5		mg/Kg	1	7/3/2014 12:46:35 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D36
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #9
Lab ID: 1406D36-002 **Matrix:** SOIL

Client Sample ID: Cell #9 #2
Collection Date: 6/26/2014 10:36:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							
Mercury	ND	0.033		mg/Kg	1	7/3/2014 12:27:10 PM	14021
EPA METHOD 6010B: SOIL METALS							
Arsenic	ND	12		mg/Kg	5	7/9/2014 10:03:34 AM	14031
Barium	69	0.097		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Cadmium	ND	0.097		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Chromium	3.8	0.29		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Copper	0.37	0.29		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Iron	3400	19		mg/Kg	20	7/3/2014 1:07:56 PM	14031
Lead	ND	4.8		mg/Kg	20	7/3/2014 1:07:56 PM	14031
Manganese	34	0.097		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Selenium	ND	2.4		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Silver	ND	0.24		mg/Kg	1	7/3/2014 12:47:56 PM	14031
Zinc	7.6	2.4		mg/Kg	1	7/3/2014 12:47:56 PM	14031

Analyst: TES

Analyst: ELS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #9 #3

Project: Vadose Zone 5 Yr Metals Cell #9

Collection Date: 6/26/2014 10:47:00 AM

Lab ID: 1406D36-003

Matrix: SOIL

Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.032		mg/Kg	1	7/3/2014 12:28:57 PM	14021
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 10:04:47 AM	14031
Barium	83	0.097		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Cadmium	ND	0.097		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Chromium	4.7	0.29		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Copper	1.5	0.29		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Iron	4200	19		mg/Kg	20	7/3/2014 1:09:20 PM	14031
Lead	ND	4.8		mg/Kg	20	7/3/2014 1:09:20 PM	14031
Manganese	48	0.097		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Selenium	ND	2.4		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Silver	ND	0.24		mg/Kg	1	7/3/2014 12:49:16 PM	14031
Zinc	10	2.4		mg/Kg	1	7/3/2014 12:49:16 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406D36
 Date Reported: 7/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #9
Lab ID: 1406D36-004 **Matrix:** SOIL

Client Sample ID: Cell #9 #4
Collection Date: 6/26/2014 10:55:00 AM
Received Date: 6/27/2014 8:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: TES
Mercury	ND	0.033		mg/Kg	1	7/3/2014 12:30:44 PM	14021
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	7/9/2014 10:06:02 AM	14031
Barium	68	0.099		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Cadmium	ND	0.099		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Chromium	4.4	0.30		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Copper	ND	0.30		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Iron	4000	20		mg/Kg	20	7/3/2014 1:10:45 PM	14031
Lead	ND	5.0		mg/Kg	20	7/3/2014 1:10:45 PM	14031
Manganese	29	0.099		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Selenium	ND	2.5		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Silver	ND	0.25		mg/Kg	1	7/3/2014 12:50:39 PM	14031
Zinc	9.3	2.5		mg/Kg	1	7/3/2014 12:50:39 PM	14031

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D36

11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #9

Sample ID	MB-14021	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	14021	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571003	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-14021	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	14021	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571004	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	96.3	80	120			

Sample ID	1406D36-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #9 #1	Batch ID:	14021	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571008	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.032	0.1601	0.008478	84.6	75	125			

Sample ID	1406D36-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #9 #1	Batch ID:	14021	RunNo:	19667					
Prep Date:	7/2/2014	Analysis Date:	7/3/2014	SeqNo:	571009	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.15	0.033	0.1650	0.008478	84.4	75	125	2.51	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406D36
 11-Jul-14

Client: J & L Landfarm
Project: Vadose Zone 5 Yr Metals Cell #9

Sample ID	SampType: LCS		TestCode: EPA Method 6010B: Soil Metals							
Client ID: LCSS	Batch ID: 14031		RunNo: 19675							
Prep Date: 7/2/2014	Analysis Date: 7/3/2014		SeqNo: 571138		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	93.6	80	120			
Barium	22	0.10	25.00	0	89.5	80	120			
Cadmium	23	0.10	25.00	0	90.2	80	120			
Chromium	23	0.30	25.00	0	90.0	80	120			
Copper	23	0.30	25.00	0	93.0	80	120			
Iron	24	1.0	25.00	0	96.3	80	120			B
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	22	0.10	25.00	0	89.3	80	120			
Selenium	22	2.5	25.00	0	86.8	80	120			
Silver	4.7	0.25	5.000	0	93.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID	SampType: MBLK		TestCode: EPA Method 6010B: Soil Metals							
Client ID: PBS	Batch ID: 14031		RunNo: 19675							
Prep Date: 7/2/2014	Analysis Date: 7/3/2014		SeqNo: 571141		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Iron	1.1	1.0								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406D36

RcptNo: 1

Received by/date: CS 06/27/14

Logged By: Celina Sessa 6/27/2014 8:50:00 AM Celina Sessa

Completed By: Celina Sessa 6/27/2014 3:44:39 PM Celina Sessa

Reviewed By: A 06/30/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

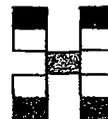
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.5	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Standard Rush



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:

J-L hndfarm
Mailing Address:

PO Box 356 Hobbs, NM 88241
Phone #: 575-631-5765

email or Fax#: jlobb997@aol.com
QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Project Name:
Vadose zone
5 yr metals cell # 9
Project #

Project Manager:
Judy Roberts

Sampler: *Spjsh*
On Ice: Yes No

Sample Temperature: 5.5°

Analysis Request

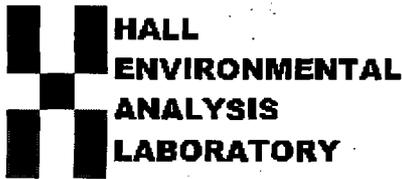
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/26/14	1028	Soil	Cell # 9 # 1	1 vial glass	ice	1406D36-001												X	
	1036		# 2			-002												X	
	1047		# 3			-003												X	
	1055		# 4			-004												X	

Date: 6/26 Time: 1130 Relinquished by: *Spjsh*

Received by: *Adina Serna* Date: 06/27/14 Time: 0850

Remarks:
* suite of 12 metals
As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 25 5yr Metals

OrderNo.: 1406146

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406146

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 25 Random Select #1

Project: Vadose Zone Repeat Cell 25 5yr Metals

Collection Date: 6/3/2014 8:50:00 AM

Lab ID: 1406146-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 10:53:52 AM	13514
Toluene	ND	0.047		mg/Kg	1	6/5/2014 10:53:52 AM	13514
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 10:53:52 AM	13514
Xylenes, Total	ND	0.093		mg/Kg	1	6/5/2014 10:53:52 AM	13514
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/5/2014 10:53:52 AM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	68	30		mg/Kg	20	6/5/2014 12:37:19 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:27:10 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Barium	79	0.098		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Chromium	5.5	0.29		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Copper	4.3	0.29		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Iron	7200	49	B	mg/Kg	50	6/7/2014 12:30:07 PM	13541
Lead	3.4	0.24		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Manganese	96	0.098		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 1:49:44 PM	13541
Zinc	18	2.4		mg/Kg	1	6/7/2014 1:49:44 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406146

Date Reported: 6/11/2014

CLIENT: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 5yr Metals
Lab ID: 1406146-002 **Matrix:** SOIL

Client Sample ID: Cell 25 Random Select #2
Collection Date: 6/3/2014 9:16:00 AM
Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							
Analyst: NSB							
Benzene	ND	0.048		mg/Kg	1	6/5/2014 12:19:42 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 12:19:42 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 12:19:42 PM	13514
Xylenes, Total	ND	0.096		mg/Kg	1	6/5/2014 12:19:42 PM	13514
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/5/2014 12:19:42 PM	13514
EPA METHOD 300.0: ANIONS							
Analyst: JRR							
Chloride	38	30		mg/Kg	20	6/5/2014 1:14:33 PM	13547
EPA METHOD 7471: MERCURY							
Analyst: MMD							
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:28:57 PM	13546
EPA METHOD 6010B: SOIL METALS							
Analyst: ELS							
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Barium	89	0.10		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Cadmium	ND	0.10		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Chromium	4.5	0.30		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Copper	3.3	0.30		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Iron	5600	50	B	mg/Kg	50	6/7/2014 12:31:38 PM	13541
Lead	2.1	0.25		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Manganese	58	0.10		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 1:50:58 PM	13541
Zinc	14	2.5		mg/Kg	1	6/7/2014 1:50:58 PM	13541
EPA METHOD 418.1: TPH							
Analyst: JME							
Petroleum Hydrocarbons, TR	75	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - O RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406146

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 25 Random Select #3

Project: Vadose Zone Repeat Cell 25 5yr Metals

Collection Date: 6/3/2014 9:35:00 AM

Lab ID: 1406146-003

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 12:48:22 PM	13514
Toluene	ND	0.049		mg/Kg	1	6/5/2014 12:48:22 PM	13514
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 12:48:22 PM	13514
Xylenes, Total	ND	0.099		mg/Kg	1	6/5/2014 12:48:22 PM	13514
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/5/2014 12:48:22 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	22	1.5		mg/Kg	1	6/9/2014 5:59:02 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:30:45 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Barium	76	0.097		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Cadmium	ND	0.097		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Chromium	6.8	0.29		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Copper	5.2	0.29		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Iron	9100	48	B	mg/Kg	50	6/7/2014 12:33:06 PM	13541
Lead	2.7	0.24		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Manganese	100	0.097		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 1:52:12 PM	13541
Zinc	18	2.4		mg/Kg	1	6/7/2014 1:52:12 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	23	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406146

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Project: Vadose Zone Repeat Cell 25 5yr Metals

Lab ID: 1406146-004

Matrix: SOIL

Client Sample ID: Cell 25 Random Select #4

Collection Date: 6/3/2014 10:02:00 AM

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							
Analyst: NSB							
Benzene	ND	0.048		mg/Kg	1	6/5/2014 1:45:40 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 1:45:40 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 1:45:40 PM	13514
Xylenes, Total	ND	0.095		mg/Kg	1	6/5/2014 1:45:40 PM	13514
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/5/2014 1:45:40 PM	13514
EPA METHOD 300.0: ANIONS							
Analyst: JRR							
Chloride	520	30		mg/Kg	20	6/5/2014 1:39:23 PM	13547
EPA METHOD 7471: MERCURY							
Analyst: MMD							
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:34:06 PM	13546
EPA METHOD 6010B: SOIL METALS							
Analyst: ELS							
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Barium	44	0.098		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Chromium	7.0	0.29		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Copper	4.0	0.29		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Iron	9100	49	B	mg/Kg	50	6/7/2014 12:34:39 PM	13541
Lead	1.8	0.24		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Manganese	89	0.098		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 1:54:42 PM	13541
Zinc	17	2.4		mg/Kg	1	6/7/2014 1:54:42 PM	13541
EPA METHOD 418.1: TPH							
Analyst: JME							
Petroleum Hydrocarbons, TR	130	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146

11-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeat Cell 25 5yr Metals

Sample ID	MB-13547	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13547	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 5yr Metals

Sample ID	MB-13523	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13523	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	91.9	80	120			

Sample ID	LCSD-13523	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550621	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	98.9	80	120	7.30	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 5yr Metals

Sample ID MB-13514	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 13514		RunNo: 19076							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551209		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID LCS-13514	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 13514		RunNo: 19076							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551210		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	110	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID 1406146-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: Cell 25 Random Sel	Batch ID: 13514		RunNo: 19076							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551212		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.047	0.9346	0	129	67.4	135			
Toluene	1.2	0.047	0.9346	0	124	72.6	135			
Ethylbenzene	1.2	0.047	0.9346	0	126	69.4	143			
Xylenes, Total	3.4	0.093	2.804	0	121	70.8	144			
Surr: 4-Bromofluorobenzene	1.0		0.9346		107	80	120			

Sample ID 1406146-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: Cell 25 Random Sel	Batch ID: 13514		RunNo: 19076							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551213		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.047	0.9320	0	128	67.4	135	1.14	20	
Toluene	1.1	0.047	0.9320	0	121	72.6	135	3.20	20	
Ethylbenzene	1.1	0.047	0.9320	0	121	69.4	143	4.04	20	
Xylenes, Total	3.3	0.093	2.796	0	118	70.8	144	3.11	20	
Surr: 4-Bromofluorobenzene	1.0		0.9320		108	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 5yr Metals

Sample ID	LCS-13564	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552328	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID	MB-13564	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552329	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 5yr Metals

Sample ID	MB-13546	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551739	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13546	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551740	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406146
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 25 Syr Metals

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551639	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551640	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	91.3	80	120			
Barium	23	0.10	25.00	0	92.7	80	120			
Cadmium	23	0.10	25.00	0	90.8	80	120			
Chromium	23	0.30	25.00	0	92.0	80	120			
Copper	24	0.30	25.00	0	97.6	80	120			
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	23	0.10	25.00	0	92.6	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			
Silver	4.6	0.25	5.000	0	92.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552123	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.9	1.0								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552124	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	26	1.0	25.00	0	103	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1408146

RcptNo: 1

Received by/date: [Signature] 06/04/14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 6/4/2014 9:38:11 AM [Signature]

Reviewed By: CS 06/04/14

Chain of Custody

- Custody seals intact on sample bottles? Yes No Not Present
- Is Chain of Custody complete? Yes No Not Present
- How was the sample delivered? FedEx

Log In

- Was an attempt made to cool the samples? Yes No NA
- Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- Sample(s) in proper container(s)? Yes No
- Sufficient sample volume for indicated test(s)? Yes No
- Are samples (except VOA and ONG) properly preserved? Yes No
- Was preservative added to bottles? Yes No NA
- VOA vials have zero headspace? Yes No No VOA Vials
- Were any sample containers received broken? Yes No
- Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- Are matrices correctly identified on Chain of Custody? Yes No
- Is it clear what analyses were requested? Yes No
- Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: j.lrob 9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: Vadose zone repeat *4/6/16*

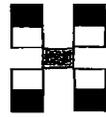
Project #: cell 25 5yr metals no #4 *par skip*

Project Manager: SKIP FABOR *J. Robertson*

Sampler: J. ROBERTSON

On Ice: Yes No

Sample Temperature: 4.2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)	
6/3/14	0850	soil	cell 25 random select #1	2 4oz glass	ice	-001	X			X				X				X		
	0916		#2			-002	X			X				X				X		
	0935		#3			-003	X			X				X				X		
	1002		#4			-004	X			X				X				X		
			<u>Syr metals no #4</u>																	
			<i>4/6/16 par skip</i>																	

Date: 6/3/14 Time: 1200 Relinquished by: [Signature]

Date: 6/3/14 Time: 0845 Received by: [Signature]

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 24 5yr Metals

OrderNo.: 1406147

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406147

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 24 Random Select #1

Project: Vadose Zone Repeat Cell 24 5yr Metals

Collection Date: 6/3/2014 7:13:00 AM

Lab ID: 1406147-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 2:14:14 PM	13514
Toluene	ND	0.047		mg/Kg	1	6/5/2014 2:14:14 PM	13514
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 2:14:14 PM	13514
Xylenes, Total	ND	0.094		mg/Kg	1	6/5/2014 2:14:14 PM	13514
Surr: 4-Bromofluorobenzene	99.9	80-120		%REC	1	6/5/2014 2:14:14 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	120	30		mg/Kg	20	6/5/2014 1:51:47 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:35:55 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/6/2014 1:32:18 PM	13541
Barium	39	0.098		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Chromium	6.0	0.29		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Copper	1.9	0.29		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Iron	4300	49	B	mg/Kg	50	6/7/2014 12:36:07 PM	13541
Lead	1.2	0.25		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Manganese	42	0.098		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 1:57:13 PM	13541
Zinc	12	2.5		mg/Kg	1	6/7/2014 1:57:13 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	180	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 9
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406147

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 24 Random Select #2

Project: Vadose Zone Repeat Cell 24 5yr Metals

Collection Date: 6/3/2014 7:33:00 AM

Lab ID: 1406147-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 2:42:49 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 2:42:49 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 2:42:49 PM	13514
Xylenes, Total	ND	0.096		mg/Kg	1	6/5/2014 2:42:49 PM	13514
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 2:42:49 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	46	30		mg/Kg	20	6/5/2014 2:04:12 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:41:25 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Barium	77	0.099		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Chromium	8.3	0.30		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Copper	5.1	0.30		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Iron	11000	50	B	mg/Kg	50	6/7/2014 12:45:00 PM	13541
Lead	3.4	0.25		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Manganese	120	0.099		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:02:19 PM	13541
Zinc	22	2.5		mg/Kg	1	6/7/2014 2:02:19 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	240	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm **Client Sample ID:** Cell 24 Random Select #3
Project: Vadose Zone Repeat Cell 24 5yr Metals **Collection Date:** 6/3/2014 7:59:00 AM
Lab ID: 1406147-003 **Matrix:** SOIL **Received Date:** 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 3:11:23 PM	13514
Toluene	ND	0.049		mg/Kg	1	6/5/2014 3:11:23 PM	13514
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 3:11:23 PM	13514
Xylenes, Total	ND	0.097		mg/Kg	1	6/5/2014 3:11:23 PM	13514
Surr: 4-Bromofluorobenzene	98.8	80-120		%REC	1	6/5/2014 3:11:23 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	140	30		mg/Kg	20	6/5/2014 3:06:14 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:43:14 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Barium	60	0.099		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Chromium	6.7	0.30		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Copper	4.8	0.30		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Iron	8000	50	B	mg/Kg	50	6/7/2014 12:46:22 PM	13541
Lead	4.4	0.25		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Manganese	110	0.099		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:04:50 PM	13541
Zinc	19	2.5		mg/Kg	1	6/7/2014 2:04:50 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	110	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406147
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 24 5yr Metals

Sample ID	MB-13547	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13547	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406147

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 24 5yr Metals

Sample ID	MB-13523	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13523	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	91.9	80	120			

Sample ID	LCSD-13523	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550621	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	98.9	80	120	7.30	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406147

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 24 5yr Metals

Sample ID	MB-13514	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551209	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-13514	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551210	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	110	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	LCS-13564	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552328	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			

Sample ID	MB-13564	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552329	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406147

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 24 5yr Metals

Sample ID: MB-13546	SampType: MBLK	TestCode: EPA Method 7471: Mercury								
Client ID: PBS	Batch ID: 13546	RunNo: 19099								
Prep Date: 6/5/2014	Analysis Date: 6/6/2014	SeqNo: 551739	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID: LCS-13546	SampType: LCS	TestCode: EPA Method 7471: Mercury								
Client ID: LCSS	Batch ID: 13546	RunNo: 19099								
Prep Date: 6/5/2014	Analysis Date: 6/6/2014	SeqNo: 551740	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.6	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406147

11-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeat Cell 24 5yr Metals

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551639	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551640	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	91.3	80	120			
Barium	23	0.10	25.00	0	92.7	80	120			
Cadmium	23	0.10	25.00	0	90.8	80	120			
Chromium	23	0.30	25.00	0	92.0	80	120			
Copper	24	0.30	25.00	0	97.6	80	120			
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	23	0.10	25.00	0	92.6	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			
Silver	4.6	0.25	5.000	0	92.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552123	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.9	1.0								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552124	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	26	1.0	25.00	0	103	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406147

RcptNo: 1

Received by/date:	<i>[Signature]</i>	<i>06/04/14</i>
Logged By:	Lindsay Mangin	6/4/2014 8:45:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin	6/4/2014 9:50:16 AM <i>[Signature]</i>
Reviewed By:	<i>OS</i>	<i>06/04/14</i>

Chain of Custody

- Custody seals intact on sample bottles? Yes No Not Present
- Is Chain of Custody complete? Yes No Not Present
- How was the sample delivered? FedEx

Log In

- Was an attempt made to cool the samples? Yes No NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- Sample(s) in proper container(s)? Yes No
- Sufficient sample volume for indicated test(s)? Yes No
- Are samples (except VOA and ONG) properly preserved? Yes No
- Was preservative added to bottles? Yes No NA
- VOA vials have zero headspace? Yes No No VOA Vials
- Were any sample containers received broken? Yes No
- Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- Are matrices correctly identified on Chain of Custody? Yes No
- Is it clear what analyses were requested? Yes No
- Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (If applicable)

- Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: J+L Land Farm
 Mailing Address: PO Box 356 Hobbs, NM 88241
 Phone #: 575-631-5765
 email or Fax#: jlr069@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: Vadose zone repeat cell 24 5yr metals on #4
 Project #: _____
 Project Manager: SKIP TAYLOR
Joni ROBERTSON
 Sampler:
 On Ice: Yes No
 Sample Temperature: 4/2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

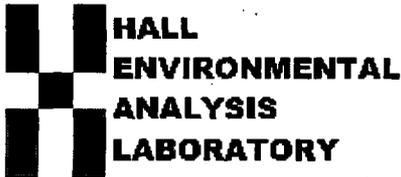
Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Bubbles (Y or N)
6/3/14	0713	soil	cell 24 random select #1	2 4oz glass	ice	1406147	X			X				X				X	
	0733		#2			-002	X			X				X				X	
	0759		#3			-003	X			X				X				X	
	0819		#4			-004	X			X				X				X	
			5yr metals on #4																
			6/10 skip																

Date: 6/3/14 Time: 1200 Relinquished by: [Signature]
 Received by: [Signature] Date: 6/04/14 Time: 0845
 Date: _____ Time: _____ Relinquished by: _____
 Received by: _____ Date: _____ Time: _____

Remarks: *As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 12, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 14 5yr Metals

OrderNo.: 1406148

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light-colored background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406148

Date Reported: 6/12/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 14 Random Select #1

Project: Vadose Zone Repeat Cell 14 5yr Metals

Collection Date: 6/2/2014 8:35:00 AM

Lab ID: 1406148-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 4:08:36 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 4:08:36 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 4:08:36 PM	13514
Xylenes, Total	ND	0.095		mg/Kg	1	6/5/2014 4:08:36 PM	13514
Surr: 4-Bromofluorobenzene	98.9	80-120		%REC	1	6/5/2014 4:08:36 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	420	30		mg/Kg	20	6/5/2014 3:31:03 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:46:55 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	6/11/2014 8:44:27 AM	13541
Barium	300	0.20		mg/Kg	2	6/7/2014 2:08:37 PM	13541
Cadmium	ND	0.10		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Chromium	2.5	0.30		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Copper	1.5	0.30		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Iron	2400	50		mg/Kg	50	6/7/2014 12:49:04 PM	13541
Lead	ND	0.25		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Manganese	20	0.10		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:07:22 PM	13541
Zinc	5.1	2.5		mg/Kg	1	6/7/2014 2:07:22 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	180	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406148

Date Reported: 6/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 14 Random Select #2

Project: Vadose Zone Repeat Cell 14 5yr Metals

Collection Date: 6/2/2014 8:55:00 AM

Lab ID: 1406148-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 4:37:15 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 4:37:15 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 4:37:15 PM	13514
Xylenes, Total	ND	0.095		mg/Kg	1	6/5/2014 4:37:15 PM	13514
Surr: 4-Bromofluorobenzene	99.2	80-120		%REC	1	6/5/2014 4:37:15 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	4800	150		mg/Kg	100	6/9/2014 6:11:26 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 2:48:46 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/6/2014 1:44:31 PM	13541
Barium	140	0.098		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Chromium	4.0	0.29		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Copper	2.3	0.29		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Iron	4500	49		mg/Kg	50	6/7/2014 12:50:40 PM	13541
Lead	0.27	0.24		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Manganese	38	0.098		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:09:52 PM	13541
Zinc	10	2.4		mg/Kg	1	6/7/2014 2:09:52 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	87	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406148

Date Reported: 6/12/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 14 Random Select #3

Project: Vadose Zone Repeat Cell 14 5yr Metals

Collection Date: 6/2/2014 9:30:00 AM

Lab ID: 1406148-003

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 7:00:16 PM	13514
Toluene	ND	0.049		mg/Kg	1	6/5/2014 7:00:16 PM	13514
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 7:00:16 PM	13514
Xylenes, Total	ND	0.098		mg/Kg	1	6/5/2014 7:00:16 PM	13514
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 7:00:16 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	3000	150		mg/Kg	100	6/10/2014 6:02:43 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 2:58:11 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.1	2.5		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Barium	47	0.10		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Cadmium	ND	0.10		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Chromium	8.0	0.30		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Copper	2.6	0.30		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Iron	9700	50		mg/Kg	50	6/7/2014 12:52:03 PM	13541
Lead	1.1	0.25		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Manganese	64	0.10		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:18:43 PM	13541
Zinc	20	2.5		mg/Kg	1	6/7/2014 2:18:43 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 10
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406148

Date Reported: 6/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 14 Random Select #4

Project: Vadose Zone Repeat Cell 14 5yr Metals

Collection Date: 6/2/2014 9:58:00 AM

Lab ID: 1406148-004

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/6/2014 12:49:30 PM	13514
Toluene	ND	0.049		mg/Kg	1	6/6/2014 12:49:30 PM	13514
Ethylbenzene	ND	0.049		mg/Kg	1	6/6/2014 12:49:30 PM	13514
Xylenes, Total	ND	0.098		mg/Kg	1	6/6/2014 12:49:30 PM	13514
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/6/2014 12:49:30 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	42	30		mg/Kg	20	6/5/2014 4:08:18 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 2:59:56 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/6/2014 1:49:57 PM	13541
Barium	160	0.099		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Chromium	4.9	0.30		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Copper	2.7	0.30		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Iron	5400	50		mg/Kg	50	6/7/2014 12:53:24 PM	13541
Lead	1.5	0.25		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Manganese	52	0.099		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:19:59 PM	13541
Zinc	11	2.5		mg/Kg	1	6/7/2014 2:19:59 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	220	20		mg/Kg	1	6/5/2014 12:00:00 PM	13523

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID	MB-13547	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13547	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148
12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID	MB-13523	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13523	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	91.9	80	120			

Sample ID	LCSD-13523	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13523	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550621	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	99	20	100.0	0	98.9	80	120	7.30	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID: MB-13514	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles
Client ID: PBS	Batch ID: 13514	RunNo: 19076
Prep Date: 6/4/2014	Analysis Date: 6/5/2014	SeqNo: 551209 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID: LCS-13514	SampType: LCS	TestCode: EPA Method 8021B: Volatiles
Client ID: LCSS	Batch ID: 13514	RunNo: 19076
Prep Date: 6/4/2014	Analysis Date: 6/5/2014	SeqNo: 551210 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	110	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID	MB-13546	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551739	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13546	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551740	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.6	80	120			

Sample ID	1406148-002AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 14 Random Sel	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551767	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.033	0.1659	0	82.4	75	125			

Sample ID	1406148-002AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 14 Random Sel	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551770	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.13	0.032	0.1631	0	82.1	75	125	2.50	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148
 12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551639	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551640	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	91.3	80	120			
Barium	23	0.10	25.00	0	92.7	80	120			
Cadmium	23	0.10	25.00	0	90.8	80	120			
Chromium	23	0.30	25.00	0	92.0	80	120			
Copper	24	0.30	25.00	0	97.6	80	120			
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	23	0.10	25.00	0	92.6	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			
Silver	4.6	0.25	5.000	0	92.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID	1406148-002AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 14 Random Sel	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551941	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	4.8	23.96	0	107	75	125			

Sample ID	1406148-002AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 14 Random Sel	Batch ID:	13541	RunNo:	19093					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551942	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	27	4.8	24.02	0	112	75	125	5.50	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406148

12-Jun-14

Client: J & L Landfarm
 Project: Vadose Zone Repeat Cell 14 5yr Metals

Sample ID	MB-13541	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552123	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.9	1.0								

Sample ID	LCS-13541	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552124	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	26	1.0	25.00	0	103	80	120			B

Sample ID	1406148-002AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 14 Random Sel	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552187	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	130	0.096	23.96	135.3	-8.82	75	125			S
Cadmium	21	0.096	23.96	0	88.0	75	125			
Chromium	25	0.29	23.96	4.041	87.6	75	125			
Copper	25	0.29	23.96	2.252	96.2	75	125			
Lead	19	0.24	23.96	0.2734	77.9	75	125			
Manganese	71	0.096	23.96	38.34	135	75	125			S
Selenium	18	2.4	23.96	0	74.1	75	125			S
Silver	4.4	0.24	4.791	0	92.4	75	125			
Zinc	30	2.4	23.96	10.11	83.4	75	125			

Sample ID	1406148-002AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 14 Random Sel	Batch ID:	13541	RunNo:	19106					
Prep Date:	6/5/2014	Analysis Date:	6/7/2014	SeqNo:	552188	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	150	0.096	24.02	135.3	76.4	75	125	14.3	20	
Cadmium	21	0.096	24.02	0	89.4	75	125	1.83	20	
Chromium	24	0.29	24.02	4.041	82.3	75	125	5.03	20	
Copper	25	0.29	24.02	2.252	96.4	75	125	0.397	20	
Lead	18	0.24	24.02	0.2734	75.6	75	125	2.62	20	
Manganese	57	0.096	24.02	38.34	75.8	75	125	22.2	20	R
Selenium	18	2.4	24.02	0	73.0	75	125	1.26	20	S
Silver	4.5	0.24	4.804	0	93.1	75	125	1.02	20	
Zinc	27	2.4	24.02	10.11	71.4	75	125	9.89	20	S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406148

RcptNo: 1

Received by/date: [Signature] 06/04/14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 6/4/2014 10:00:15 AM [Signature]

Reviewed By: CS 06/04/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0° C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: J+L Landform

Mailing Address:

P.O. Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: j.lcob@j697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: Vadose zone repeat

cell 14 5yr metals ^{4/6/10}

Project #: _____

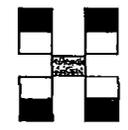
Project Manager: SKIP TAYLOR

JOB ROBERTSON

Sampler: _____

On Ice: Yes No

Sample Temperature: 2 / 7



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX* MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MIRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (FC) NO ₃ , NO ₂ , PO ₄ , SO ₄	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/2/14	0835	soil	cell 14 random select #1	(2) 4oz qts	ice	-001	X			X				X				X	
	0855		#2			-002	X			X				X				X	
	0930		#3			-003	X			X				X				X	
	0958		#4*			-004	X			X				X				X	
			5yr metals																

Date: 6/3/14 Time: 1200 Relinquished by: [Signature]

Received by: [Signature] Date: 06/04/14 Time: 0845

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks: * As, Ba, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Se, Ag, Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 21 5yr Metals

OrderNo.: 1406149

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406149

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 21 Random Select #1

Project: Vadose Zone Repeat Cell 21 5yr Metals

Collection Date: 6/2/2014 7:09:00 AM

Lab ID: 1406149-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 7:57:21 PM	13514
Toluene	ND	0.049		mg/Kg	1	6/5/2014 7:57:21 PM	13514
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 7:57:21 PM	13514
Xylenes, Total	ND	0.097		mg/Kg	1	6/5/2014 7:57:21 PM	13514
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 7:57:21 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	55	30		mg/Kg	20	6/5/2014 4:20:42 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 3:01:42 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/6/2014 1:51:19 PM	13541
Barium	82	0.098		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Chromium	4.6	0.29		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Copper	3.2	0.29		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Iron	5500	49	B	mg/Kg	50	6/7/2014 12:54:46 PM	13541
Lead	1.3	0.25		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Manganese	64	0.098		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:21:13 PM	13541
Zinc	11	2.5		mg/Kg	1	6/7/2014 2:21:13 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	91	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406149

Date Reported: 6/11/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 21 Random Select #2

Project: Vadose Zone Repeat Cell 21 5yr Metals

Collection Date: 6/2/2014 7:28:00 AM

Lab ID: 1406149-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/7/2014 11:17:19 AM	13514
Toluene	ND	0.047		mg/Kg	1	6/7/2014 11:17:19 AM	13514
Ethylbenzene	ND	0.047		mg/Kg	1	6/7/2014 11:17:19 AM	13514
Xylenes, Total	ND	0.095		mg/Kg	1	6/7/2014 11:17:19 AM	13514
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	6/7/2014 11:17:19 AM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	690	30		mg/Kg	20	6/5/2014 4:33:07 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:07:11 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/6/2014 1:52:39 PM	13541
Barium	72	0.099		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Chromium	4.3	0.30		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Copper	2.9	0.30		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Iron	5100	50	B	mg/Kg	50	6/7/2014 12:56:08 PM	13541
Lead	3.1	0.25		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Manganese	54	0.099		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:22:28 PM	13541
Zinc	14	2.5		mg/Kg	1	6/7/2014 2:22:28 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	2500	200		mg/Kg	10	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406149

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 21 Random Select #3

Project: Vadose Zone Repeat Cell 21 5yr Metals

Collection Date: 6/2/2014 7:52:00 AM

Lab ID: 1406149-003

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 9:23:08 PM	13514
Toluene	ND	0.047		mg/Kg	1	6/5/2014 9:23:08 PM	13514
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 9:23:08 PM	13514
Xylenes, Total	ND	0.093		mg/Kg	1	6/5/2014 9:23:08 PM	13514
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 9:23:08 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	160	30		mg/Kg	20	6/5/2014 5:10:20 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:08:58 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/6/2014 1:54:04 PM	13541
Barium	110	0.097		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Cadmium	ND	0.097		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Chromium	4.3	0.29		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Copper	3.0	0.29		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Iron	5100	49	B	mg/Kg	50	6/7/2014 12:57:29 PM	13541
Lead	1.7	0.24		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Manganese	51	0.097		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:23:44 PM	13541
Zinc	12	2.4		mg/Kg	1	6/7/2014 2:23:44 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	69	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 9
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406149

Date Reported: 6/11/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 21 Random Select #4

Project: Vadose Zone Repeat Cell 21 5yr Metals

Collection Date: 6/2/2014 8:13:00 AM

Lab ID: 1406149-004

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 9:51:44 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 9:51:44 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 9:51:44 PM	13514
Xylenes, Total	ND	0.097		mg/Kg	1	6/5/2014 9:51:44 PM	13514
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/5/2014 9:51:44 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	54	30		mg/Kg	20	6/5/2014 5:22:45 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:10:46 PM	13546
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.8		mg/Kg	2	6/7/2014 2:26:12 PM	13541
Barium	76	0.096		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Chromium	4.5	0.29		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Copper	2.3	0.29		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Iron	4900	48	B	mg/Kg	50	6/7/2014 1:04:10 PM	13541
Lead	1.7	0.24		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Manganese	49	0.096		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:24:57 PM	13541
Zinc	12	2.4		mg/Kg	1	6/7/2014 2:24:57 PM	13541
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	440	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406149

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 21 5yr Metals

Sample ID	MB-13547	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13547	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406149

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 21 5yr Metals

Sample ID	MB-13526	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550616	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13526	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550617	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	96.1	80	120			

Sample ID	LCSD-13526	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550618	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	97	20	100.0	0	97.5	80	120	1.43	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406149

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 21 5yr Metals

Sample ID	MB-13514	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551209	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-13514	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551210	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	1.1	0.050	1.000	0	110	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	LCS-13564	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552328	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.2		1.000		116	80	120			
----------------------------	-----	--	-------	--	-----	----	-----	--	--	--

Sample ID	MB-13564	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13564	RunNo:	19108					
Prep Date:	6/6/2014	Analysis Date:	6/7/2014	SeqNo:	552329	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			
----------------------------	-----	--	-------	--	-----	----	-----	--	--	--

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406149
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 21 5yr Metals

Sample ID	MB-13546	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551739	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13546	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13546	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551740	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	99.6	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406149

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 21 5yr Metals

Sample ID MB-13541	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals								
Client ID: PBS	Batch ID: 13541	RunNo: 19093								
Prep Date: 6/5/2014	Analysis Date: 6/6/2014	SeqNo: 551639	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID LCS-13541	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals								
Client ID: LCSS	Batch ID: 13541	RunNo: 19093								
Prep Date: 6/5/2014	Analysis Date: 6/6/2014	SeqNo: 551640	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	91.3	80	120			
Barium	23	0.10	25.00	0	92.7	80	120			
Cadmium	23	0.10	25.00	0	90.8	80	120			
Chromium	23	0.30	25.00	0	92.0	80	120			
Copper	24	0.30	25.00	0	97.6	80	120			
Lead	22	0.25	25.00	0	87.5	80	120			
Manganese	23	0.10	25.00	0	92.6	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			
Silver	4.6	0.25	5.000	0	92.8	80	120			
Zinc	22	2.5	25.00	0	89.9	80	120			

Sample ID MB-13541	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals								
Client ID: PBS	Batch ID: 13541	RunNo: 19106								
Prep Date: 6/5/2014	Analysis Date: 6/7/2014	SeqNo: 552123	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.9	1.0								

Sample ID LCS-13541	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals								
Client ID: LCSS	Batch ID: 13541	RunNo: 19106								
Prep Date: 6/5/2014	Analysis Date: 6/7/2014	SeqNo: 552124	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	26	1.0	25.00	0	103	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406149

RcptNo: 1

Received by/date: [Signature] 06/04/14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 6/4/2014 10:05:08 AM [Signature]

Reviewed By: AS 06/04/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: J & L Landfarm

Mailing Address:
PO Box 356 Hobbs, NM 88241
 Phone #: 575-631-5765
 email or Fax#: jlrob9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name:
Vadose zone repeat cell 21 Syr metals #4 of 6/10

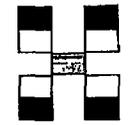
Project #: _____ skip

Project Manager: SKIP TAYLOR
JUDY ROBERTSON

Sampler: Sho Shu

On Ice: Yes No

Sample Temperature: 4.2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALS No.	STEX + MTBE + TMBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Rubbles (Y or N)
<u>6/2/14</u>	<u>0709</u>	<u>soil</u>	<u>cell 21 random select #1</u>	<u>4oz g/lbs</u>	<u>ice</u>	<u>14061219</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
	<u>0728</u>		<u>#2</u>			<u>-002</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
	<u>0752</u>		<u>#3</u>			<u>-003</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
	<u>0813</u>		<u>#4</u>			<u>-004</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
			<u>Syr metals #4</u>																

Date: 6/3/14 Time: 1200 Relinquished by: Sho Shu

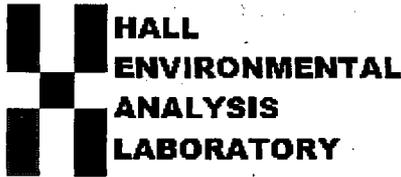
Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: 6/10/14 Time: 0845

Received by: _____ Date: _____ Time: _____

Remarks:
 * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 12, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 31 5yr Metals

OrderNo.: 1406154

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light-colored background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406154

Date Reported: 6/12/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 31 Random Select #1

Project: Vadose Zone Repeat Cell 31 5yr Metals

Collection Date: 6/3/2014 10:02:00 AM

Lab ID: 1406154-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 10:20:17 PM	13514
Toluene	ND	0.047		mg/Kg	1	6/5/2014 10:20:17 PM	13514
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 10:20:17 PM	13514
Xylenes, Total	ND	0.093		mg/Kg	1	6/5/2014 10:20:17 PM	13514
Surr: 4-Bromofluorobenzene	100	80-120		%REC	1	6/5/2014 10:20:17 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	210	30		mg/Kg	20	6/5/2014 5:35:10 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:18:42 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.5	2.4		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Barium	99	0.097		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Cadmium	ND	0.097		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Chromium	4.5	0.29		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Copper	3.2	0.29		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Iron	5400	49		mg/Kg	50	6/7/2014 1:05:34 PM	13542
Lead	0.87	0.24		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Manganese	66	0.097		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:27:25 PM	13542
Zinc	11	2.4		mg/Kg	1	6/7/2014 2:27:25 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	64	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406154

Date Reported: 6/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 31 Random Select #2

Project: Vadose Zone Repeat Cell 31 5yr Metals

Collection Date: 6/3/2014 10:28:00 AM

Lab ID: 1406154-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 10:48:50 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 10:48:50 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 10:48:50 PM	13514
Xylenes, Total	ND	0.096		mg/Kg	1	6/5/2014 10:48:50 PM	13514
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 10:48:50 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	160	30		mg/Kg	20	6/5/2014 5:47:35 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	0.12	0.032		mg/Kg	1	6/6/2014 3:20:31 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.5	2.4		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Barium	94	0.096		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Chromium	4.6	0.29		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Copper	3.1	0.29		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Iron	5300	48		mg/Kg	50	6/7/2014 1:06:54 PM	13542
Lead	0.74	0.24		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Manganese	63	0.096		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:29:55 PM	13542
Zinc	12	2.4		mg/Kg	1	6/7/2014 2:29:55 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	37	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406154
 Date Reported: 6/12/2014

CLIENT: J & L Landfarm **Client Sample ID:** Cell 31 Random Select #3
Project: Vadose Zone Repeat Cell 31 5yr Metals **Collection Date:** 6/3/2014 10:50:00 AM
Lab ID: 1406154-003 **Matrix:** SOIL **Received Date:** 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/5/2014 11:17:21 PM	13514
Toluene	ND	0.050		mg/Kg	1	6/5/2014 11:17:21 PM	13514
Ethylbenzene	ND	0.050		mg/Kg	1	6/5/2014 11:17:21 PM	13514
Xylenes, Total	ND	0.10		mg/Kg	1	6/5/2014 11:17:21 PM	13514
Surr: 4-Bromofluorobenzene	99.7	80-120		%REC	1	6/5/2014 11:17:21 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	2000	75		mg/Kg	50	6/9/2014 6:36:15 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.16		mg/Kg	5	6/9/2014 1:35:35 PM	13572
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	8.1	2.4		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Barium	170	0.096		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Chromium	2.3	0.29		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Copper	2.0	0.29		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Iron	2700	48		mg/Kg	50	6/7/2014 1:08:16 PM	13542
Lead	ND	0.24		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Manganese	27	0.096		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:36:11 PM	13542
Zinc	4.8	2.4		mg/Kg	1	6/7/2014 2:36:11 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406154

Date Reported: 6/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 31 Random Select #4

Project: Vadose Zone Repeat Cell 31 5yr Metals

Collection Date: 6/3/2014 11:15:00 AM

Lab ID: 1406154-004

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 11:45:53 PM	13514
Toluene	ND	0.048		mg/Kg	1	6/5/2014 11:45:53 PM	13514
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 11:45:53 PM	13514
Xylenes, Total	ND	0.096		mg/Kg	1	6/5/2014 11:45:53 PM	13514
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/5/2014 11:45:53 PM	13514
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	660	30		mg/Kg	20	6/5/2014 6:12:24 PM	13547
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:27:52 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.6	2.5		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Barium	140	0.10		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Cadmium	ND	0.10		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Chromium	3.8	0.30		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Copper	2.5	0.30		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Iron	4500	50		mg/Kg	50	6/7/2014 1:09:37 PM	13542
Lead	ND	0.25		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Manganese	48	0.10		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:46:22 PM	13542
Zinc	9.1	2.5		mg/Kg	1	6/7/2014 2:46:22 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406154

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 31 5yr Metals

Sample ID	MB-13547	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13547	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13547	RunNo:	19087					
Prep Date:	6/5/2014	Analysis Date:	6/5/2014	SeqNo:	551441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406154

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 31 5yr Metals

Sample ID	MB-13526	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550616	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13526	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550617	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	96.1	80	120			

Sample ID	LCSD-13526	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550618	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	97	20	100.0	0	97.5	80	120	1.43	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406154

12-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeat Cell 31 5yr Metals

Sample ID	MB-13514	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551209	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-13514	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13514	RunNo:	19076					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551210	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	110	80	120			
Toluene	1.0	0.050	1.000	0	101	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.9	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406154

12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 31 5yr Metals

Sample ID	MB-13549	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551741	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13549	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	96.4	80	120			

Sample ID	MB-13572	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13572	RunNo:	19124					
Prep Date:	6/6/2014	Analysis Date:	6/9/2014	SeqNo:	552840	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13572	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13572	RunNo:	19124					
Prep Date:	6/6/2014	Analysis Date:	6/9/2014	SeqNo:	552841	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	98.6	80	120			

Sample ID	1406154-003AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 31 Random Sel	Batch ID:	13572	RunNo:	19124					
Prep Date:	6/6/2014	Analysis Date:	6/9/2014	SeqNo:	552954	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.17	0.1692	0	104	75	125			

Sample ID	1406154-003AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 31 Random Sel	Batch ID:	13572	RunNo:	19124					
Prep Date:	6/6/2014	Analysis Date:	6/9/2014	SeqNo:	552955	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.19	0.16	0.1641	0	113	75	125	5.25	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406154
 12-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 31 5yr Metals

Sample ID 1406154-003AMS		SampType: MS		TestCode: EPA Method 6010B: Soil Metals						
Client ID: Cell 31 Random Sel		Batch ID: 13542		RunNo: 19106						
Prep Date: 6/5/2014		Analysis Date: 6/7/2014		SeqNo: 552206		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	30	2.5	24.54	8.084	91.3	75	125			
Barium	160	0.098	24.54	170.9	-38.5	75	125			S
Cadmium	22	0.098	24.54	0	90.5	75	125			
Chromium	22	0.29	24.54	2.348	80.4	75	125			
Copper	26	0.29	24.54	1.973	98.1	75	125			
Lead	19	0.25	24.54	0	76.0	75	125			
Manganese	43	0.098	24.54	27.11	66.0	75	125			S
Selenium	17	2.5	24.54	0	70.1	75	125			S
Silver	4.7	0.25	4.908	0	94.7	75	125			
Zinc	23	2.5	24.54	4.751	72.9	75	125			S

Sample ID 1406154-003AMSD		SampType: MSD		TestCode: EPA Method 6010B: Soil Metals						
Client ID: Cell 31 Random Sel		Batch ID: 13542		RunNo: 19106						
Prep Date: 6/5/2014		Analysis Date: 6/7/2014		SeqNo: 552207		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	31	2.5	24.55	8.084	93.3	75	125	1.60	20	
Barium	190	0.098	24.55	170.9	72.4	75	125	15.6	20	S
Cadmium	23	0.098	24.55	0	91.7	75	125	1.41	20	
Chromium	23	0.29	24.55	2.348	83.5	75	125	3.41	20	
Copper	26	0.29	24.55	1.973	98.8	75	125	0.689	20	
Lead	19	0.25	24.55	0	76.6	75	125	0.786	20	
Manganese	50	0.098	24.55	27.11	91.3	75	125	13.4	20	
Selenium	18	2.5	24.55	0	74.7	75	125	6.37	20	S
Silver	4.7	0.25	4.910	0	94.9	75	125	0.229	20	
Zinc	23	2.5	24.55	4.751	76.2	75	125	3.54	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406154

RcptNo: 1

Received by/date: *[Signature]* October 14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM *[Signature]*

Completed By: Lindsay Mangin 6/4/2014 10:29:10 AM *[Signature]*

Reviewed By: AS 06/04/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 8.0°C Yes No NA
- 6. Sample(s) In proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain of Custody Record

Client: J & L handfarm

Mailing Address: PO Box 356 Hobbs NM 88241

Phone #: 575-631-5765

email or Fax#: jlrob9687@aol.com

QA/QC Package: Standard Level 4 (Full Validation)

Accreditation: NELAP Other _____

EDD (Type) _____

Turnaround time: Standard Rush

Project Name: Vadose zone report of 6/10
cell 31 5yr metals on 4/24 skip

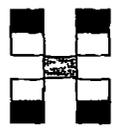
Project #: _____

Project Manager: SKIP TAYLOR
JUDY ROBERTSON

Sampler: _____

Onsite: Yes No

Sample Temperature: 4/2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Analysis Request	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals
	X			X				X				X
	X			X				X				X
	X			X				X				X
	X			X				X				X

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
6/3/14	1002	soil	cell 31 random select #1	2 4oz glass	ice	1406154 / -001
	1028		#2			-002
	1050		#3			-003
	1115		#4			-004
			5yr metal on 4/24 skip			

Date: 6/3/13 Time: 1200 Relinquished by: [Signature]

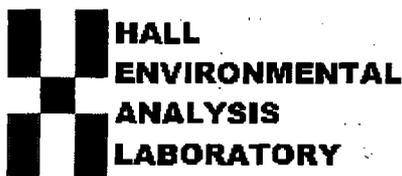
Received by: [Signature] Date: 06/04/14 Time: 0845

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 12 5yr Metals

OrderNo.: 1406155

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406155

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 12 Random Select #1

Project: Vadose Zone Repeat Cell 12 5yr Metals

Collection Date: 6/2/2014 10:38:00 AM

Lab ID: 1406155-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 3:43:48 PM	13515
Toluene	ND	0.047		mg/Kg	1	6/5/2014 3:43:48 PM	13515
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 3:43:48 PM	13515
Xylenes, Total	ND	0.093		mg/Kg	1	6/5/2014 3:43:48 PM	13515
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	6/5/2014 3:43:48 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	220	30		mg/Kg	20	6/9/2014 1:13:39 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:29:44 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Barium	60	0.099		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Chromium	5.0	0.30		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Copper	4.2	0.30		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Iron	5700	50		mg/Kg	50	6/7/2014 1:11:00 PM	13542
Lead	1.3	0.25		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Manganese	65	0.099		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 2:52:41 PM	13542
Zinc	12	2.5		mg/Kg	1	6/7/2014 2:52:41 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	770	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406155

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 12 Random Select #2

Project: Vadose Zone Repeat Cell 12 5yr Metals

Collection Date: 6/2/2014 11:02:00 AM

Lab ID: 1406155-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 5:14:34 PM	13515
Toluene	ND	0.049		mg/Kg	1	6/5/2014 5:14:34 PM	13515
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 5:14:34 PM	13515
Xylenes, Total	ND	0.098		mg/Kg	1	6/5/2014 5:14:34 PM	13515
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 5:14:34 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	ND	30		mg/Kg	20	6/9/2014 2:03:17 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:35:09 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Barium	58	0.096		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Chromium	4.3	0.29		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Copper	2.3	0.29		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Iron	5200	48		mg/Kg	50	6/7/2014 1:12:22 PM	13542
Lead	9.3	0.24		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Manganese	59	0.096		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:55:09 PM	13542
Zinc	11	2.4		mg/Kg	1	6/7/2014 2:55:09 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	46	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406155

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 12 Random Select #3

Project: Vadose Zone Repeat Cell 12 5yr Metals

Collection Date: 6/2/2014 11:30:00 AM

Lab ID: 1406155-003

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 5:44:42 PM	13515
Toluene	ND	0.049		mg/Kg	1	6/5/2014 5:44:42 PM	13515
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 5:44:42 PM	13515
Xylenes, Total	ND	0.097		mg/Kg	1	6/5/2014 5:44:42 PM	13515
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/5/2014 5:44:42 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	49	30		mg/Kg	20	6/9/2014 2:40:31 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:36:54 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Barium	69	0.096		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Chromium	3.8	0.29		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Copper	3.3	0.29		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Iron	4300	48		mg/Kg	50	6/7/2014 1:13:44 PM	13542
Lead	1.1	0.24		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Manganese	54	0.096		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 2:57:38 PM	13542
Zinc	9.1	2.4		mg/Kg	1	6/7/2014 2:57:38 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406155

Date Reported: 6/11/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** J & L Landfarm**Client Sample ID:** Cell 12 Random Select #4**Project:** Vadose Zone Repeat Cell 12 5yr Metals**Collection Date:** 6/2/2014 12:02:00 PM**Lab ID:** 1406155-004**Matrix:** SOIL**Received Date:** 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/5/2014 6:14:51 PM	13515
Toluene	ND	0.049		mg/Kg	1	6/5/2014 6:14:51 PM	13515
Ethylbenzene	ND	0.049		mg/Kg	1	6/5/2014 6:14:51 PM	13515
Xylenes, Total	ND	0.098		mg/Kg	1	6/5/2014 6:14:51 PM	13515
Surr: 4-Bromofluorobenzene	95.1	80-120		%REC	1	6/5/2014 6:14:51 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	250	30		mg/Kg	20	6/9/2014 2:52:55 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:38:38 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Barium	45	0.099		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Chromium	6.5	0.30		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Copper	4.2	0.30		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Iron	8600	50		mg/Kg	50	6/7/2014 1:15:04 PM	13542
Lead	1.7	0.25		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Manganese	92	0.099		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 3:00:08 PM	13542
Zinc	17	2.5		mg/Kg	1	6/7/2014 3:00:08 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406155

11-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeat Cell 12 5yr Metals

Sample ID	MB-13585	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13585	RunNo:	19158					
Prep Date:	6/9/2014	Analysis Date:	6/9/2014	SeqNo:	553664	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13585	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13585	RunNo:	19158					
Prep Date:	6/9/2014	Analysis Date:	6/9/2014	SeqNo:	553665	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406155
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 12 5yr Metals

Sample ID	MB-13526	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550616	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13526	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550617	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	96.1	80	120			

Sample ID	LCSD-13526	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550618	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	97	20	100.0	0	97.5	80	120	1.43	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406155

11-Jun-14

Client: J & L Landfarm
 Project: Vadose Zone Repeat Cell 12 5yr Metals

Sample ID	MB-13515	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13515	RunNo:	19061					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551186	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	LCS-13515	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13515	RunNo:	19061					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551187	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	90.2	80	120			
Toluene	0.88	0.050	1.000	0	88.2	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	1406155-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 12 Random Sel	Batch ID:	13515	RunNo:	19061					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551189	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.047	0.9320	0.01907	111	67.4	135			
Toluene	1.0	0.047	0.9320	0.01972	110	72.6	135			
Ethylbenzene	1.1	0.047	0.9320	0	115	69.4	143			
Xylenes, Total	3.4	0.093	2.796	0.02935	119	70.8	144			
Surr: 4-Bromofluorobenzene	1.0		0.9320		108	80	120			

Sample ID	1406155-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 12 Random Sel	Batch ID:	13515	RunNo:	19061					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	551190	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.047	0.9337	0.01907	102	67.4	135	7.99	20	
Toluene	0.98	0.047	0.9337	0.01972	103	72.6	135	6.97	20	
Ethylbenzene	1.0	0.047	0.9337	0	107	69.4	143	7.80	20	
Xylenes, Total	3.1	0.093	2.801	0.02935	110	70.8	144	7.23	20	
Surr: 4-Bromofluorobenzene	0.96		0.9337		103	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406155

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 12 5yr Metals

Sample ID	MB-13549	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551741	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13549	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	96.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406155

RcptNo: 1

Received by/date: [Signature] 06/04/14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 6/4/2014 10:33:45 AM [Signature]

Reviewed By: CS 06/04/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0° C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler information

Cooler No	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Client: J & L Lawfirm

Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlrub9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other

EDD (Type)

Turn-Around Time:

Standard Rush

Project Name: Vadose Zone report

cell 12 5yr metals

Project #:

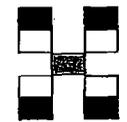
Project Manager:

JUNI ROBERTSON

Sampler: Ship In

On Ice: Yes No

Sample Temperature: 4.7



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals*	Air Ruthies (Y or N)
<u>6/2/14</u>	<u>1028</u>	<u>soil</u>	<u>cell #12 random select #1</u>	<u>(2) 4oz pkts</u>	<u>ice</u>	<u>1406155</u>	<u>X</u>			<u>X</u>				<u>X</u>				<u>X</u>	
	<u>1102</u>		<u>" " #2</u>			<u>-002</u>	<u>X</u>			<u>X</u>				<u>X</u>				<u>X</u>	
	<u>1130</u>		<u>" " #3</u>			<u>-003</u>	<u>X</u>			<u>X</u>				<u>X</u>				<u>X</u>	
	<u>1202</u>		<u>" " #4</u>			<u>-004</u>	<u>X</u>			<u>X</u>				<u>X</u>				<u>X</u>	

Date: 6/3/14 Time: 1200 Relinquished by: Ship In

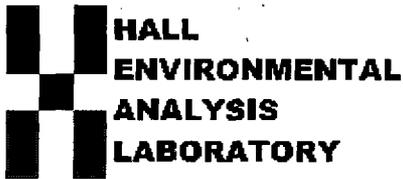
Received by: [Signature] Date: 6/14 Time: 0815

Date: 6/3/14 Time: 1200 Relinquished by: Ship In

Received by: [Signature] Date: 6/14 Time: 0815

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 11, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeat Cell 22 5yr Metals

OrderNo.: 1406156

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/4/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406156

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 22 Random Select #1

Project: Vadose Zone Repeat Cell 22 5yr Metals

Collection Date: 6/3/2014 5:38:00 AM

Lab ID: 1406156-001

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 6:44:51 PM	13515
Toluene	ND	0.048		mg/Kg	1	6/5/2014 6:44:51 PM	13515
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 6:44:51 PM	13515
Xylenes, Total	ND	0.097		mg/Kg	1	6/5/2014 6:44:51 PM	13515
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/5/2014 6:44:51 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	120	30		mg/Kg	20	6/9/2014 3:05:19 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:40:23 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Barium	47	0.099		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Chromium	5.0	0.30		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Copper	3.3	0.30		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Iron	5700	50		mg/Kg	50	6/7/2014 1:16:27 PM	13542
Lead	1.5	0.25		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Manganese	66	0.099		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 3:02:39 PM	13542
Zinc	12	2.5		mg/Kg	1	6/7/2014 3:02:39 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	970	200		mg/Kg	10	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406156

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 22 Random Select #2

Project: Vadose Zone Repeat Cell 22 5yr Metals

Collection Date: 6/3/2014 6:01:00 AM

Lab ID: 1406156-002

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/5/2014 7:14:56 PM	13515
Toluene	ND	0.048		mg/Kg	1	6/5/2014 7:14:56 PM	13515
Ethylbenzene	ND	0.048		mg/Kg	1	6/5/2014 7:14:56 PM	13515
Xylenes, Total	ND	0.095		mg/Kg	1	6/5/2014 7:14:56 PM	13515
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/5/2014 7:14:56 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	ND	30		mg/Kg	20	6/9/2014 3:17:43 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 3:42:08 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Barium	65	0.096		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Cadmium	ND	0.096		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Chromium	4.3	0.29		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Copper	2.2	0.29		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Iron	5500	48		mg/Kg	50	6/7/2014 1:25:43 PM	13542
Lead	3.8	0.24		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Manganese	58	0.096		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Selenium	ND	2.4		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Silver	ND	0.24		mg/Kg	1	6/7/2014 3:08:57 PM	13542
Zinc	11	2.4		mg/Kg	1	6/7/2014 3:08:57 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	48	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406156

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 22 Random Select #3

Project: Vadose Zone Repeat Cell 22 5yr Metals

Collection Date: 6/3/2014 6:26:00 AM

Lab ID: 1406156-003

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/5/2014 10:46:02 PM	13515
Toluene	ND	0.047		mg/Kg	1	6/5/2014 10:46:02 PM	13515
Ethylbenzene	ND	0.047		mg/Kg	1	6/5/2014 10:46:02 PM	13515
Xylenes, Total	ND	0.095		mg/Kg	1	6/5/2014 10:46:02 PM	13515
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	6/5/2014 10:46:02 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	48	30		mg/Kg	20	6/9/2014 3:30:08 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/6/2014 3:43:55 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	2.8	2.5		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Barium	80	0.098		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Cadmium	ND	0.098		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Chromium	3.5	0.29		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Copper	3.1	0.29		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Iron	4000	49		mg/Kg	50	6/7/2014 1:27:06 PM	13542
Lead	1.2	0.25		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Manganese	56	0.098		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 3:11:27 PM	13542
Zinc	8.4	2.5		mg/Kg	1	6/7/2014 3:11:27 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406156

Date Reported: 6/11/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 22 Random Select #4

Project: Vadose Zone Repeat Cell 22 5yr Metals

Collection Date: 6/3/2014 6:50:00 AM

Lab ID: 1406156-004

Matrix: SOIL

Received Date: 6/4/2014 8:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	6/5/2014 11:16:06 PM	13515
Toluene	ND	0.046		mg/Kg	1	6/5/2014 11:16:06 PM	13515
Ethylbenzene	ND	0.046		mg/Kg	1	6/5/2014 11:16:06 PM	13515
Xylenes, Total	ND	0.091		mg/Kg	1	6/5/2014 11:16:06 PM	13515
Surr: 4-Bromofluorobenzene	96.8	80-120		%REC	1	6/5/2014 11:16:06 PM	13515
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	160	30		mg/Kg	20	6/9/2014 3:42:33 PM	13585
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/6/2014 3:46:17 PM	13549
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Barium	41	0.099		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Cadmium	ND	0.099		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Chromium	6.3	0.30		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Copper	3.8	0.30		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Iron	7700	49		mg/Kg	50	6/7/2014 1:28:29 PM	13542
Lead	1.7	0.25		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Manganese	91	0.099		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Selenium	ND	2.5		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Silver	ND	0.25		mg/Kg	1	6/7/2014 3:13:56 PM	13542
Zinc	16	2.5		mg/Kg	1	6/7/2014 3:13:56 PM	13542
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/5/2014 12:00:00 PM	13526

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406156

11-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeat Cell 22 5yr Metals

Sample ID	MB-13585	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13585	RunNo:	19158					
Prep Date:	6/9/2014	Analysis Date:	6/9/2014	SeqNo:	553664	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13585	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13585	RunNo:	19158					
Prep Date:	6/9/2014	Analysis Date:	6/9/2014	SeqNo:	553665	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.6	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406156

11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 22 5yr Metals

Sample ID	MB-13526	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550616	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13526	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550617	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	96	20	100.0	0	96.1	80	120			

Sample ID	LCSD-13526	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13526	RunNo:	19048					
Prep Date:	6/4/2014	Analysis Date:	6/5/2014	SeqNo:	550618	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	97	20	100.0	0	97.5	80	120	1.43	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406156
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 22 5yr Metals

Sample ID MB-13515	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 13515		RunNo: 19061							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551186		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID LCS-13515	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 13515		RunNo: 19061							
Prep Date: 6/4/2014	Analysis Date: 6/5/2014		SeqNo: 551187		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	90.2	80	120			
Toluene	0.88	0.050	1.000	0	88.2	80	120			
Ethylbenzene	0.90	0.050	1.000	0	89.5	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406156
 11-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeat Cell 22 5yr Metals

Sample ID	MB-13549	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551741	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13549	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13549	RunNo:	19099					
Prep Date:	6/5/2014	Analysis Date:	6/6/2014	SeqNo:	551742	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	96.4	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406156

RcptNo: 1

Received by/date: [Signature] 06/04/14

Logged By: Lindsay Mangin 6/4/2014 8:45:00 AM [Signature]

Completed By: Lindsay Mangin 6/4/2014 10:44:40 AM [Signature]

Reviewed By: CS 06/04/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

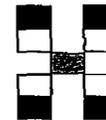
17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: J&L handfarm

Mailing Address: Po Box 356 Hobbs, nm 88241

Phone #: 575-631-5765

email or Fax#: jlrab 9697@ aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Standard Rush

Project Name: Vadose zone repeat cell 22, 5yr metals *of 6/10 per day*

Project #: _____

Project Manager: Joy Robertson *J. Robertson*

Sampler: Shirley Labor

On ice: Yes No

Sample temperature: 4.2

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Rishles (Y or N)
6/3/14	0538	Soil	cell # 22 random select #1	4oz soil 2	ice	14002156	X			X				X				X	
	0601		#2			-002	X			X				X				X	
	0626		#3			-003	X			X				X				X	
	0650		#4			-004	X			X				X				X	
			<u>5yr metals as #4</u>																
			<i>of 6/10 per day Labor</i>																

Date: 6/3/14 Time: 1200 Relinquished by: [Signature]

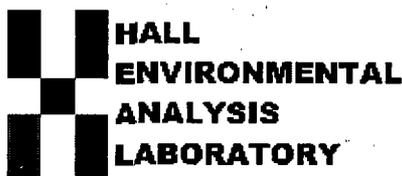
Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: 6/3/14 Time: 0845

Received by: _____ Date: _____ Time: _____

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Cell 26 Vadose Zone Repeat 5 Yr Metals

OrderNo.: 1406542

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406542

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 26 Random Select #1

Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Collection Date: 6/10/2014 9:10:00 AM

Lab ID: 1406542-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/13/2014 4:14:55 PM	13664
Toluene	ND	0.050		mg/Kg	1	6/13/2014 4:14:55 PM	13664
Ethylbenzene	ND	0.050		mg/Kg	1	6/13/2014 4:14:55 PM	13664
Xylenes, Total	ND	0.099		mg/Kg	1	6/13/2014 4:14:55 PM	13664
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	6/13/2014 4:14:55 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	150	30		mg/Kg	20	6/12/2014 1:04:06 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:13:08 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	8.5	2.4		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Barium	230	0.096		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Cadmium	ND	0.096		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Chromium	1.5	0.29		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Copper	1.2	0.29		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Iron	1500	9.6	B	mg/Kg	10	6/17/2014 1:09:27 PM	13695
Lead	ND	0.24		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Manganese	14	0.096		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Selenium	ND	2.4		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Silver	ND	0.24		mg/Kg	1	6/14/2014 2:17:53 PM	13695
Zinc	4.4	2.4		mg/Kg	1	6/14/2014 2:17:53 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	29	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406542

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 26 Random Select #2

Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Collection Date: 6/10/2014 9:31:00 AM

Lab ID: 1406542-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/13/2014 4:45:15 PM	13664
Toluene	ND	0.049		mg/Kg	1	6/13/2014 4:45:15 PM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2014 4:45:15 PM	13664
Xylenes, Total	ND	0.097		mg/Kg	1	6/13/2014 4:45:15 PM	13664
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	6/13/2014 4:45:15 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	16	1.5		mg/Kg	1	6/13/2014 5:02:34 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:18:29 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.6	2.5		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Barium	190	0.10		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Chromium	1.9	0.30		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Copper	1.0	0.30		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Iron	1900	10	B	mg/Kg	10	6/17/2014 1:10:48 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Manganese	19	0.10		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:32:50 PM	13695
Zinc	4.7	2.5		mg/Kg	1	6/14/2014 2:32:50 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	24	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406542

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 26 Random Select #3

Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Collection Date: 6/10/2014 9:49:00 AM

Lab ID: 1406542-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/13/2014 5:15:22 PM	13664
Toluene	ND	0.049		mg/Kg	1	6/13/2014 5:15:22 PM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2014 5:15:22 PM	13664
Xylenes, Total	ND	0.098		mg/Kg	1	6/13/2014 5:15:22 PM	13664
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/13/2014 5:15:22 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	16	1.5		mg/Kg	1	6/13/2014 5:14:58 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:20:19 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	7.6	2.5		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Barium	220	0.10		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Chromium	2.7	0.30		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Copper	1.4	0.30		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Iron	2800	20	B	mg/Kg	20	6/17/2014 1:12:12 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Manganese	18	0.10		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:35:39 PM	13695
Zinc	6.3	2.5		mg/Kg	1	6/14/2014 2:35:39 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 3 of 10
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406542

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 26 Random Select #4

Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Collection Date: 6/10/2014 10:10:00 AM

Lab ID: 1406542-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/13/2014 5:45:32 PM	13664
Toluene	ND	0.048		mg/Kg	1	6/13/2014 5:45:32 PM	13664
Ethylbenzene	ND	0.048		mg/Kg	1	6/13/2014 5:45:32 PM	13664
Xylenes, Total	ND	0.096		mg/Kg	1	6/13/2014 5:45:32 PM	13664
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	6/13/2014 5:45:32 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	15	1.5		mg/Kg	1	6/13/2014 5:27:24 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:22:06 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	7.4	2.5		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Barium	170	0.10		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Chromium	2.7	0.30		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Copper	1.4	0.30		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Iron	2800	20	B	mg/Kg	20	6/17/2014 1:13:34 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Manganese	19	0.10		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:38:27 PM	13695
Zinc	6.3	2.5		mg/Kg	1	6/14/2014 2:38:27 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	26	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542
 23-Jun-14

Client: J & L Landfarm
Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID	MB-13663	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556437	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13663	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556438	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542

23-Jun-14

Client: J & L Landfarm
Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID MB-13659	SampType: MBLK	TestCode: EPA Method 418.1: TPH								
Client ID: PBS	Batch ID: 13659	RunNo: 19206								
Prep Date: 6/12/2014	Analysis Date: 6/12/2014	SeqNo: 555439	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID LCS-13659	SampType: LCS	TestCode: EPA Method 418.1: TPH								
Client ID: LCSS	Batch ID: 13659	RunNo: 19206								
Prep Date: 6/12/2014	Analysis Date: 6/12/2014	SeqNo: 555440	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	92.3	80	120			

Sample ID LCSD-13659	SampType: LCSD	TestCode: EPA Method 418.1: TPH								
Client ID: LCSS02	Batch ID: 13659	RunNo: 19206								
Prep Date: 6/12/2014	Analysis Date: 6/12/2014	SeqNo: 555441	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	80	120	8.83	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542

23-Jun-14

Client: J & L Landfarm
Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID	MB-13664	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557176	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-13664	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557177	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.1	80	120			
Toluene	0.91	0.050	1.000	0	91.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1406542-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 26 Random Sel	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557179	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	0.9911	0	98.1	67.4	135			
Toluene	0.97	0.050	0.9911	0.02066	95.6	72.6	135			
Ethylbenzene	0.99	0.050	0.9911	0.02314	97.9	69.4	143			
Xylenes, Total	3.1	0.099	2.973	0.05531	102	70.8	144			
Surr: 4-Bromofluorobenzene	1.1		0.9911		112	80	120			

Sample ID	1406542-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 26 Random Sel	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557181	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	0.9950	0	97.7	67.4	135	0.00915	20	
Toluene	0.98	0.050	0.9950	0.02066	96.9	72.6	135	1.68	20	
Ethylbenzene	1.0	0.050	0.9950	0.02314	98.9	69.4	143	1.39	20	
Xylenes, Total	3.1	0.10	2.985	0.05531	103	70.8	144	1.81	20	
Surr: 4-Bromofluorobenzene	1.1		0.9950		115	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542

23-Jun-14

Client: J & L Landfarm
Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID	MB-13709	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557827	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13709	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557828	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Sample ID	1406542-001BMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 26 Random Sel	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557830	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.033	0.1685	0.006718	78.5	75	125			

Sample ID	1406542-001BMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell 26 Random Sel	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557831	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.13	0.032	0.1593	0.006718	79.6	75	125	4.06	20	

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542

23-Jun-14

Client: J & L Landfarm

Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557923	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557924	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.8	80	120			
Barium	24	0.10	25.00	0	94.9	80	120			
Cadmium	24	0.10	25.00	0	94.6	80	120			
Chromium	24	0.30	25.00	0	95.2	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	91.4	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.1	80	120			
Silver	4.8	0.25	5.000	0	96.8	80	120			
Zinc	23	2.5	25.00	0	92.4	80	120			

Sample ID	1406542-001BMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 26 Random Sel	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557928	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	30	2.4	24.17	8.527	89.6	75	125			
Barium	230	0.097	24.17	228.0	26.3	75	125			S
Cadmium	21	0.097	24.17	0	88.3	75	125			
Chromium	21	0.29	24.17	1.495	79.9	75	125			
Copper	24	0.29	24.17	1.247	95.1	75	125			
Lead	17	0.24	24.17	0	71.8	75	125			S
Manganese	36	0.097	24.17	14.08	88.8	75	125			
Selenium	17	2.4	24.17	0	68.9	75	125			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406542
 23-Jun-14

Client: J & L Landfarm
Project: Cell 26 Vadose Zone Repeat 5 Yr Metals

Sample ID	1406542-001BMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 26 Random Sel	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557928	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	4.2	0.24	4.834	0	86.3	75	125			
Zinc	22	2.4	24.17	4.370	72.9	75	125			S

Sample ID	1406542-001BMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell 26 Random Sel	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557929	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	32	2.6	25.65	8.527	93.1	75	125	7.08	20	
Cadmium	24	0.10	25.65	0	91.6	75	125	9.62	20	
Chromium	23	0.31	25.65	1.495	82.7	75	125	8.78	20	
Copper	27	0.31	25.65	1.247	99.1	75	125	9.56	20	
Lead	19	0.26	25.65	0	75.1	75	125	10.4	20	
Manganese	37	0.10	25.65	14.08	89.0	75	125	3.80	20	
Selenium	18	2.6	25.65	0	69.2	75	125	6.34	20	S
Silver	4.6	0.26	5.130	0	90.5	75	125	10.7	20	
Zinc	24	2.6	25.65	4.370	75.7	75	125	7.78	20	

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558464	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	2.4	1.0								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558848	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.9	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM Work Order Number: 1406542 RcptNo: 1

Received by/date *Jim 06/12/14*

Logged By: Ashley Gallegos 6/12/2014 9:00:00 AM *AG*

Completed By: Ashley Gallegos 6/12/2014 9:30:35 AM *AG*

Reviewed By: *[Signature]* 06/12/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? **FedEx**

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No # of preserved bottles checked for pH: Adjusted? (<2 or >12 unless noted)
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Client: J+L landfarm

Mailing Address:

PO Box 356 Hobbs nm 88241

Phone #: 575-631-5765

email or Fax#: j.lrob9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: cell 26
vadose zone repeat
Syr metals

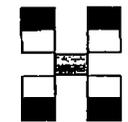
Project #:

Project Manager:
Judy Roberts

Sampler:

On Ice: Yes No

Sample Temperature: 48



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/10/14	0910	soil	cell 26 random select #1	4oz glass 2	ice	1400542 -001	X			X				X				X	
	0931		#2			-002	X			X				X				X	
	0949		#3			-003	X			X				X				X	
	1010		#4			-004	X			X				X				X	

Date: 6/11/14 Time: 1130 Relinquished by: [Signature]

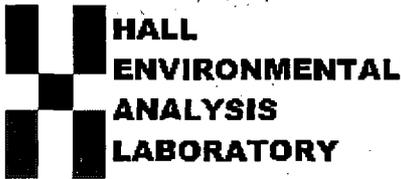
Received by: [Signature] Date: 6/12/14 Time: 0900

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Random Repeats 5 yr Metals

OrderNo.: 1406543

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406543

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 33 Random Select #1

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 6:35:00 AM

Lab ID: 1406543-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/13/2014 6:15:44 PM	13664
Toluene	ND	0.047		mg/Kg	1	6/13/2014 6:15:44 PM	13664
Ethylbenzene	ND	0.047		mg/Kg	1	6/13/2014 6:15:44 PM	13664
Xylenes, Total	ND	0.093		mg/Kg	1	6/13/2014 6:15:44 PM	13664
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	6/13/2014 6:15:44 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	59	30		mg/Kg	20	6/12/2014 2:43:22 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.031		mg/Kg	1	6/16/2014 1:23:54 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.6	2.5		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Barium	410	0.20		mg/Kg	2	6/14/2014 2:48:01 PM	13695
Cadmium	ND	0.098		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Chromium	1.6	0.29		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Copper	0.66	0.29		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Iron	1600	9.8	B	mg/Kg	10	6/17/2014 1:14:56 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Manganese	15	0.098		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:41:18 PM	13695
Zinc	3.8	2.5		mg/Kg	1	6/14/2014 2:41:18 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: , * Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 O RSD is greater than RSDlimit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 P Sample pH greater than 2.
 RL Reporting Detection Limit

Analytical Report

Lab Order 1406543

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 33 Random Select #2

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 6:55:00 AM

Lab ID: 1406543-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	6/13/2014 6:45:57 PM	13664
Toluene	ND	0.046		mg/Kg	1	6/13/2014 6:45:57 PM	13664
Ethylbenzene	ND	0.046		mg/Kg	1	6/13/2014 6:45:57 PM	13664
Xylenes, Total	ND	0.092		mg/Kg	1	6/13/2014 6:45:57 PM	13664
Surr: 4-Bromofluorobenzene	98.7	80-120		%REC	1	6/13/2014 6:45:57 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	71	30		mg/Kg	20	6/12/2014 2:55:47 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:25:43 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.5	2.5		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Barium	760	0.51		mg/Kg	5	6/17/2014 1:16:19 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Chromium	2.7	0.30		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Copper	2.2	0.30		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Iron	2800	20	B	mg/Kg	20	6/17/2014 1:17:42 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Manganese	36	0.10		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:49:25 PM	13695
Zinc	7.1	2.5		mg/Kg	1	6/14/2014 2:49:25 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	75	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406543
 Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 33 Random Select #3

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 7:15:00 AM

Lab ID: 1406543-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/13/2014 11:17:26 PM	13664
Toluene	ND	0.049		mg/Kg	1	6/13/2014 11:17:26 PM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/13/2014 11:17:26 PM	13664
Xylenes, Total	ND	0.098		mg/Kg	1	6/13/2014 11:17:26 PM	13664
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	6/13/2014 11:17:26 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	660	30		mg/Kg	20	6/12/2014 3:08:11 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:31:15 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	7.4	2.5		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Barium	600	0.51		mg/Kg	5	6/17/2014 1:19:04 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Chromium	1.8	0.30		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Copper	1.1	0.61		mg/Kg	2	6/14/2014 2:53:36 PM	13695
Iron	1700	10	B	mg/Kg	10	6/17/2014 1:20:27 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Manganese	23	0.10		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:52:11 PM	13695
Zinc	5.0	2.5		mg/Kg	1	6/14/2014 2:52:11 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	27	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406543

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 33 Random Select #4

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 7:29:00 AM

Lab ID: 1406543-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	6/13/2014 11:47:34 PM	13664
Toluene	ND	0.050		mg/Kg	1	6/13/2014 11:47:34 PM	13664
Ethylbenzene	ND	0.050		mg/Kg	1	6/13/2014 11:47:34 PM	13664
Xylenes, Total	ND	0.10		mg/Kg	1	6/13/2014 11:47:34 PM	13664
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/13/2014 11:47:34 PM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	220	30		mg/Kg	20	6/12/2014 3:20:36 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:33:03 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	5.8	2.5		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Barium	340	0.20		mg/Kg	2	6/14/2014 2:56:25 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Chromium	2.3	0.30		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Copper	1.3	0.30		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Iron	2200	10	B	mg/Kg	10	6/17/2014 1:27:06 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Manganese	29	0.10		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Silver	ND	0.25		mg/Kg	1	6/14/2014 2:55:00 PM	13695
Zinc	5.9	2.5		mg/Kg	1	6/14/2014 2:55:00 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406543
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID MB-13663	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBS	Batch ID: 13663	RunNo: 19245								
Prep Date: 6/12/2014	Analysis Date: 6/12/2014	SeqNo: 556437	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID LCS-13663	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSS	Batch ID: 13663	RunNo: 19245								
Prep Date: 6/12/2014	Analysis Date: 6/12/2014	SeqNo: 556438	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406543

23-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13659	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555439	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13659	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	92.3	80	120			

Sample ID	LCSD-13659	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	80	120	8.83	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406543

23-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13664	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557176	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-13664	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557177	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.1	80	120			
Toluene	0.91	0.050	1.000	0	91.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406543

23-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13709	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557827	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13709	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557828	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406543

23-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557923	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557924	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.8	80	120			
Barium	24	0.10	25.00	0	94.9	80	120			
Cadmium	24	0.10	25.00	0	94.6	80	120			
Chromium	24	0.30	25.00	0	95.2	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	91.4	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.1	80	120			
Silver	4.8	0.25	5.000	0	96.8	80	120			
Zinc	23	2.5	25.00	0	92.4	80	120			

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558464	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	2.4	1.0								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558848	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.9	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: **J & L LANDFARM** Work Order Number: **1406543** RcptNo: **1**

Received by/date: *Sum* *06/12/14*

Logged By: **Ashley Gallegos** 6/12/2014 9:00:00 AM *AG*

Completed By: **Ashley Gallegos** 6/12/2014 9:39:07 AM *AG*

Reviewed By: *[Signature]* *06/12/14*

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

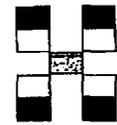
18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Client: S+L Land farm
 Mailing Address: PO Box 356 Hobbs, NM 88241
 Phone #: 575-631-5765
 email or Fax#: j1rob9697@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: Vadose random repeats
5 yr metals
 Project #:
 Project Manager: Judy Roberts
 Sampler:
 On Ice No
 Sample Temperature: 4/8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

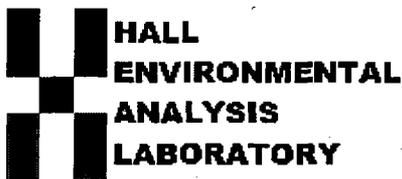
Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBE's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/10/14	0635	Soil	cell 33 random select #1	2 4oz glass	ice	1406593	X			X				X				X	
	0655		#2				X			X				X				X	
	0715		#3				X			X				X				X	
	0729		#4				X			X				X				X	

Date: 6/11/14 Time: 1130 Relinquished by: [Signature]
 Received by: [Signature] Date: 6/12/14 Time: 0900
 Relinquished by: _____ Received by: _____ Date: _____ Time: _____

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 25, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Random Repeats 5 yr Metals

OrderNo.: 1406544

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406544

Date Reported: 6/25/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 32 Random Select #1

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 5:15:00 AM

Lab ID: 1406544-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	6/14/2014 12:17:48 AM	13664
Toluene	ND	0.046		mg/Kg	1	6/14/2014 12:17:48 AM	13664
Ethylbenzene	ND	0.046		mg/Kg	1	6/14/2014 12:17:48 AM	13664
Xylenes, Total	ND	0.093		mg/Kg	1	6/14/2014 12:17:48 AM	13664
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/14/2014 12:17:48 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	110	30		mg/Kg	20	6/12/2014 3:33:00 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.034		mg/Kg	1	6/16/2014 1:34:54 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.8	2.4		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Barium	99	0.097		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Cadmium	ND	0.097		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Chromium	4.5	0.29		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Copper	3.5	0.29		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Iron	5600	49	B	mg/Kg	50	6/17/2014 1:28:30 PM	13695
Lead	0.88	0.24		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Manganese	61	0.097		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Selenium	ND	2.4		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Silver	ND	0.24		mg/Kg	1	6/14/2014 2:57:48 PM	13695
Zinc	12	2.4		mg/Kg	1	6/14/2014 2:57:48 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	290	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406544

Date Reported: 6/25/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 32 Random Select #2

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 5:35:00 AM

Lab ID: 1406544-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/14/2014 12:48:00 AM	13664
Toluene	ND	0.047		mg/Kg	1	6/14/2014 12:48:00 AM	13664
Ethylbenzene	ND	0.047		mg/Kg	1	6/14/2014 12:48:00 AM	13664
Xylenes, Total	ND	0.095		mg/Kg	1	6/14/2014 12:48:00 AM	13664
Surr: 4-Bromofluorobenzene	95.5	80-120		%REC	1	6/14/2014 12:48:00 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	ND	30		mg/Kg	20	6/12/2014 3:45:24 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:36:43 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	5.7	2.5		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Barium	310	0.20		mg/Kg	2	6/14/2014 3:08:45 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Chromium	1.7	0.30		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Copper	1.3	0.30		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Iron	1700	10	B	mg/Kg	10	6/17/2014 1:31:13 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Manganese	18	0.10		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 3:07:18 PM	13695
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:29:50 PM	13695
Zinc	4.5	2.5		mg/Kg	1	6/14/2014 3:07:18 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	28	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406544

Date Reported: 6/25/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 32 Random Select #3

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 5:55:00 AM

Lab ID: 1406544-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	6/14/2014 1:18:02 AM	13664
Toluene	ND	0.046		mg/Kg	1	6/14/2014 1:18:02 AM	13664
Ethylbenzene	ND	0.046		mg/Kg	1	6/14/2014 1:18:02 AM	13664
Xylenes, Total	ND	0.092		mg/Kg	1	6/14/2014 1:18:02 AM	13664
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	6/14/2014 1:18:02 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	21	1.5		mg/Kg	1	6/23/2014 3:33:01 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:38:34 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	5.7	2.4		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Barium	370	0.19		mg/Kg	2	6/14/2014 3:11:33 PM	13695
Cadmium	ND	0.096		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Chromium	2.3	0.29		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Copper	1.9	0.29		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Iron	2300	19	B	mg/Kg	20	6/17/2014 1:34:01 PM	13695
Lead	ND	0.24		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Manganese	32	0.096		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Selenium	ND	2.4		mg/Kg	1	6/14/2014 3:10:09 PM	13695
Silver	ND	0.24		mg/Kg	1	6/17/2014 1:32:37 PM	13695
Zinc	6.4	2.4		mg/Kg	1	6/14/2014 3:10:09 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	23	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 32 Random Select #4

Project: Vadose Random Repeats 5 yr Metals

Collection Date: 6/10/2014 6:18:00 AM

Lab ID: 1406544-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/14/2014 1:48:11 AM	13664
Toluene	ND	0.049		mg/Kg	1	6/14/2014 1:48:11 AM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/14/2014 1:48:11 AM	13664
Xylenes, Total	ND	0.098		mg/Kg	1	6/14/2014 1:48:11 AM	13664
Surr: 4-Bromofluorobenzene	98.4	80-120		%REC	1	6/14/2014 1:48:11 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	33	30		mg/Kg	20	6/12/2014 4:35:02 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:40:25 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	12		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Barium	88	0.48		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Cadmium	ND	0.48		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Chromium	9.9	1.4		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Copper	6.3	1.4		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Iron	11000	48	B	mg/Kg	50	6/17/2014 1:36:47 PM	13695
Lead	3.2	1.2		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Manganese	160	0.48		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Selenium	ND	12		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Silver	ND	1.2		mg/Kg	5	6/17/2014 1:35:25 PM	13695
Zinc	30	12		mg/Kg	5	6/17/2014 1:35:25 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13659

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406544

25-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13663	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556437	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13663	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556438	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406544

25-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13659	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555439	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13659	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555440	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	92	20	100.0	0	92.3	80	120			

Sample ID	LCSD-13659	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13659	RunNo:	19206					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	555441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	101	80	120	8.83	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406544

25-Jun-14

Client: J & L Landfarm

Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13664	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557176	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-13664	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557177	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.1	80	120			
Toluene	0.91	0.050	1.000	0	91.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406544

25-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13709	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557827	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13709	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557828	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406544
25-Jun-14

Client: J & L Landfarm
Project: Vadose Random Repeats 5 yr Metals

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	PBS	Batch ID:	13695	RunNo:	19303						
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557923	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	ND	2.5									
Barium	ND	0.10									
Cadmium	ND	0.10									
Chromium	ND	0.30									
Copper	ND	0.30									
Lead	ND	0.25									
Manganese	ND	0.10									
Selenium	ND	2.5									
Silver	ND	0.25									
Zinc	ND	2.5									

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	LCSS	Batch ID:	13695	RunNo:	19303						
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557924	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	24	2.5	25.00	0	95.8	80	120				
Barium	24	0.10	25.00	0	94.9	80	120				
Cadmium	24	0.10	25.00	0	94.6	80	120				
Chromium	24	0.30	25.00	0	95.2	80	120				
Copper	25	0.30	25.00	0	101	80	120				
Lead	23	0.25	25.00	0	91.4	80	120				
Manganese	24	0.10	25.00	0	95.1	80	120				
Selenium	23	2.5	25.00	0	91.1	80	120				
Silver	4.8	0.25	5.000	0	96.8	80	120				
Zinc	23	2.5	25.00	0	92.4	80	120				

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	PBS	Batch ID:	13695	RunNo:	19320						
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558464	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	2.4	1.0									

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	LCSS	Batch ID:	13695	RunNo:	19320						
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558848	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	25	1.0	25.00	0	99.9	80	120			B	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406544

RcptNo: 1

Received by/date: *Jim* 06/12/14

Logged By: Ashley Gallegos

6/12/2014 9:00:00 AM

AG

Completed By: Ashley Gallegos

6/12/2014 9:41:56 AM

AG

Reviewed By: *[Signature]*

06/12/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No Adjusted?
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jrob9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: Vadose zone repeat

5yr metals

Project #:

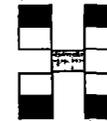
Project Manager:

Judy Roberts

Sampler:

On Ice Yes No

Sample Temperature: 4.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Ruthles (Y or N)
6/10/14	0515	soil	cell 32 random select #1	40296 2	ice	1406544 -001	X			X				X				X	
	0535		#2			-002	Y			X				X				X	
	0555		#3			-003	X			X				+				X	
	0618		#4			-004	X			X				+				X	

Date: 6/10/14 Time: 1130 Relinquished by: [Signature]

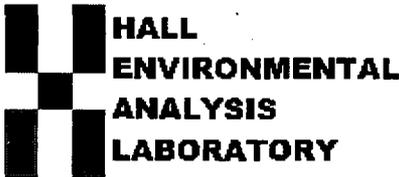
Received by: [Signature] Date: 06/12/14 Time: 0900

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks:

*
AS Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeats 5 yr Metals Cell 30

OrderNo.: 1406546

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406546

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 30 Random Select #1

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Collection Date: 6/10/2014 5:30:00 AM

Lab ID: 1406546-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	6/14/2014 2:18:17 AM	13664
Toluene	ND	0.046		mg/Kg	1	6/14/2014 2:18:17 AM	13664
Ethylbenzene	ND	0.046		mg/Kg	1	6/14/2014 2:18:17 AM	13664
Xylenes, Total	ND	0.092		mg/Kg	1	6/14/2014 2:18:17 AM	13664
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/14/2014 2:18:17 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	210	30		mg/Kg	20	6/12/2014 4:47:27 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:42:10 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	7.1	2.5		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Barium	290	0.20		mg/Kg	2	6/14/2014 3:17:15 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Chromium	1.5	0.31		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Copper	1.2	0.31		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Iron	1600	10	B	mg/Kg	10	6/17/2014 1:39:37 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Manganese	24	0.10		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 3:15:53 PM	13695
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:38:11 PM	13695
Zinc	4.1	2.5		mg/Kg	1	6/14/2014 3:15:53 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406546

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 30 Random Select #2

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Collection Date: 6/10/2014 5:51:00 AM

Lab ID: 1406546-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/14/2014 2:51:01 AM	13664
Toluene	ND	0.049		mg/Kg	1	6/14/2014 2:51:01 AM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/14/2014 2:51:01 AM	13664
Xylenes, Total	ND	0.098		mg/Kg	1	6/14/2014 2:51:01 AM	13664
Surr: 4-Bromofluorobenzene	94.1	80-120		%REC	1	6/14/2014 2:51:01 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	34	30		mg/Kg	20	6/12/2014 4:59:51 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:43:54 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.9	2.5		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Barium	150	0.099		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Cadmium	ND	0.099		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Chromium	2.9	0.30		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Copper	1.3	0.30		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Iron	3100	20	B	mg/Kg	20	6/17/2014 1:47:40 PM	13695
Lead	ND	0.25		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Manganese	32	0.099		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/14/2014 3:18:38 PM	13695
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:46:13 PM	13695
Zinc	7.0	2.5		mg/Kg	1	6/14/2014 3:18:38 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406546

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 30 Random Select #3

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Collection Date: 6/10/2014 6:14:00 AM

Lab ID: 1406546-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/14/2014 3:21:12 AM	13664
Toluene	ND	0.049		mg/Kg	1	6/14/2014 3:21:12 AM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/14/2014 3:21:12 AM	13664
Xylenes, Total	ND	0.097		mg/Kg	1	6/14/2014 3:21:12 AM	13664
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	6/14/2014 3:21:12 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	440	30		mg/Kg	20	6/12/2014 5:12:16 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 1:45:40 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	7.8	2.5		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Barium	390	0.51		mg/Kg	5	6/17/2014 1:50:25 PM	13695
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Chromium	1.3	0.31		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Copper	0.87	0.31		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Iron	1200	5.1	B	mg/Kg	5	6/17/2014 1:50:25 PM	13695
Lead	ND	0.25		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Manganese	13	0.10		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:48:58 PM	13695
Zinc	3.0	2.5		mg/Kg	1	6/17/2014 1:48:58 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406546

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 30 Random Select #4

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Collection Date: 6/10/2014 6:29:00 AM

Lab ID: 1406546-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/14/2014 3:51:23 AM	13664
Toluene	ND	0.047		mg/Kg	1	6/14/2014 3:51:23 AM	13664
Ethylbenzene	ND	0.047		mg/Kg	1	6/14/2014 3:51:23 AM	13664
Xylenes, Total	ND	0.094		mg/Kg	1	6/14/2014 3:51:23 AM	13664
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	6/14/2014 3:51:23 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	100	30		mg/Kg	20	6/12/2014 5:24:40 PM	13663
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:47:26 PM	13709
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.4	2.5		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Barium	600	0.50		mg/Kg	5	6/17/2014 1:53:09 PM	13695
Cadmium	ND	0.099		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Chromium	2.8	0.30		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Copper	2.3	0.30		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Iron	2600	20	B	mg/Kg	20	6/18/2014 11:04:26 AM	13695
Lead	ND	0.25		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Manganese	39	0.099		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Selenium	ND	2.5		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:51:47 PM	13695
Zinc	7.5	2.5		mg/Kg	1	6/17/2014 1:51:47 PM	13695
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	46	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406546

23-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Sample ID	MB-13663	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556437	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13663	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13663	RunNo:	19245					
Prep Date:	6/12/2014	Analysis Date:	6/12/2014	SeqNo:	556438	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.1	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406546

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 30

Sample ID	MB-13667	SampType	MBLK	TestCode	EPA Method 418.1: TPH					
Client ID	PBS	Batch ID	13667	RunNo	19239					
Prep Date	6/12/2014	Analysis Date	6/13/2014	SeqNo	556588	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13667	SampType	LCS	TestCode	EPA Method 418.1: TPH					
Client ID	LCSS	Batch ID	13667	RunNo	19239					
Prep Date	6/12/2014	Analysis Date	6/13/2014	SeqNo	556589	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	105	80	120			

Sample ID	LCSD-13667	SampType	LCSD	TestCode	EPA Method 418.1: TPH					
Client ID	LCSS02	Batch ID	13667	RunNo	19239					
Prep Date	6/12/2014	Analysis Date	6/13/2014	SeqNo	556590	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	104	80	120	1.32	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406546

23-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeats 5 yr Metals Cell 30

Sample ID	MB-13664	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557176	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-13664	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557177	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.1	80	120			
Toluene	0.91	0.050	1.000	0	91.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406546

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 30

Sample ID	MB-13709	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557827	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13709	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13709	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557828	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406546

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 30

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557923	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557924	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.8	80	120			
Barium	24	0.10	25.00	0	94.9	80	120			
Cadmium	24	0.10	25.00	0	94.6	80	120			
Chromium	24	0.30	25.00	0	95.2	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	91.4	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.1	80	120			
Silver	4.8	0.25	5.000	0	96.8	80	120			
Zinc	23	2.5	25.00	0	92.4	80	120			

Sample ID	MB-13695	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558464	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	2.4	1.0								

Sample ID	LCS-13695	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13695	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558848	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.9	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1408546

RcptNo: 1

Received by/date: *LM* *06/12/14*

Logged By: Ashley Gallegos

6/12/2014 9:00:00 AM

Completed By: Ashley Gallegos

6/12/2014 9:44:28 AM

Reviewed By: *[Signature]*

06/12/14

Chain of Custody

1. Custody seals intact on sample bottles? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? FedEx

Log In

4. Was an attempt made to cool the samples? Yes No NA
5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
6. Sample(s) in proper container(s)? Yes No
7. Sufficient sample volume for indicated test(s)? Yes No
8. Are samples (except VOA and ONG) properly preserved? Yes No
9. Was preservative added to bottles? Yes No NA
10. VOA vials have zero headspace? Yes No No VOA Vials
11. Were any sample containers received broken? Yes No
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH:
 (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
14. Is it clear what analyses were requested? Yes No
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Client: J+L hand farm

Mailing Address: PO Box 356 Hobbs Nm 88241

Phone #: 575-631-5765

email or Fax#: jrob9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: Vadose zone repeats

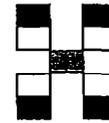
Syr metals cell 30

Project #:

Project Manager: Judy Roberts

Sampler:
 On Ice Yes No

Sample Temperature: 4.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

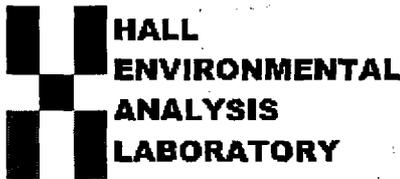
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)
6/11/14	0530	soil	Cell # 30 random select #1	2 4oz glass	ice	1400546 -001	X			X				X				X	
	0551		#2			-002	X			X				X				X	
	0614		#3			-003	X			X				X				X	
	0629		#4			-004	X			X				X				X	

Date: 6/11/14 Time: 1130 Relinquished by: [Signature]

Date: 6/12/14 Time: 0900 Received by: [Signature]

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeats 5 yr Metals Cell 7

OrderNo.: 1406548

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406548
 Date Reported: 6/23/2014

CLIENT: J & L Landfarm **Client Sample ID:** Cell #7 Random Select #1
Project: Vadose Zone Repeats 5 yr Metals Cell 7 **Collection Date:** 6/11/2014 8:22:00 AM
Lab ID: 1406548-001 **Matrix:** SOIL **Received Date:** 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/14/2014 6:21:51 AM	13664
Toluene	ND	0.049		mg/Kg	1	6/14/2014 6:21:51 AM	13664
Ethylbenzene	ND	0.049		mg/Kg	1	6/14/2014 6:21:51 AM	13664
Xylenes, Total	ND	0.098		mg/Kg	1	6/14/2014 6:21:51 AM	13664
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	6/14/2014 6:21:51 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	100	30		mg/Kg	20	6/13/2014 12:29:30 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 1:56:29 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Barium	76	0.10		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Chromium	4.1	0.30		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Copper	1.3	0.30		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Iron	3900	20	B	mg/Kg	20	6/17/2014 2:06:51 PM	13696
Lead	0.73	0.25		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Manganese	41	0.10		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 1:55:52 PM	13696
Zinc	8.7	2.5		mg/Kg	1	6/17/2014 1:55:52 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	38	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 1 of 10
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406548

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #7 Random Select #2

Project: Vadose Zone Repeats 5 yr Metals Cell 7

Collection Date: 6/11/2014 8:39:00 AM

Lab ID: 1406548-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/14/2014 6:51:54 AM	13664
Toluene	ND	0.048		mg/Kg	1	6/14/2014 6:51:54 AM	13664
Ethylbenzene	ND	0.048		mg/Kg	1	6/14/2014 6:51:54 AM	13664
Xylenes, Total	ND	0.096		mg/Kg	1	6/14/2014 6:51:54 AM	13664
Surr: 4-Bromofluorobenzene	98.2	80-120		%REC	1	6/14/2014 6:51:54 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	440	30		mg/Kg	20	6/13/2014 1:06:44 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:01:55 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.6	2.5		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Barium	300	0.50		mg/Kg	5	6/17/2014 2:09:39 PM	13696
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Chromium	1.6	0.30		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Copper	2.1	0.30		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Iron	1100	5.0	B	mg/Kg	5	6/17/2014 2:09:39 PM	13696
Lead	ND	0.25		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Manganese	17	0.10		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:08:13 PM	13696
Zinc	3.6	2.5		mg/Kg	1	6/17/2014 2:08:13 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406548

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #7 Random Select #3

Project: Vadose Zone Repeats 5 yr Metals Cell 7

Collection Date: 6/11/2014 9:02:00 AM

Lab ID: 1406548-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/14/2014 7:21:59 AM	13664
Toluene	ND	0.047		mg/Kg	1	6/14/2014 7:21:59 AM	13664
Ethylbenzene	ND	0.047		mg/Kg	1	6/14/2014 7:21:59 AM	13664
Xylenes, Total	ND	0.094		mg/Kg	1	6/14/2014 7:21:59 AM	13664
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	6/14/2014 7:21:59 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	57	30		mg/Kg	20	6/13/2014 1:19:09 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:03:43 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	9.3	2.5		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Barium	310	0.20		mg/Kg	2	6/17/2014 2:12:21 PM	13696
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Chromium	1.9	0.30		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Copper	1.1	0.30		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Iron	1600	10	B	mg/Kg	10	6/17/2014 2:13:43 PM	13696
Lead	ND	0.25		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Manganese	17	0.10		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:11:00 PM	13696
Zinc	4.8	2.5		mg/Kg	1	6/17/2014 2:11:00 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	43	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406548
 Date Reported: 6/23/2014

CLIENT: J & L Landfarm
 Project: Vadose Zone Repeats 5 yr Metals Cell 7
 Lab ID: 1406548-004 Matrix: SOIL

Client Sample ID: Cell #7 Random Select #4
 Collection Date: 6/11/2014 9:31:00 AM
 Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/14/2014 7:52:07 AM	13664
Toluene	ND	0.047		mg/Kg	1	6/14/2014 7:52:07 AM	13664
Ethylbenzene	ND	0.047		mg/Kg	1	6/14/2014 7:52:07 AM	13664
Xylenes, Total	ND	0.094		mg/Kg	1	6/14/2014 7:52:07 AM	13664
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/14/2014 7:52:07 AM	13664
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	50	30		mg/Kg	20	6/13/2014 1:56:24 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/16/2014 2:05:33 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.4		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Barium	83	0.096		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Cadmium	ND	0.096		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Chromium	4.5	0.29		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Copper	1.9	0.29		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Iron	4600	19	B	mg/Kg	20	6/17/2014 2:17:47 PM	13696
Lead	0.82	0.24		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Manganese	50	0.096		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Selenium	ND	2.4		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Silver	ND	0.24		mg/Kg	1	6/17/2014 2:15:04 PM	13696
Zinc	9.8	2.4		mg/Kg	1	6/17/2014 2:15:04 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
E Value above quantitation range	H Holding times for preparation or analysis exceeded	
J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 4 of 10
O RSD is greater than RSDlimit	P Sample pH greater than 2.	
R RPD outside accepted recovery limits	RL Reporting Detection Limit	
S Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Sample ID	MB-13690	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13690	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Sample ID	MB-13667	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556588	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13667	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556589	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	105	80	120			

Sample ID	LCSD-13667	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556590	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	104	80	120	1.32	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Sample ID	MB-13664	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557176	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		111	80	120			

Sample ID	LCS-13664	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13664	RunNo:	19246					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	557177	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.1	80	120			
Toluene	0.91	0.050	1.000	0	91.2	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Sample ID	MB-13710	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557851	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13710	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557852	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	108	80	120			

Sample ID	1406548-001BMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #7 Random Sel	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557854	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.032	0.1602	0.005521	103	75	125			

Sample ID	1406548-001BMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #7 Random Sel	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557855	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1684	0.005521	99.3	75	125	0.857	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557922	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	95.1	80	120			
Cadmium	24	0.10	25.00	0	94.3	80	120			
Chromium	24	0.30	25.00	0	94.9	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	90.5	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.2	80	120			
Silver	4.9	0.25	5.000	0	97.1	80	120			
Zinc	23	2.5	25.00	0	93.1	80	120			

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558462	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558463	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.6	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406548

23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 7

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	2.5	25.15	0	101	75	125			
Barium	100	0.10	25.15	75.99	106	75	125			
Cadmium	23	0.10	25.15	0	90.1	75	125			
Chromium	26	0.30	25.15	4.055	89.2	75	125			
Copper	26	0.30	25.15	1.277	96.4	75	125			
Lead	22	0.25	25.15	0.7271	84.9	75	125			
Manganese	65	0.10	25.15	40.75	94.9	75	125			
Selenium	20	2.5	25.15	0	79.7	75	125			
Silver	4.6	0.25	5.031	0	92.2	75	125			
Zinc	30	2.5	25.15	8.680	86.1	75	125			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.19	0	100	75	125	0.832	20	
Barium	190	0.10	25.19	75.99	444	75	125	58.6	20	RS
Cadmium	22	0.10	25.19	0	86.3	75	125	4.17	20	
Chromium	25	0.30	25.19	4.055	83.9	75	125	5.10	20	
Copper	27	0.30	25.19	1.277	103	75	125	5.96	20	
Lead	21	0.25	25.19	0.7271	81.6	75	125	3.62	20	
Manganese	1100	0.10	25.19	40.75	4320	75	125	178	20	ERS
Selenium	19	2.5	25.19	0	77.0	75	125	3.22	20	
Silver	4.6	0.25	5.037	0	92.0	75	125	0.0537	20	
Zinc	33	2.5	25.19	8.680	97.6	75	125	9.20	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM Work Order Number: 1406548 RptNo: 1

Received by/date: *Rum 06/12/14*

Logged By: Ashley Gallegos 6/12/2014 9:00:00 AM *AG*

Completed By: Ashley Gallegos 6/12/2014 9:47:33 AM *AG*

Reviewed By: *[Signature]* 06/12/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C.	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm
 Mailing Address: PO Box 356 Hobbs nm 88241
 Phone #: 575-631-5763
 email or Fax#: jlrob9697@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)

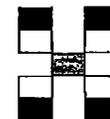
Turn-Around Time:
 Standard Rush

Project Name: Vadose zone repeats
5 yr metals cell 7
 Project #:

Project Manager:

Accreditation
 NELAP Other _____
 EDD (Type) _____

Sampler:
 On Ice Yes No
 Sample Temperature: 4°C



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals	Air Bubbles (Y or N)
6/11/14	0822	soil	Cell #7 random select #1	4oz glass 2'	ice	1406548 -001	X			X				X				X	
	0839		#2			-002	X			X				X				X	
	0902		#3			-003	X			X				X				X	
	0931		#4			-004	X			X				X				X	

Date: 6/11/14 Time: 1130 Relinquished by: Shay's Jls

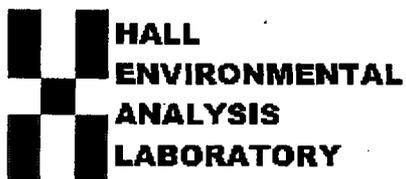
Received by: [Signature] Date: 06/12/14 Time: 0900

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts

J & L Landfarm

PO Box 356

Hobbs, NM 88241

TEL: (575) 631-5765

FAX

RE: Cell 23 Vadose Zone Repeat 5 yr Metals

OrderNo.: 1406550

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell

Supervisor

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406550

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 23 Random Select #1

Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Collection Date: 6/10/2014 7:55:00 AM

Lab ID: 1406550-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	6/16/2014 1:34:31 PM	13666
Toluene	ND	0.047		mg/Kg	1	6/16/2014 1:34:31 PM	13666
Ethylbenzene	ND	0.047		mg/Kg	1	6/16/2014 1:34:31 PM	13666
Xylenes, Total	ND	0.094		mg/Kg	1	6/16/2014 1:34:31 PM	13666
Surr: 4-Bromofluorobenzene	99.4	80-120		%REC	1	6/16/2014 1:34:31 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	410	30		mg/Kg	20	6/13/2014 2:08:49 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.031		mg/Kg	1	6/16/2014 2:07:24 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Barium	38	0.099		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Cadmium	ND	0.099		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Chromium	4.4	0.30		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Copper	2.5	0.30		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Iron	4300	50	B	mg/Kg	50	6/18/2014 11:05:24 AM	13696
Lead	1.1	0.25		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Manganese	61	0.099		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:24:29 PM	13696
Zinc	12	2.5		mg/Kg	1	6/17/2014 2:24:29 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm Client Sample ID: Cell 23 Random Select #2
 Project: Cell 23 Vadose Zone Repeat 5 yr Metals Collection Date: 6/10/2014 8:15:00 AM
 Lab ID: 1406550-002 Matrix: SOIL Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/16/2014 2:03:11 PM	13666
Toluene	ND	0.049		mg/Kg	1	6/16/2014 2:03:11 PM	13666
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2014 2:03:11 PM	13666
Xylenes, Total	ND	0.097		mg/Kg	1	6/16/2014 2:03:11 PM	13666
Surr: 4-Bromofluorobenzene	97.8	80-120		%REC	1	6/16/2014 2:03:11 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	160	30		mg/Kg	20	6/13/2014 2:21:13 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.031		mg/Kg	1	6/16/2014 2:09:14 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	6.4	2.5		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Barium	200	0.098		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Cadmium	ND	0.098		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Chromium	2.4	0.29		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Copper	2.1	0.29		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Iron	2200	9.8	B	mg/Kg	10	6/17/2014 2:29:59 PM	13696
Lead	ND	0.25		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Manganese	28	0.098		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:28:37 PM	13696
Zinc	6.2	2.5		mg/Kg	1	6/17/2014 2:28:37 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406550

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell 23 Random Select #3

Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Collection Date: 6/10/2014 8:33:00 AM

Lab ID: 1406550-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/16/2014 2:31:54 PM	13666
Toluene	ND	0.049		mg/Kg	1	6/16/2014 2:31:54 PM	13666
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2014 2:31:54 PM	13666
Xylenes, Total	ND	0.097		mg/Kg	1	6/16/2014 2:31:54 PM	13666
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	6/16/2014 2:31:54 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	170	30		mg/Kg	20	6/13/2014 2:33:37 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.034		mg/Kg	1	6/16/2014 2:14:51 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	4.3	2.5		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Barium	160	0.099		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Cadmium	ND	0.099		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Chromium	3.4	0.30		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Copper	2.7	0.30		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Iron	3600	20	B	mg/Kg	20	6/17/2014 2:32:46 PM	13696
Lead	1.1	0.25		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Manganese	42	0.099		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:31:22 PM	13696
Zinc	9.4	2.5		mg/Kg	1	6/17/2014 2:31:22 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	130	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406550

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell 23 Random Select #4

Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Collection Date: 6/10/2014 8:52:00 AM

Lab ID: 1406550-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/16/2014 3:00:37 PM	13666
Toluene	ND	0.048		mg/Kg	1	6/16/2014 3:00:37 PM	13666
Ethylbenzene	ND	0.048		mg/Kg	1	6/16/2014 3:00:37 PM	13666
Xylenes, Total	ND	0.095		mg/Kg	1	6/16/2014 3:00:37 PM	13666
Surr: 4-Bromofluorobenzene	99.4	80-120		%REC	1	6/16/2014 3:00:37 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	1100	30		mg/Kg	20	6/13/2014 2:46:02 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	0.072	0.033		mg/Kg	1	6/16/2014 2:16:43 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Barium	44	0.10		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Chromium	6.0	0.30		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Copper	3.7	0.30		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Iron	7100	50	B	mg/Kg	50	6/17/2014 2:36:50 PM	13696
Lead	1.8	0.25		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Manganese	82	0.10		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:34:08 PM	13696
Zinc	16	2.5		mg/Kg	1	6/17/2014 2:34:08 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	23	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406550

23-Jun-14

Client: J & L Landfarm
Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Sample ID	MB-13690	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13690	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406550

23-Jun-14

Client: J & L Landfarm
Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Sample ID	MB-13667	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556588	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13667	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556589	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	105	80	120			

Sample ID	LCSD-13667	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556590	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	104	80	120	1.32	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406550

23-Jun-14

Client: J & L Landfarm

Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Sample ID	MB-13666	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	13666	RunNo:	19306					
Prep Date:	6/12/2014	Analysis Date:	6/16/2014	SeqNo:	558130	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID	LCS-13666	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	13666	RunNo:	19306					
Prep Date:	6/12/2014	Analysis Date:	6/16/2014	SeqNo:	558131	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID	1406550-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 23 Random Sel	Batch ID:	13666	RunNo:	19306					
Prep Date:	6/12/2014	Analysis Date:	6/16/2014	SeqNo:	558133	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.047	0.9381	0	99.6	67.4	135			
Toluene	0.94	0.047	0.9381	0	100	72.6	135			
Ethylbenzene	0.96	0.047	0.9381	0	102	69.4	143			
Xylenes, Total	2.9	0.094	2.814	0	102	70.8	144			
Surr: 4-Bromofluorobenzene	0.99		0.9381		106	80	120			

Sample ID	1406550-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	Cell 23 Random Sel	Batch ID:	13666	RunNo:	19306					
Prep Date:	6/12/2014	Analysis Date:	6/16/2014	SeqNo:	558134	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.047	0.9434	0	97.1	67.4	135	1.99	20	
Toluene	0.92	0.047	0.9434	0	97.8	72.6	135	1.78	20	
Ethylbenzene	0.96	0.047	0.9434	0	101	69.4	143	0.438	20	
Xylenes, Total	2.9	0.094	2.830	0	101	70.8	144	0.0712	20	
Surr: 4-Bromofluorobenzene	1.0		0.9434		106	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406550

23-Jun-14

Client: J & L Landfarm
Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Sample ID	MB-13710	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557851	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13710	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557852	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	108	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406550

23-Jun-14

Client: J & L Landfarm
Project: Cell 23 Vadose Zone Repeat 5 yr Metals

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557922	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	95.1	80	120			
Cadmium	24	0.10	25.00	0	94.3	80	120			
Chromium	24	0.30	25.00	0	94.9	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	90.5	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.2	80	120			
Silver	4.9	0.25	5.000	0	97.1	80	120			
Zinc	23	2.5	25.00	0	93.1	80	120			

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558462	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558463	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.6	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406550

RcptNo: 1

Received by/date:

Rum 06/12/14

Logged By: Ashley Gallegos

6/12/2014 9:00:00 AM

AG
AG

Completed By: Ashley Gallegos

6/12/2014 9:51:54 AM

Reviewed By:

[Signature] 06/12/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No # of preserved bottles checked for pH:
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No Adjusted? (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

TURN-AROUND TIME:

Client: J & L Landfarm

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlandb9697@aol.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Standard Rush

Project Name: cell 23 vadose zone repeat 545 Metals

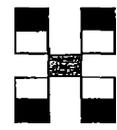
Project #:

Project Manager: Judy Roberts

Sampler: _____

On Ice: Yes No

Sample Temperature: 4.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals *	Air Bubbles (Y or N)		
6/10/14	0755	Soil	cell 23 random select #1	4oz qts 2	ice	1400550	X			X				X							
	0815		A2			-001	X			X				X							
	0833		#3			-002	X			X				X							
	0852		#4			-003	X			X				X							
						-004	X			X				X							

Date: 6/11/14 Time: 1130 Relinquished by: [Signature]

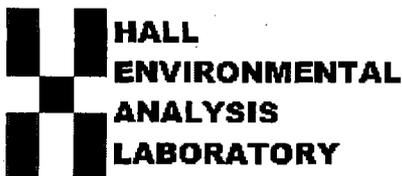
Received by: [Signature] Date: 06/12/14 Time: 0900

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

Remarks: * As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 23, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Repeats 5 yr Metals Cell 3,

OrderNo.: 1406551

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/12/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink that reads 'John Caldwell'.

John Caldwell
Supervisor
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406551

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #3 Random Select #1

Project: Vadose Zone Repeats 5 yr Metals Cell 3

Collection Date: 6/11/2014 6:58:00 AM

Lab ID: 1406551-001

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/16/2014 3:29:16 PM	13666
Toluene	ND	0.049		mg/Kg	1	6/16/2014 3:29:16 PM	13666
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2014 3:29:16 PM	13666
Xylenes, Total	ND	0.098		mg/Kg	1	6/16/2014 3:29:16 PM	13666
Surr: 4-Bromofluorobenzene	97.9	80-120		%REC	1	6/16/2014 3:29:16 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	110	30		mg/Kg	20	6/13/2014 2:58:27 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:18:27 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Barium	76	0.098		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Cadmium	ND	0.098		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Chromium	4.5	0.29		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Copper	0.40	0.29		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Iron	3700	20	B	mg/Kg	20	6/17/2014 2:46:11 PM	13696
Lead	0.42	0.25		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Manganese	23	0.098		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:43:31 PM	13696
Zinc	7.3	2.5		mg/Kg	1	6/17/2014 2:43:31 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406551

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #3 Random Select #2

Project: Vadose Zone Repeats 5 yr Metals Cell 3

Collection Date: 6/11/2014 7:17:00 AM

Lab ID: 1406551-002

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	6/16/2014 3:57:55 PM	13666
Toluene	ND	0.049		mg/Kg	1	6/16/2014 3:57:55 PM	13666
Ethylbenzene	ND	0.049		mg/Kg	1	6/16/2014 3:57:55 PM	13666
Xylenes, Total	ND	0.097		mg/Kg	1	6/16/2014 3:57:55 PM	13666
Surr: 4-Bromofluorobenzene	99.1	80-120		%REC	1	6/16/2014 3:57:55 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	280	30		mg/Kg	20	6/13/2014 3:10:52 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:20:11 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	3.5	2.5		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Barium	100	0.099		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Cadmium	ND	0.099		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Chromium	3.6	0.30		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Copper	1.1	0.30		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Iron	3100	20	B	mg/Kg	20	6/17/2014 2:48:55 PM	13696
Lead	0.33	0.25		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Manganese	49	0.099		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:47:32 PM	13696
Zinc	6.6	2.5		mg/Kg	1	6/17/2014 2:47:32 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406551

Date Reported: 6/23/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #3 Random Select #3

Project: Vadose Zone Repeats 5 yr Metals Cell 3

Collection Date: 6/11/2014 7:35:00 AM

Lab ID: 1406551-003

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/16/2014 4:26:32 PM	13666
Toluene	ND	0.048		mg/Kg	1	6/16/2014 4:26:32 PM	13666
Ethylbenzene	ND	0.048		mg/Kg	1	6/16/2014 4:26:32 PM	13666
Xylenes, Total	ND	0.096		mg/Kg	1	6/16/2014 4:26:32 PM	13666
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	6/16/2014 4:26:32 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	290	30		mg/Kg	20	6/13/2014 3:23:17 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:21:56 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Barium	83	0.10		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Cadmium	ND	0.10		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Chromium	5.2	0.30		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Copper	0.48	0.30		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Iron	5300	51	B	mg/Kg	50	6/17/2014 2:51:38 PM	13696
Lead	ND	0.25		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Manganese	44	0.10		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:50:15 PM	13696
Zinc	9.7	2.5		mg/Kg	1	6/17/2014 2:50:15 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 3 of 9
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Analytical Report

Lab Order 1406551

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #3 Random Select #4

Project: Vadose Zone Repeats 5.yr Metals Cell 3

Collection Date: 6/11/2014 8:00:00 AM

Lab ID: 1406551-004

Matrix: SOIL

Received Date: 6/12/2014 9:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	6/16/2014 4:55:14 PM	13666
Toluene	ND	0.048		mg/Kg	1	6/16/2014 4:55:14 PM	13666
Ethylbenzene	ND	0.048		mg/Kg	1	6/16/2014 4:55:14 PM	13666
Xylenes, Total	ND	0.097		mg/Kg	1	6/16/2014 4:55:14 PM	13666
Surr: 4-Bromofluorobenzene	98.7	80-120		%REC	1	6/16/2014 4:55:14 PM	13666
EPA METHOD 300.0: ANIONS							Analyst: JRR
Chloride	300	30		mg/Kg	20	6/13/2014 3:35:42 PM	13690
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/16/2014 2:23:42 PM	13710
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Barium	76	0.099		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Cadmium	ND	0.099		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Chromium	9.3	0.30		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Copper	0.74	0.30		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Iron	11000	50	B	mg/Kg	50	6/17/2014 2:55:45 PM	13696
Lead	ND	0.25		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Manganese	49	0.099		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Selenium	ND	2.5		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Silver	ND	0.25		mg/Kg	1	6/17/2014 2:52:59 PM	13696
Zinc	19	2.5		mg/Kg	1	6/17/2014 2:52:59 PM	13696
EPA METHOD 418.1: TPH							Analyst: JME
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	6/13/2014 12:00:00 PM	13667

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406551

23-Jun-14

Client: J & L Landfarm

Project: Vadose Zone Repeats 5 yr Metals Cell 3

Sample ID	MB-13690	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557619	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-13690	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	13690	RunNo:	19289					
Prep Date:	6/13/2014	Analysis Date:	6/13/2014	SeqNo:	557620	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	95.0	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406551
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 3

Sample ID	MB-13667	SampType:	MBLK	TestCode:	EPA Method 418.1: TPH					
Client ID:	PBS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556588	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID	LCS-13667	SampType:	LCS	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556589	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	105	80	120			

Sample ID	LCSD-13667	SampType:	LCSD	TestCode:	EPA Method 418.1: TPH					
Client ID:	LCSS02	Batch ID:	13667	RunNo:	19239					
Prep Date:	6/12/2014	Analysis Date:	6/13/2014	SeqNo:	556590	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	100	20	100.0	0	104	80	120	1.32	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406551
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 3

Sample ID MB-13666	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 13666		RunNo: 19306							
Prep Date: 6/12/2014	Analysis Date: 6/16/2014		SeqNo: 558130		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			

Sample ID LCS-13666	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 13666		RunNo: 19306							
Prep Date: 6/12/2014	Analysis Date: 6/16/2014		SeqNo: 558131		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.1	0.050	1.000	0	107	80	120			
Xylenes, Total	3.2	0.10	3.000	0	106	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406551
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 3

Sample ID	MB-13710	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557851	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13710	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13710	RunNo:	19298					
Prep Date:	6/16/2014	Analysis Date:	6/16/2014	SeqNo:	557852	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1667	0	108	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406551
 23-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Repeats 5 yr Metals Cell 3

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557921	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19303					
Prep Date:	6/13/2014	Analysis Date:	6/14/2014	SeqNo:	557922	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	95.3	80	120			
Barium	24	0.10	25.00	0	95.1	80	120			
Cadmium	24	0.10	25.00	0	94.3	80	120			
Chromium	24	0.30	25.00	0	94.9	80	120			
Copper	25	0.30	25.00	0	101	80	120			
Lead	23	0.25	25.00	0	90.5	80	120			
Manganese	24	0.10	25.00	0	95.1	80	120			
Selenium	23	2.5	25.00	0	91.2	80	120			
Silver	4.9	0.25	5.000	0	97.1	80	120			
Zinc	23	2.5	25.00	0	93.1	80	120			

Sample ID	MB-13696	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558462	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID	LCS-13696	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13696	RunNo:	19320					
Prep Date:	6/13/2014	Analysis Date:	6/17/2014	SeqNo:	558463	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	99.6	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM Work Order Number: 1406551 RcptNo: 1

Received by/date: *Jim 06/12/14*

Logged By: Ashley Gallegos 6/12/2014 9:00:00 AM *AG*

Completed By: Ashley Gallegos 6/12/2014 9:53:07 AM *AG*

Reviewed By: *AG* 6/12/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for Indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(if no, notify customer for authorization.) Yes No Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Client:

Standard Rush

J+L hand farm
Mailing Address:

Project Name:
vadose zone repeats
5yr metals cell 3

P.O. Box 356 Hobbs, NM 88241

Project #:

Phone #: 575-631-5765

email or Fax#: jlr069697@aol.com

Project Manager:

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

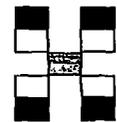
NELAP Other _____

EDD (Type) _____

Sampler:

On ice: Yes No

Sample Temperature: 4.8



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals	Air Ruthles (Y or N)	
6/11/14	0658	soil	cell # 3 random select # 1	4oz glass 2	ice	1406551 -001	X			X				X						
	0717		#2			-002	X			X				X						
	0735		#3			-003	X			X				X						
	0800		#4			-004	X			X				X						

Date: 6/11/14 Time: 1130 Relinquished by: [Signature]

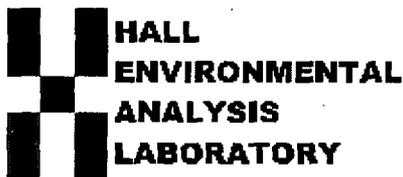
Received by: [Signature] Date: 6/12/14 Time: 0900

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

Date: _____ Time: _____ Relinquished by: _____

Received by: _____ Date: _____ Time: _____

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 30, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Metals 5yr Cell 13

OrderNo.: 1406993

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406993

Date Reported: 6/30/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #13 #1

Project: Vadose Zone Metals 5yr Cell 13

Collection Date: 6/19/2014 5:31:00 AM

Lab ID: 1406993-001

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/24/2014 1:52:41 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 10:59:04 AM	13841
Barium	280	0.20		mg/Kg	2	6/24/2014 10:59:04 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Chromium	1.9	0.30		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Copper	3.3	0.30		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Iron	2000	10		mg/Kg	10	6/25/2014 8:25:32 AM	13841
Lead	0.35	0.25		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Manganese	19	0.10		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 10:54:55 AM	13841
Zinc	5.6	2.5		mg/Kg	1	6/24/2014 10:54:55 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406993

Date Reported: 6/30/2014

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** J & L Landfarm**Client Sample ID:** Cell #13 #2**Project:** Vadose Zone Metals 5yr Cell 13**Collection Date:** 6/19/2014 5:43:00 AM**Lab ID:** 1406993-002**Matrix:** SOIL**Received Date:** 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 1:58:04 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 11:04:32 AM	13841
Barium	230	0.10		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Chromium	1.7	0.30		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Copper	1.5	0.30		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Iron	1600	10		mg/Kg	10	6/25/2014 8:26:53 AM	13841
Lead	ND	0.25		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Manganese	18	0.10		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:03:10 AM	13841
Zinc	5.4	2.5		mg/Kg	1	6/24/2014 11:03:10 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406993

Date Reported: 6/30/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #13 #3

Project: Vadose Zone Metals 5yr Cell 13

Collection Date: 6/19/2014 5:56:00 AM

Lab ID: 1406993-003

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 1:59:52 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 11:18:30 AM	13841
Barium	370	0.20		mg/Kg	2	6/24/2014 11:18:30 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Chromium	1.4	0.30		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Copper	0.85	0.30		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Iron	1300	10		mg/Kg	10	6/25/2014 8:28:14 AM	13841
Lead	ND	0.25		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Manganese	12	0.10		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:17:03 AM	13841
Zinc	3.7	2.5		mg/Kg	1	6/24/2014 11:17:03 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Analytical Report

Lab Order 1406993

Date Reported: 6/30/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #13 #4

Project: Vadose Zone Metals 5yr Cell 13

Collection Date: 6/19/2014 5:09:00 AM

Lab ID: 1406993-004

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/24/2014 2:01:41 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 11:21:12 AM	13841
Barium	420	0.20		mg/Kg	2	6/24/2014 11:21:12 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Chromium	1.4	0.30		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Copper	0.74	0.30		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Iron	1200	10		mg/Kg	10	6/25/2014 8:29:36 AM	13841
Lead	ND	0.25		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Manganese	11	0.10		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:19:49 AM	13841
Zinc	3.9	2.5		mg/Kg	1	6/24/2014 11:19:49 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406993

30-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell 13

Sample ID	MB-13842	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13842	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563444	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Sample ID	1406993-001AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #13 #1	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563453	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.032	0.1598	0.005686	81.5	75	125			

Sample ID	1406993-001AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #13 #1	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563454	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.14	0.033	0.1657	0.005686	83.8	75	125	6.27	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406993

30-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell 13

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563064	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563065	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.7	80	120			
Barium	23	0.10	25.00	0	92.1	80	120			
Cadmium	23	0.10	25.00	0	92.3	80	120			
Chromium	23	0.30	25.00	0	91.7	80	120			
Copper	24	0.30	25.00	0	96.2	80	120			
Lead	22	0.25	25.00	0	89.3	80	120			
Manganese	23	0.10	25.00	0	91.4	80	120			
Selenium	22	2.5	25.00	0	86.4	80	120			
Silver	4.8	0.25	5.000	0	95.2	80	120			
Zinc	22	2.5	25.00	0	89.3	80	120			

Sample ID	1406993-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	Cell #13 #1	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563090	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	24.90	4.486	72.8	75	125			S
Cadmium	18	0.10	24.90	0	70.6	75	125			S
Chromium	18	0.30	24.90	1.850	64.1	75	125			S
Copper	20	0.30	24.90	3.348	65.6	75	125			S
Lead	16	0.25	24.90	0.3537	61.4	75	125			S
Manganese	35	0.10	24.90	19.02	65.0	75	125			S
Selenium	13	2.5	24.90	0	53.5	75	125			S
Silver	3.5	0.25	4.980	0	69.7	75	125			S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R %RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406993

30-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell 13

Sample ID	1406993-001AMS	SampType:	MS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #13 #1	Batch ID:	13841	RunNo:	19463						
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563090	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Zinc	21	2.5	24.90	5.589	61.9	75	125			S	

Sample ID	1406993-001AMSD	SampType:	MSD	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	Cell #13 #1	Batch ID:	13841	RunNo:	19463						
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563091	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	22	2.5	24.60	4.486	69.6	75	125	4.51	20	S	
Cadmium	17	0.098	24.60	0	68.1	75	125	4.82	20	S	
Chromium	17	0.30	24.60	1.850	62.2	75	125	3.73	20	S	
Copper	19	0.30	24.60	3.348	62.8	75	125	4.61	20	S	
Lead	15	0.25	24.60	0.3537	58.3	75	125	6.16	20	S	
Manganese	36	0.098	24.60	19.02	69.3	75	125	2.39	20	S	
Selenium	12	2.5	24.60	0	49.9	75	125	8.20	20	S	
Silver	3.3	0.25	4.920	0	67.1	75	125	4.94	20	S	
Zinc	20	2.5	24.60	5.589	59.0	75	125	4.34	20	S	

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	PBS	Batch ID:	13841	RunNo:	19483						
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563853	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	1.5	1.0									

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals						
Client ID:	LCSS	Batch ID:	13841	RunNo:	19483						
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563854	Units:	mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Iron	25	1.0	25.00	0	98.4	80	120			B	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406993

RcptNo: 1

Received by/date: mg 06/20/14

Logged By: Michelle Garcia 6/20/2014 8:30:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/20/2014 12:40:44 PM *Michelle Garcia*

Reviewed By: mg 06/23/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? (If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Client:

J+L Landform

Mailing Address:

PO Box 356 Hobbs, NM 88241

Phone #: 575 631-5765

email or Fax#: j1rob9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Accreditation

NELAP Other _____

EDD (Type) _____

Turn-Around Time:

Standard Rush

Project Name: vadose zone metals

5 yr cell 13

Project #:

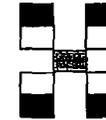
Project Manager:

Judy Roberts

Sampler: *[Signature]*

On Ice: Yes No

Sample Temperature: 4/1



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)	
6/19/14	0531	Soil	cell #13 #1	1402965	ice	1406993													X	
	0543		#2																X	
	0556		#3																X	
	0609		#4																X	

Date: 6/19/14 Time: 1130 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 06/20/14 Time: 0830

Remarks: *[Signature]*

Date: 6/19/14 Time: 1130 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 06/20/14 Time: 0830

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 30, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX:

RE: Vadose Zone Metals 5yr Cell #18

OrderNo.: 1406994

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406994

Date Reported: 6/30/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #18 #1

Project: Vadose Zone Metals 5yr Cell #18

Collection Date: 6/19/2014 9:10:00 AM

Lab ID: 1406994-001

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:07:13 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Barium	45	0.10		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Chromium	3.3	0.30		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Copper	1.9	0.30		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Iron	3900	20		mg/Kg	20	6/25/2014 8:30:55 AM	13841
Lead	1.1	0.25		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Manganese	51	0.10		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:22:32 AM	13841
Zinc	8.9	2.5		mg/Kg	1	6/24/2014 11:22:32 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406994

Date Reported: 6/30/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #18 #2

Project: Vadose Zone Metals 5yr Cell #18

Collection Date: 6/19/2014 9:19:00 AM

Lab ID: 1406994-002

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.032		mg/Kg	1	6/24/2014 2:09:02 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Barium	27	0.10		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Chromium	3.0	0.30		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Copper	1.6	0.30		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Iron	3300	20		mg/Kg	20	6/25/2014 8:32:18 AM	13841
Lead	1.2	0.25		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Manganese	39	0.10		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:25:11 AM	13841
Zinc	13	2.5		mg/Kg	1	6/24/2014 11:25:11 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 2 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406994

Date Reported: 6/30/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #18 #3

Project: Vadose Zone Metals 5yr Cell #18

Collection Date: 6/19/2014 9:33:00 AM

Lab ID: 1406994-003

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:10:53 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.5		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Barium	32	0.10		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Chromium	3.7	0.31		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Copper	1.6	0.31		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Iron	4200	20		mg/Kg	20	6/25/2014 8:33:38 AM	13841
Lead	0.99	0.25		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Manganese	43	0.10		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:27:56 AM	13841
Zinc	9.9	2.5		mg/Kg	1	6/24/2014 11:27:56 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406994

Date Reported: 6/30/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #18 #4

Project: Vadose Zone Metals 5yr Cell #18

Collection Date: 6/19/2014 9:55:00 AM

Lab ID: 1406994-004

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:12:44 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.6		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Barium	51	0.10		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Chromium	3.8	0.31		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Copper	1.9	0.31		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Iron	4100	21		mg/Kg	20	6/25/2014 8:34:57 AM	13841
Lead	0.62	0.26		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Manganese	41	0.10		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Selenium	ND	2.6		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Silver	ND	0.26		mg/Kg	1	6/24/2014 11:35:58 AM	13841
Zinc	9.8	2.6		mg/Kg	1	6/24/2014 11:35:58 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406994

30-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #18

Sample ID	MB-13842	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13842	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563444	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Qualifiers:

- | | |
|---|--|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| J Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| O RSD is greater than RSDlimit | P Sample pH greater than 2. |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S Spike Recovery outside accepted recovery limits | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406994

30-Jun-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #18

Sample ID: MB-13841	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals
Client ID: PBS	Batch ID: 13841	RunNo: 19463
Prep Date: 6/23/2014	Analysis Date: 6/24/2014	SeqNo: 563064 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID: LCS-13841	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals
Client ID: LCSS	Batch ID: 13841	RunNo: 19463
Prep Date: 6/23/2014	Analysis Date: 6/24/2014	SeqNo: 563065 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.7	80	120			
Barium	23	0.10	25.00	0	92.1	80	120			
Cadmium	23	0.10	25.00	0	92.3	80	120			
Chromium	23	0.30	25.00	0	91.7	80	120			
Copper	24	0.30	25.00	0	96.2	80	120			
Lead	22	0.25	25.00	0	89.3	80	120			
Manganese	23	0.10	25.00	0	91.4	80	120			
Selenium	22	2.5	25.00	0	86.4	80	120			
Silver	4.8	0.25	5.000	0	95.2	80	120			
Zinc	22	2.5	25.00	0	89.3	80	120			

Sample ID: MB-13841	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals
Client ID: PBS	Batch ID: 13841	RunNo: 19483
Prep Date: 6/23/2014	Analysis Date: 6/25/2014	SeqNo: 563853 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID: LCS-13841	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals
Client ID: LCSS	Batch ID: 13841	RunNo: 19483
Prep Date: 6/23/2014	Analysis Date: 6/25/2014	SeqNo: 563854 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	98.4	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406994

RcptNo: 1

Received by/date: mg 06/20/14

Logged By: Michelle Garcia 6/20/2014 8:30:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/20/2014 12:47:28 PM *Michelle Garcia*

Reviewed By: mg / [Signature] 06/23/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

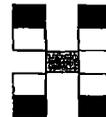
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:

Standard Rush



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:

J+L Landform
Mailing Address:

Project Name:
vadose zone metals
5 yr cell #18

Project #:

PO Box 356 Hobbs Nm 88241
Phone #: 575-631-5765

Project Manager:

email or Fax#: j.lrob 9697@aol.com

QA/QC Package:

Standard Level 4 (Full Validation)

Judy Roberts

Accreditation

NELAP Other

Sampler: *[Signature]*

On Ice: Yes No

EDD (Type)

Sample Temperature: 4.4

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals	Air Bubbles (Y or N)	
2/19/14	0910	Soil	cell 18 #1	14oz gbs	ice	1406994														
	0919		#2																	
	0933		#3																	
	0955		#4																	

Date: 2/19/14 Time: 1130 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 02/20/14 Time: 0830*

Remarks:

Date: Time: Relinquished by:

Received by: Date: Time:

As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 03, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Metals 5yr Cell 15

OrderNo.: 1406995

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #15 #1

Project: Vadose Zone Metals 5yr Cell 15

Collection Date: 6/19/2014 6:31:00 AM

Lab ID: 1406995-001

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.034		mg/Kg	1	6/24/2014 2:14:35 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 11:40:04 AM	13841
Barium	180	0.10		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Chromium	3.0	0.30		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Copper	1.6	0.30		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Iron	2700	20		mg/Kg	20	6/25/2014 8:39:25 AM	13841
Lead	ND	0.25		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Manganese	30	0.10		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:38:42 AM	13841
Zinc	6.7	2.5		mg/Kg	1	6/24/2014 11:38:42 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	
	E Value above quantitation range	H Holding times for preparation or analysis exceeded	
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit	Page 1 of 6
	O RSD is greater than RSDlimit	P Sample pH greater than 2.	
	R RPD outside accepted recovery limits	RL Reporting Detection Limit	
	S Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406995

Date Reported: 7/3/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #15 #2

Project: Vadose Zone Metals 5yr Cell 15

Collection Date: 6/19/2014 6:42:00 AM

Lab ID: 1406995-002

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:16:27 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 11:42:47 AM	13841
Barium	210	0.10		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Chromium	2.8	0.30		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Copper	1.7	0.30		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Iron	2700	20		mg/Kg	20	6/25/2014 8:40:46 AM	13841
Lead	ND	0.25		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Manganese	34	0.10		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 11:41:26 AM	13841
Zinc	6.9	2.5		mg/Kg	1	6/24/2014 11:41:26 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406995
03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell 15

Sample ID	MB-13842	SampType	MBLK	TestCode	EPA Method 7471: Mercury					
Client ID	PBS	Batch ID	13842	RunNo	19472					
Prep Date	6/23/2014	Analysis Date	6/24/2014	SeqNo	563441	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13842	SampType	LCS	TestCode	EPA Method 7471: Mercury					
Client ID	LCSS	Batch ID	13842	RunNo	19472					
Prep Date	6/23/2014	Analysis Date	6/24/2014	SeqNo	563444	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406995

03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell 15

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563064	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563065	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.7	80	120			
Barium	23	0.10	25.00	0	92.1	80	120			
Cadmium	23	0.10	25.00	0	92.3	80	120			
Chromium	23	0.30	25.00	0	91.7	80	120			
Copper	24	0.30	25.00	0	96.2	80	120			
Lead	22	0.25	25.00	0	89.3	80	120			
Manganese	23	0.10	25.00	0	91.4	80	120			
Selenium	22	2.5	25.00	0	86.4	80	120			
Silver	4.8	0.25	5.000	0	95.2	80	120			
Zinc	22	2.5	25.00	0	89.3	80	120			

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13841	RunNo:	19483					
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563853	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13841	RunNo:	19483					
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563854	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	98.4	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406995

RcptNo: 1

Received by/date: mg 06/20/14

Logged By: Michelle Garcia 6/20/2014 8:30:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/20/2014 12:51:02 PM *Michelle Garcia*

Reviewed By: mg 06/23/14

Chain of Custody

- Custody seals intact on sample bottles? Yes No Not Present
- Is Chain of Custody complete? Yes No Not Present
- How was the sample delivered? FedEx

Log In

- Was an attempt made to cool the samples? Yes No NA
- Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- Sample(s) in proper container(s)? Yes No
- Sufficient sample volume for indicated test(s)? Yes No
- Are samples (except VOA and ONG) properly preserved? Yes No
- Was preservative added to bottles? Yes No NA
- VOA vials have zero headspace? Yes No No VOA Vials
- Were any sample containers received broken? Yes No
- Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- Are matrices correctly identified on Chain of Custody? Yes No
- Is it clear what analyses were requested? Yes No
- Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Client: J+L Landfarm

Mailing Address: PO Box 356 Hobbs, NM 88241

Phone #: 575-631-5765

email or Fax#: jlrob9697@Ad.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) _____

Turn-Around Time:
 Standard Rush

Project Name: vadose zone metals
5 yr cell 15

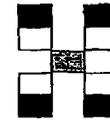
Project #: _____

Project Manager: Judy Roberts

Sampler: [Signature]

On Ice: Yes No

Sample Temperature: 4/4



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals #	Air Bubbles (Y or N)	
6/19/14	0631	soil	cell #15 #1	4oz glass	ice	406995-001													X	
	0642		#2			-002													X	
	0655		#3			-003													X	
	0710		#4			-004													X	

Date: 6/19/14 Time: 1130 Relinquished by: [Signature]

Date: _____ Time: _____ Relinquished by: _____

Received by: [Signature] Date: 06/20/14 Time: 0830

Received by: _____ Date: _____ Time: _____

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 03, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Metals 5yr Cell #17

OrderNo.: 1406996

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406996
 Date Reported: 7/3/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #17 #2

Project: Vadose Zone Metals 5yr Cell #17

Collection Date: 6/19/2014 8:34:00 AM

Lab ID: 1406996-002

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.034		mg/Kg	1	6/24/2014 2:23:26 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.1		mg/Kg	2	6/24/2014 12:00:14 PM	13841
Barium	200	0.10		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Chromium	1.9	0.31		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Copper	1.4	0.31		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Iron	2200	10		mg/Kg	10	6/25/2014 8:46:15 AM	13841
Lead	ND	0.26		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Manganese	23	0.10		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Selenium	ND	2.6		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Silver	ND	0.26		mg/Kg	1	6/24/2014 11:58:51 AM	13841
Zinc	5.3	2.6		mg/Kg	1	6/24/2014 11:58:51 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406996
 Date Reported: 7/3/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #17 #4

Project: Vadose Zone Metals 5yr Cell #17

Collection Date: 6/19/2014 8:52:00 AM

Lab ID: 1406996-004

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:30:42 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 12:05:51 PM	13841
Barium	53	0.10		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Chromium	5.3	0.30		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Copper	2.4	0.30		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Iron	6800	50		mg/Kg	50	6/25/2014 8:48:55 AM	13841
Lead	0.89	0.25		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Manganese	55	0.10		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 12:04:28 PM	13841
Zinc	14	2.5		mg/Kg	1	6/24/2014 12:04:28 PM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1406996
 03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #17

Sample ID	MB-13842	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13842	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563444	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406996

03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #17

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563064	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13841	RunNo:	19463					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563065	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.7	80	120			
Barium	23	0.10	25.00	0	92.1	80	120			
Cadmium	23	0.10	25.00	0	92.3	80	120			
Chromium	23	0.30	25.00	0	91.7	80	120			
Copper	24	0.30	25.00	0	96.2	80	120			
Lead	22	0.25	25.00	0	89.3	80	120			
Manganese	23	0.10	25.00	0	91.4	80	120			
Selenium	22	2.5	25.00	0	86.4	80	120			
Silver	4.8	0.25	5.000	0	95.2	80	120			
Zinc	22	2.5	25.00	0	89.3	80	120			

Sample ID	MB-13841	SampType:	MBLK	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	PBS	Batch ID:	13841	RunNo:	19483					
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563853	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID	LCS-13841	SampType:	LCS	TestCode:	EPA Method 6010B: Soil Metals					
Client ID:	LCSS	Batch ID:	13841	RunNo:	19483					
Prep Date:	6/23/2014	Analysis Date:	6/25/2014	SeqNo:	563854	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	98.4	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87106
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406996

RcptNo: 1

Received by/date: Mg 06/20/14

Logged By: Michelle Garcia 6/20/2014 8:30:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/20/2014 12:53:29 PM *Michelle Garcia*

Reviewed By: Mg 06/23/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

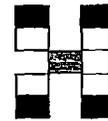
18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Client: J+L land farm
 Mailing Address: PO Box 356 Hobbs, NM 88241
 Phone #: 575-631-5765
 email or Fax#: jlrob9697@aol.com
 QA/QC Package:
 Standard Level 4 (Full Validation)
 Accreditation
 NELAP Other _____
 EDD (Type) _____

Turn-Around Time:
 Standard Rush
 Project Name: Vadose zone metals
5 yr cell #17
 Project #:
 Project Manager: Judy Roberts
 Sampler: Spith
 On Ice: Yes No
 Sample Temperature: 4.4



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals	Air Bubbles (Y or N)	
6/19/14	0825	soil	cell #17 #1	1/2 gal	ice	1406996														
	0834		#2																	
	0842		#3																	
	0852		#4																	

Date: 6/19/14 Time: 1130 Relinquished by: Spith
 Received by: Mike G Date: 06/20/14 Time: 0830
 Date: _____ Time: _____ Relinquished by: _____
 Received by: _____ Date: _____ Time: _____

Remarks: As Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 03, 2014

Judy Roberts
J & L Landfarm
PO Box 356
Hobbs, NM 88241
TEL: (575) 631-5765
FAX

RE: Vadose Zone Metals 5yr Cell #16

OrderNo.: 1406997

Dear Judy Roberts:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1406997

Date Reported: 7/3/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #16 #1

Project: Vadose Zone Metals 5yr Cell #16

Collection Date: 6/19/2014 7:31:00 AM

Lab ID: 1406997-001

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:32:30 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.9		mg/Kg	2	6/24/2014 12:08:34 PM	13841
Barium	99	0.099		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Cadmium	ND	0.099		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Chromium	3.8	0.30		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Copper	2.1	0.30		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Iron	4200	20		mg/Kg	20	6/25/2014 8:50:15 AM	13841
Lead	0.39	0.25		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Manganese	42	0.099		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 12:07:13 PM	13841
Zinc	9.8	2.5		mg/Kg	1	6/24/2014 12:07:13 PM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: * Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 O RSD is greater than RSDlimit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 P Sample pH greater than 2.
 RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1406997
 Date Reported: 7/3/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #16 #2

Project: Vadose Zone Metals 5yr Cell #16

Collection Date: 6/19/2014 7:44:00 AM

Lab ID: 1406997-002

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:34:18 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	4.8		mg/Kg	2	6/24/2014 12:16:35 PM	13841
Barium	44	0.096		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Cadmium	ND	0.096		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Chromium	4.7	0.29		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Copper	2.0	0.29		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Iron	6600	48		mg/Kg	50	6/25/2014 9:51:54 AM	13841
Lead	1.4	0.24		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Manganese	67	0.096		mg/Kg	1	6/25/2014 8:51:36 AM	13841
Selenium	ND	2.4		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Silver	ND	0.24		mg/Kg	1	6/24/2014 12:15:10 PM	13841
Zinc	15	2.4		mg/Kg	1	6/25/2014 8:51:36 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1406997

Date Reported: 7/3/2014

CLIENT: J & L Landfarm

Client Sample ID: Cell #16 #3

Project: Vadose Zone Metals 5yr Cell #16

Collection Date: 6/19/2014 7:53:00 AM

Lab ID: 1406997-003

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:36:06 PM	13842
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	2.6		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Barium	32	0.10		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Chromium	5.3	0.31		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Copper	1.9	0.31		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Iron	6600	51		mg/Kg	50	6/25/2014 9:54:35 AM	13841
Lead	1.3	0.26		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Manganese	71	0.10		mg/Kg	1	6/25/2014 9:53:15 AM	13841
Selenium	ND	2.6		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Silver	ND	0.26		mg/Kg	1	6/24/2014 12:17:54 PM	13841
Zinc	16	2.6		mg/Kg	1	6/25/2014 9:53:15 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: J & L Landfarm

Client Sample ID: Cell #16 #4

Project: Vadose Zone Metals 5yr Cell #16

Collection Date: 6/19/2014 8:02:00 AM

Lab ID: 1406997-004

Matrix: SOIL

Received Date: 6/20/2014 8:30:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7471: MERCURY							Analyst: MMD
Mercury	ND	0.033		mg/Kg	1	6/24/2014 2:37:54 PM	13848
EPA METHOD 6010B: SOIL METALS							Analyst: ELS
Arsenic	ND	5.0		mg/Kg	2	6/24/2014 12:22:00 PM	13841
Barium	32	0.10		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Cadmium	ND	0.10		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Chromium	4.8	0.30		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Copper	1.8	0.30		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Iron	5400	50		mg/Kg	50	6/25/2014 9:57:10 AM	13841
Lead	1.3	0.25		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Manganese	58	0.10		mg/Kg	1	6/25/2014 9:55:57 AM	13841
Selenium	ND	2.5		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Silver	ND	0.25		mg/Kg	1	6/24/2014 12:20:39 PM	13841
Zinc	14	2.5		mg/Kg	1	6/25/2014 9:55:57 AM	13841

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	E Value above quantitation range	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit
	O RSD is greater than RSDlimit	P Sample pH greater than 2.
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S Spike Recovery outside accepted recovery limits	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406997

03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #16

Sample ID	MB-13842	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563441	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13842	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13842	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563444	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1667	0	97.8	80	120			

Sample ID	MB-13848	SampType:	MBLK	TestCode:	EPA Method 7471: Mercury					
Client ID:	PBS	Batch ID:	13848	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563447	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID	LCS-13848	SampType:	LCS	TestCode:	EPA Method 7471: Mercury					
Client ID:	LCSS	Batch ID:	13848	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563450	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	105	80	120			

Sample ID	1406997-004AMS	SampType:	MS	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #16 #4	Batch ID:	13848	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563478	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.032	0.1609	0.006582	103	75	125			

Sample ID	1406997-004AMSD	SampType:	MSD	TestCode:	EPA Method 7471: Mercury					
Client ID:	Cell #16 #4	Batch ID:	13848	RunNo:	19472					
Prep Date:	6/23/2014	Analysis Date:	6/24/2014	SeqNo:	563479	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.18	0.033	0.1648	0.006582	102	75	125	2.03	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406997

03-Jul-14

Client: J & L Landfarm
Project: Vadose Zone Metals 5yr Cell #16

Sample ID: MB-13841	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals
Client ID: PBS	Batch ID: 13841	RunNo: 19463
Prep Date: 6/23/2014	Analysis Date: 6/24/2014	SeqNo: 563064 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Copper	ND	0.30								
Lead	ND	0.25								
Manganese	ND	0.10								
Selenium	ND	2.5								
Silver	ND	0.25								
Zinc	ND	2.5								

Sample ID: LCS-13841	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals
Client ID: LCSS	Batch ID: 13841	RunNo: 19463
Prep Date: 6/23/2014	Analysis Date: 6/24/2014	SeqNo: 563065 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	23	2.5	25.00	0	90.7	80	120			
Barium	23	0.10	25.00	0	92.1	80	120			
Cadmium	23	0.10	25.00	0	92.3	80	120			
Chromium	23	0.30	25.00	0	91.7	80	120			
Copper	24	0.30	25.00	0	96.2	80	120			
Lead	22	0.25	25.00	0	89.3	80	120			
Manganese	23	0.10	25.00	0	91.4	80	120			
Selenium	22	2.5	25.00	0	86.4	80	120			
Silver	4.8	0.25	5.000	0	95.2	80	120			
Zinc	22	2.5	25.00	0	89.3	80	120			

Sample ID: MB-13841	SampType: MBLK	TestCode: EPA Method 6010B: Soil Metals
Client ID: PBS	Batch ID: 13841	RunNo: 19483
Prep Date: 6/23/2014	Analysis Date: 6/25/2014	SeqNo: 563853 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	1.5	1.0								

Sample ID: LCS-13841	SampType: LCS	TestCode: EPA Method 6010B: Soil Metals
Client ID: LCSS	Batch ID: 13841	RunNo: 19483
Prep Date: 6/23/2014	Analysis Date: 6/25/2014	SeqNo: 563854 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	25	1.0	25.00	0	98.4	80	120			B

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87105
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: J & L LANDFARM

Work Order Number: 1406997

RcptNo: 1

Received by/date: mg 06/20/14

Logged By: Michelle Garcia 6/20/2014 8:30:00 AM *Michelle Garcia*

Completed By: Michelle Garcia 6/20/2014 1:04:53 PM *Michelle Garcia*

Reviewed By: mg 06/23/14

Chain of Custody

- 1. Custody seals intact on sample bottles? Yes No Not Present
- 2. Is Chain of Custody complete? Yes No Not Present
- 3. How was the sample delivered? FedEx

Log In

- 4. Was an attempt made to cool the samples? Yes No NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
- 6. Sample(s) in proper container(s)? Yes No
- 7. Sufficient sample volume for indicated test(s)? Yes No
- 8. Are samples (except VOA and ONG) properly preserved? Yes No
- 9. Was preservative added to bottles? Yes No NA
- 10. VOA vials have zero headspace? Yes No No VOA Vials
- 11. Were any sample containers received broken? Yes No
- 12. Does paperwork match bottle labels? Yes No
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes No
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No
(If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

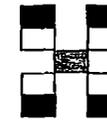
17. Additional remarks:

18. Cooler Information

Cooler No.	Temp °C	Condition	Seal Intact	Seal No.	Seal Date	Signed By
1	4.4	Good	Yes			

Chain-of-Custody Record

Turn-Around Time:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:

Standard Rush

Mailing Address: **S+L Landfarm**

Project Name: **Vadose zone metals
5 yr cell #16**

P O Box 356 Hobbs NM

Project #:

Phone #: **575-631-5765**

email or Fax#: **j1rob9697@AOL.com**

Project Manager:

QA/QC Package:

Standard Level 4 (Full Validation)

Judy Roberts

Accreditation

NELAP Other

Sampler: **[Signature]**

EDD (Type)

On Ice: Yes No

Sample Temperature: **44**

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	metals *	Air Bubbles (Y or N)	
6/19/14	0731	soil	cell #16 #1	1 429/15	ice	1406997														
	0744		#2																X	
	0753		#3																X	
	0802		#4																X	

Date: **6/19/14** Time: **1130** Relinquished by: **[Signature]**

Received by: **[Signature]** Date: **06/20/14** Time: **0830**

Remarks: *****

Date: Time: Relinquished by:

Received by: Date: Time:

Pb Ba Cd Cr Cu Fe Pb Mn Hg Se Ag Zn

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.