

# Appendix A

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## Laboratory Results

## Initial Sampling Laboratory Results

Technical Report for

Grynberg Petroleum Company

Chivington Pit Remediation

Accutest Job Number: D56995

Sampling Date: 04/17/14

Report to:

Grynberg Petroleum Company  
2500 South Yosemite Suite 900  
Denver, CO 80237  
chrisd@lesair.com

ATTN: Chris DiMarco

Total number of pages in report: **37**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.



Scott Heideman  
Laboratory Director

Client Service contact: Cristina Berrutti 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

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## Sample Summary

Grynberg Petroleum Company

Job No: D56995

Chivington Pit Remediation

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D56995-1	04/17/14	14:00 CD	04/18/14	SO	Soil	WASTE PILE 1

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## Summary of Hits

**Job Number:** D56995  
**Account:** Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation  
**Collected:** 04/17/14

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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**D56995-1      WASTE PILE 1**

Benzene	480000	7900	3000	ug/kg	SW846 8260B
Ethylbenzene	248000	3200	600	ug/kg	SW846 8260B
Toluene	1120000	16000	7900	ug/kg	SW846 8260B
Xylene (total)	1050000	32000	16000	ug/kg	SW846 8260B
Barium	7820	6.3		mg/kg	SW846 6010C
Chromium	14.3	6.3		mg/kg	SW846 6010C
Lead	29.9	6.3		mg/kg	SW846 6010C
Flashpoint At 620 mm Hg <sup>a</sup>	70			Deg. F	ASTM D93, PM CC
pH	11.12			su	SW846 9045D

(a) Results confirmed by re-analysis.



Sample Results

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Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b> WASTE PILE 1		
<b>Lab Sample ID:</b> D56995-1		<b>Date Sampled:</b> 04/17/14
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 04/18/14
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> 77.2
<b>Project:</b> Chivington Pit Remediation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V30210.D	1	04/23/14	JL	n/a	n/a	V3V1764
Run #2	3V30212.D	1	04/23/14	JL	n/a	n/a	V3V1764

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	5.0 ul
Run #2	5.05 g	5.0 ml	1.0 ul

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	32000	24000	ug/kg	
71-43-2	Benzene	480000 <sup>a</sup>	7900	3000	ug/kg	
75-27-4	Bromodichloromethane	ND	3200	600	ug/kg	
75-25-2	Bromoform	ND	7900	600	ug/kg	
75-15-0	Carbon disulfide	ND	3200	600	ug/kg	
56-23-5	Carbon tetrachloride	ND	3200	600	ug/kg	
108-90-7	Chlorobenzene	ND	3200	600	ug/kg	
75-00-3	Chloroethane	ND	3200	1100	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	7900	1700	ug/kg	
67-66-3	Chloroform	ND	3200	600	ug/kg	
124-48-1	Dibromochloromethane	ND	3200	600	ug/kg	
95-50-1	o-Dichlorobenzene	ND	3200	600	ug/kg	
541-73-1	m-Dichlorobenzene	ND	3200	600	ug/kg	
106-46-7	p-Dichlorobenzene	ND	3200	600	ug/kg	
75-34-3	1,1-Dichloroethane	ND	3200	600	ug/kg	
107-06-2	1,2-Dichloroethane	ND	3200	600	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	3200	740	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	3200	600	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	3200	600	ug/kg	
78-87-5	1,2-Dichloropropane	ND	3200	600	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7900	600	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7900	600	ug/kg	
100-41-4	Ethylbenzene	248000	3200	600	ug/kg	
591-78-6	2-Hexanone	ND	7900	920	ug/kg	
74-83-9	Methyl bromide	ND	7900	4100	ug/kg	
74-87-3	Methyl chloride	ND	16000	3200	ug/kg	
75-09-2	Methylene chloride	ND	32000	21000	ug/kg	
78-93-3	Methyl ethyl ketone	ND	7900	3600	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	16000	1700	ug/kg	
100-42-5	Styrene	ND	7900	600	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3200	600	ug/kg	
127-18-4	Tetrachloroethylene	ND	3200	680	ug/kg	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> WASTE PILE 1	
<b>Lab Sample ID:</b> D56995-1	<b>Date Sampled:</b> 04/17/14
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 04/18/14
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> 77.2
<b>Project:</b> Chivington Pit Remediation	

### VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	1120000 <sup>a</sup>	16000	7900	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	3200	600	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	3200	600	ug/kg	
79-01-6	Trichloroethylene	ND	3200	840	ug/kg	
108-05-4	Vinyl Acetate	ND	7900	2200	ug/kg	
75-01-4	Vinyl chloride	ND	3200	1300	ug/kg	
1330-20-7	Xylene (total)	1050000 <sup>a</sup>	32000	16000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	113%	103%	64-130%
460-00-4	4-Bromofluorobenzene	97%	99%	62-131%
17060-07-0	1,2-Dichloroethane-D4	93%	98%	70-130%

(a) Result is from Run# 2

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> WASTE PILE 1	<b>Date Sampled:</b> 04/17/14
<b>Lab Sample ID:</b> D56995-1	<b>Date Received:</b> 04/18/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 77.2
<b>Project:</b> Chivington Pit Remediation	

## Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analysed By	Method	Prep Method
Arsenic	< 3.1	3.1	mg/kg	1	04/24/14	04/24/14 KV	SW846 6010C <sup>1</sup>	SW846 3050B <sup>4</sup>
Barium	7820	6.3	mg/kg	5	04/24/14	04/25/14 KV	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Cadmium	< 1.3	1.3	mg/kg	1	04/24/14	04/24/14 KV	SW846 6010C <sup>1</sup>	SW846 3050B <sup>4</sup>
Chromium	14.3	6.3	mg/kg	5	04/24/14	04/25/14 KV	SW846 6010C <sup>2</sup>	SW846 3050B <sup>4</sup>
Lead	29.9	6.3	mg/kg	1	04/24/14	04/24/14 KV	SW846 6010C <sup>1</sup>	SW846 3050B <sup>4</sup>
Mercury	< 0.11	0.11	mg/kg	1	04/30/14	04/30/14 JB	SW846 7471B <sup>3</sup>	SW846 7471B <sup>5</sup>
Selenium	< 6.3	6.3	mg/kg	1	04/24/14	04/24/14 KV	SW846 6010C <sup>1</sup>	SW846 3050B <sup>4</sup>
Silver	< 3.8	3.8	mg/kg	1	04/24/14	04/24/14 KV	SW846 6010C <sup>1</sup>	SW846 3050B <sup>4</sup>

- (1) Instrument QC Batch: MA4692
- (2) Instrument QC Batch: MA4694
- (3) Instrument QC Batch: MA4711
- (4) Prep QC Batch: MP12795
- (5) Prep QC Batch: MP12822

RL = Reporting Limit

## Report of Analysis

<b>Client Sample ID:</b> WASTE PILE 1	<b>Date Sampled:</b> 04/17/14
<b>Lab Sample ID:</b> D56995-1	<b>Date Received:</b> 04/18/14
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 77.2
<b>Project:</b> Chivington Pit Remediation	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
<b>%solids</b>							
Solids, Percent	77.2		%	1	04/21/14	SWT	SM2540G-2011 M
Flashpoint At 620 mm Hg <sup>a</sup>	70		Deg. F	1	04/21/14	AK	ASTM D93, PM CC
pH	11.12		su	1	04/18/14 16:00	SK	SW846 9045D

(a) Results confirmed by re-analysis.

RL = Reporting Limit

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Mountain States  
4036 Youngfield Street, Wheat Ridge, Co 80033  
TEL: 303-425-6021 877-737-4521  
FAX: 303-425-6021

FED-EX Tracking # \_\_\_\_\_  
Accutest Quote # \_\_\_\_\_  
Accutest Job # **D56995**

Client / Reporting Information		Project Information				Requested Analysis (see TEST CODE sheet)												Matrix Codes
Company Name <b>Carrberg Petroleum Company</b>		Project Name <b>Chivington Pit Remediation</b>				<p style="text-align: center;">PH    Flash Point    8260    RCRA Metals</p>												DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OL - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank
Street Address <b>3600 S Yosemite St</b>		Street <b>Chivington Pit Remediation</b>																
City State Zip <b>Denver CO 80237</b>		Billing Information (if different from Report to) Company Name																
Project Contact <b>Chris DiMarco</b>		Street Address																
E-mail <b>chrisdi@car.com</b>		City State Zip																
Phone # <b>303-904-2525</b>		Project Manager <b>Chris DiMarco</b>																
FAX # <b>303-904-2525</b>		Attention: <b>Chris DiMarco</b>																
Sampler(s) Name(s) <b>Chris DiMarco</b>		PO#																
Phone # <b>303-904-2525</b>		FO#																
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## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1764-MB	3V30204.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	1000	750	ug/kg	
71-43-2	Benzene	ND	50	19	ug/kg	
75-27-4	Bromodichloromethane	ND	100	19	ug/kg	
75-25-2	Bromoform	ND	250	19	ug/kg	
75-15-0	Carbon disulfide	ND	100	19	ug/kg	
56-23-5	Carbon tetrachloride	ND	100	19	ug/kg	
108-90-7	Chlorobenzene	ND	100	19	ug/kg	
75-00-3	Chloroethane	ND	100	36	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	250	55	ug/kg	
67-66-3	Chloroform	ND	100	19	ug/kg	
124-48-1	Dibromochloromethane	ND	100	19	ug/kg	
95-50-1	o-Dichlorobenzene	ND	100	19	ug/kg	
541-73-1	m-Dichlorobenzene	ND	100	19	ug/kg	
106-46-7	p-Dichlorobenzene	ND	100	19	ug/kg	
75-34-3	1,1-Dichloroethane	ND	100	19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	100	19	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	100	24	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	100	19	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	100	19	ug/kg	
78-87-5	1,2-Dichloropropane	ND	100	19	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	250	19	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	250	19	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
591-78-6	2-Hexanone	ND	250	29	ug/kg	
74-83-9	Methyl bromide	ND	250	130	ug/kg	
74-87-3	Methyl chloride	ND	500	100	ug/kg	
75-09-2	Methylene chloride	ND	1000	650	ug/kg	
78-93-3	Methyl ethyl ketone	ND	250	120	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	500	55	ug/kg	
100-42-5	Styrene	ND	250	19	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	100	19	ug/kg	
127-18-4	Tetrachloroethylene	ND	100	22	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	100	19	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	100	19	ug/kg	
79-01-6	Trichloroethylene	ND	100	27	ug/kg	

## Method Blank Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1764-MB	3V30204.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-05-4	Vinyl Acetate	ND	250	70	ug/kg	
75-01-4	Vinyl chloride	ND	100	43	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	99% 64-130%
460-00-4	4-Bromofluorobenzene	93% 62-131%
17060-07-0	1,2-Dichloroethane-D4	99% 70-130%

# Blank Spike Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1764-BS	3V30205.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	2500	3500	140	10-228
71-43-2	Benzene	2500	2630	105	70-130
75-27-4	Bromodichloromethane	2500	2680	107	70-130
75-25-2	Bromoform	2500	2740	110	70-130
75-15-0	Carbon disulfide	2500	2550	102	40-136
56-23-5	Carbon tetrachloride	2500	2320	93	70-131
108-90-7	Chlorobenzene	2500	2600	104	70-130
75-00-3	Chloroethane	2500	2350	94	58-130
110-75-8	2-Chloroethyl vinyl ether	2500	2630	105	23-130
67-66-3	Chloroform	2500	2570	103	70-130
124-48-1	Dibromochloromethane	2500	2520	101	70-130
95-50-1	o-Dichlorobenzene	2500	2570	103	68-130
541-73-1	m-Dichlorobenzene	2500	2650	106	67-131
106-46-7	p-Dichlorobenzene	2500	2560	102	64-130
75-34-3	1,1-Dichloroethane	2500	2570	103	70-130
107-06-2	1,2-Dichloroethane	2500	2480	99	70-130
75-35-4	1,1-Dichloroethylene	2500	2530	101	67-130
156-59-2	cis-1,2-Dichloroethylene	2500	2740	110	70-130
156-60-5	trans-1,2-Dichloroethylene	2500	2730	109	70-130
78-87-5	1,2-Dichloropropane	2500	2620	105	70-130
10061-01-5	cis-1,3-Dichloropropene	2500	2340	94	70-130
10061-02-6	trans-1,3-Dichloropropene	2500	2650	106	70-131
100-41-4	Ethylbenzene	2500	2780	111	70-130
591-78-6	2-Hexanone	2500	2520	101	36-173
74-83-9	Methyl bromide	2500	2490	100	51-139
74-87-3	Methyl chloride	2500	2430	97	43-137
75-09-2	Methylene chloride	2500	2370	95	67-130
78-93-3	Methyl ethyl ketone	2500	2770	111	39-184
108-10-1	4-Methyl-2-pentanone	2500	2470	99	69-133
100-42-5	Styrene	2500	2350	94	69-132
79-34-5	1,1,2,2-Tetrachloroethane	2500	2630	105	68-130
127-18-4	Tetrachloroethylene	2500	2640	106	70-132
108-88-3	Toluene	2500	2600	104	70-130
71-55-6	1,1,1-Trichloroethane	2500	2680	107	70-130
79-00-5	1,1,2-Trichloroethane	2500	2330	93	70-130
79-01-6	Trichloroethylene	2500	2680	107	70-130

\* = Outside of Control Limits.

# Blank Spike Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V1764-BS	3V30205.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
108-05-4	Vinyl Acetate	2500	2420	97	70-130
75-01-4	Vinyl chloride	2500	2250	90	57-130
1330-20-7	Xylene (total)	7500	7190	96	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	101%	64-130%
460-00-4	4-Bromofluorobenzene	99%	62-131%
17060-07-0	1,2-Dichloroethane-D4	99%	70-130%

\* = Outside of Control Limits.

# Matrix Spike Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D57077-1MS	3V30206.D	1	04/23/14	JL	n/a	n/a	V3V1764
D57077-1	3V30207.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	D57077-1 ug/kg	Spike Q	MS ug/kg	MS %	Limits
67-64-1	Acetone	ND	2560	3120	122	10-241
71-43-2	Benzene	ND	2560	2460	96	64-139
75-27-4	Bromodichloromethane	ND	2560	2780	109	69-145
75-25-2	Bromoform	ND	2560	2800	109	59-146
75-15-0	Carbon disulfide	ND	2560	2120	83	28-145
56-23-5	Carbon tetrachloride	ND	2560	2060	80	62-147
108-90-7	Chlorobenzene	ND	2560	2490	97	60-136
75-00-3	Chloroethane	ND	2560	158	6* a	43-152
110-75-8	2-Chloroethyl vinyl ether	ND	2560	2870	112	16-152
67-66-3	Chloroform	ND	2560	2480	97	58-139
124-48-1	Dibromochloromethane	ND	2560	2770	108	60-137
95-50-1	o-Dichlorobenzene	ND	2560	2580	101	61-138
541-73-1	m-Dichlorobenzene	ND	2560	2620	102	59-139
106-46-7	p-Dichlorobenzene	ND	2560	2540	99	55-137
75-34-3	1,1-Dichloroethane	ND	2560	2380	93	58-143
107-06-2	1,2-Dichloroethane	ND	2560	2490	97	59-139
75-35-4	1,1-Dichloroethylene	ND	2560	2140	84	54-139
156-59-2	cis-1,2-Dichloroethylene	ND	2560	2630	103	60-145
156-60-5	trans-1,2-Dichloroethylene	ND	2560	2470	96	55-142
78-87-5	1,2-Dichloropropane	ND	2560	2570	100	70-137
10061-01-5	cis-1,3-Dichloropropene	ND	2560	2400	94	59-142
10061-02-6	trans-1,3-Dichloropropene	ND	2560	2870	112	53-152
100-41-4	Ethylbenzene	ND	2560	2560	100	68-136
591-78-6	2-Hexanone	ND	2560	2560	100	31-199
74-83-9	Methyl bromide	ND	2560	294	11	10-130
74-87-3	Methyl chloride	ND	2560	2210	86	22-187
75-09-2	Methylene chloride	ND	2560	2330	91	57-132
78-93-3	Methyl ethyl ketone	ND	2560	2840	111	39-184
108-10-1	4-Methyl-2-pentanone	ND	2560	2570	100	68-147
100-42-5	Styrene	ND	2560	2330	91	46-162
79-34-5	1,1,2,2-Tetrachloroethane	ND	2560	2620	102	45-149
127-18-4	Tetrachloroethylene	ND	2560	2220	87	59-140
108-88-3	Toluene	ND	2560	2280	89	60-130
71-55-6	1,1,1-Trichloroethane	ND	2560	2440	95	68-138
79-00-5	1,1,2-Trichloroethane	ND	2560	2590	101	70-148
79-01-6	Trichloroethylene	ND	2560	2580	101	53-154

\* = Outside of Control Limits.

5.3.1  
 5

# Matrix Spike Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D57077-1MS	3V30206.D	1	04/23/14	JL	n/a	n/a	V3V1764
D57077-1	3V30207.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	D57077-1 ug/kg	Spike Q	MS ug/kg	MS %	Limits
108-05-4	Vinyl Acetate	ND		1920	75	25-161
75-01-4	Vinyl chloride	ND		2380	93	43-152
1330-20-7	Xylene (total)	ND		6780	88	58-142

CAS No.	Surrogate Recoveries	MS	D57077-1	Limits
2037-26-5	Toluene-D8	92%	90%	64-130%
460-00-4	4-Bromofluorobenzene	102%	99%	62-131%
17060-07-0	1,2-Dichloroethane-D4	98%	105%	70-130%

(a) Outside control limits due to possible matrix interference.

\* = Outside of Control Limits.

5.3.1  
 5

# Duplicate Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56995-1DUP	3V30211.D	1	04/23/14	JL	n/a	n/a	V3V1764
D56995-1	3V30210.D	1	04/23/14	JL	n/a	n/a	V3V1764
D56995-1	3V30212.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	D56995-1 ug/kg	DUP Q	ug/kg	Q	RPD	Limits
67-64-1	Acetone	ND		ND		nc	30
71-43-2	Benzene	480000 <sup>a</sup>		460000	E	4	30
75-27-4	Bromodichloromethane	ND		ND		nc	30
75-25-2	Bromoform	ND		ND		nc	30
75-15-0	Carbon disulfide	ND		ND		nc	30
56-23-5	Carbon tetrachloride	ND		ND		nc	30
108-90-7	Chlorobenzene	ND		ND		nc	30
75-00-3	Chloroethane	ND		ND		nc	30
110-75-8	2-Chloroethyl vinyl ether	ND		ND		nc	30
67-66-3	Chloroform	ND		ND		nc	30
124-48-1	Dibromochloromethane	ND		ND		nc	30
95-50-1	o-Dichlorobenzene	ND		ND		nc	30
541-73-1	m-Dichlorobenzene	ND		ND		nc	30
106-46-7	p-Dichlorobenzene	ND		ND		nc	30
75-34-3	1,1-Dichloroethane	ND		ND		nc	30
107-06-2	1,2-Dichloroethane	ND		ND		nc	30
75-35-4	1,1-Dichloroethylene	ND		ND		nc	30
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	30
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	30
78-87-5	1,2-Dichloropropane	ND		ND		nc	30
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	30
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	30
100-41-4	Ethylbenzene	248000		289000		15	30
591-78-6	2-Hexanone	ND		ND		nc	30
74-83-9	Methyl bromide	ND		ND		nc	30
74-87-3	Methyl chloride	ND		ND		nc	30
75-09-2	Methylene chloride	ND		ND		nc	30
78-93-3	Methyl ethyl ketone	ND		ND		nc	30
108-10-1	4-Methyl-2-pentanone	ND		ND		nc	30
100-42-5	Styrene	ND		ND		nc	30
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	30
127-18-4	Tetrachloroethylene	ND		ND		nc	30
108-88-3	Toluene	1120000 <sup>a</sup>		1130000	E	1	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	30
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	30
79-01-6	Trichloroethylene	ND		ND		nc	30

\* = Outside of Control Limits.

5.4.1  
 5

# Duplicate Summary

**Job Number:** D56995  
**Account:** GRPCCOD Grynberg Petroleum Company  
**Project:** Chivington Pit Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D56995-1DUP	3V30211.D	1	04/23/14	JL	n/a	n/a	V3V1764
D56995-1	3V30210.D	1	04/23/14	JL	n/a	n/a	V3V1764
D56995-1	3V30212.D	1	04/23/14	JL	n/a	n/a	V3V1764

The QC reported here applies to the following samples:

Method: SW846 8260B

D56995-1

CAS No.	Compound	D56995-1 ug/kg	DUP Q	Q	RPD	Limits
108-05-4	Vinyl Acetate	ND	ND		nc	30
75-01-4	Vinyl chloride	ND	ND		nc	30
1330-20-7	Xylene (total)	1050000 <sup>a</sup>	1070000	E	2	30

CAS No.	Surrogate Recoveries	DUP	D56995-1	D56995-1	Limits
2037-26-5	Toluene-D8	116%	113%	103%	64-130%
460-00-4	4-Bromofluorobenzene	98%	97%	99%	62-131%
17060-07-0	1,2-Dichloroethane-D4	90%	93%	98%	70-130%

(a) Result is from Run #2.

(b) High RPD due to possible sample nonhomogeneity.

\* = Outside of Control Limits.

5.4.1  
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## Metals Analysis

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D56995  
Account: GRPCCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

QC Batch ID: MP12795  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 04/24/14

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.86	1.8		
Antimony	3.0	.21	.5		
Arsenic	2.5	.38	.63	-0.63	<2.5
Barium	1.0	.02	.36	0.030	<1.0
Beryllium	1.0	.08	.06		
Boron	5.0	.08	.16		
Cadmium	1.0	.02	.28	0.090	<1.0
Calcium	40	.22	6.8		
Chromium	1.0	.03	.03	0.010	<1.0
Cobalt	0.50	.04	.039		
Copper	1.0	.08	.13		
Iron	7.0	.15	1.8		
Lead	5.0	.21	.25	-0.30	<5.0
Lithium	0.50	.04	.13		
Magnesium	20	.68	1.8		
Manganese	0.50	.001	.038		
Molybdenum	1.0	.04	.13		
Nickel	3.0	.05	.07		
Phosphorus	10	1.5	1.2		
Potassium	200	9.9	12		
Selenium	5.0	.71	1.1	-0.31	<5.0
Silicon	5.0	.47	1.1		
Silver	3.0	.03	.05	-0.010	<3.0
Sodium	40	.49	3.7		
Strontium	5.0	.001	.022		
Thallium	1.0	.18	.46		
Tin	5.0	1.2	2.3		
Titanium	1.0	.01	.46		
Uranium	5.0	.29	.31		
Vanadium	1.0	.04	.043		
Zinc	3.0	.04	.16		

Associated samples MP12795: D56995-1

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

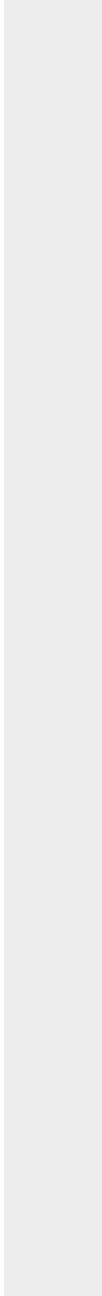
QC Batch ID: MP12795  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 04/24/14

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12795  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 04/24/14

Metal	D56995-1 Original MS		SpikeLot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	6.2	117	131	89.4	75-125
Barium	7820	6180	262	-626.7(a)	75-125
Beryllium					
Boron					
Cadmium	0.0	54.9	65.4	83.6	75-125
Calcium					
Chromium	14.3	73.2	65.4	90.0	75-125
Cobalt					
Copper					
Iron					
Lead	30.7	123	131	71.2N(b)	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	5.2	112	131	85.6	75-125
Silicon					
Silver	0.0	20.1	26.2	76.8	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP12795: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

QC Batch ID: MP12795  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 04/24/14

Metal	D56995-1 Original MS	Spike/lot ICPALL2	% Rec	QC Limits
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.

6.1.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12795  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 04/24/14

Metal	D56995-1 Original MSD		SpikeLot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	6.2	113	130	87.2	3.5	20
Barium	7820	6030	259	-690.9(a)	2.5	20
Beryllium						
Boron						
Cadmium	0.0	53.9	64.8	82.9	1.8	20
Calcium						
Chromium	14.3	72.7	64.8	90.2	0.7	20
Cobalt						
Copper						
Iron						
Lead	30.7	123	130	71.9N(b)	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	5.2	107	130	82.6	4.6	20
Silicon						
Silver	0.0	19.5	25.9	75.3	3.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP12795: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12795  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 04/24/14

Metal	D56995-1 Original MSD	Spike lot ICPALL2	% Rec	MSD RPD	QC Limit
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- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- (b) Spike recovery indicates possible matrix interference.

6.1.2  
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D56995  
 Account: GRPCCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12795  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: mg/kg

Prep Date: 04/24/14

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	95.7	100	95.7	80-120
Barium	185	200	92.5	80-120
Beryllium				
Boron				
Cadmium	45.2	50	90.4	80-120
Calcium				
Chromium	47.2	50	94.4	80-120
Cobalt				
Copper				
Iron				
Lead	91.4	100	91.4	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	94.3	100	94.3	80-120
Silicon				
Silver	18.7	20	93.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP12795: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

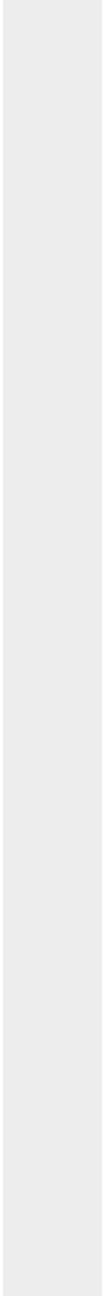
QC Batch ID: MP12795  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: mg/kg

Prep Date: 04/24/14

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
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(anr) Analyte not requested



SERIAL DILUTION RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12795  
 Matrix Type: SOLID

Methods: SW846 6010C  
 Units: ug/l

Prep Date: 04/24/14

Metal	D56995-1 Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	62200	70100	12.7*(a)	0-10
Beryllium				
Boron				
Cadmium	1.80	0.00	100.0(b)	0-10
Calcium				
Chromium	110	110	3.1	0-10
Cobalt				
Copper				
Iron				
Lead	238	296	24.3*(a)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP12795: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

6.1.4  
6

SERIAL DILUTION RESULTS SUMMARY

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

QC Batch ID: MP12795  
Matrix Type: SOLID

Methods: SW846 6010C  
Units: ug/l

Prep Date: 04/24/14

	D56995-1		QC
Metal	Original SDL 1:5	%DIF	Limits

- (anr) Analyte not requested
- (a) Serial dilution indicates possible matrix interference.
- (b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

6.1.4

6

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

QC Batch ID: MP12822  
Matrix Type: SOLID

Methods: SW846 7471B  
Units: mg/kg

Prep Date: 04/30/14

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.083	.00088	.0067	-0.0014	<0.083

Associated samples MP12822: D56995-1

Results < IDL are shown as zero for calculation purposes  
(\* ) Outside of QC limits  
(anr) Analyte not requested

6.2.1  
6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12822  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 04/30/14

Metal	D56951-5 Original MS	SpikeLot HGWSR1	% Rec	QC Limits
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Mercury	0.0065	0.40	0.394	99.9	75-125
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Associated samples MP12822: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.2.2

6

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D56995  
 Account: GRPCCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12822  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 04/30/14

Metal	D56951-5 Original MSD	Spike HGWSR1	lot % Rec	MSD RPD	QC Limit	
Mercury	0.0065	0.38	0.394	94.8	5.1	20

Associated samples MP12822: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested

6.2.2

6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D56995  
 Account: GRPCOD - Grynberg Petroleum Company  
 Project: Chivington Pit Remediation

QC Batch ID: MP12822  
 Matrix Type: SOLID

Methods: SW846 7471B  
 Units: mg/kg

Prep Date: 04/30/14

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.33	0.333	99.0	80-120

Associated samples MP12822: D56995-1

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits  
 (anr) Analyte not requested

6.2.3

6

## General Chemistry

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D56995  
Account: GRPCOD - Grynberg Petroleum Company  
Project: Chivington Pit Remediation

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
pH	GN24394			su	8.00	8.05	100.6	99.3-100.7%

Associated Samples:  
Batch GN24394: D56995-1  
(\* ) Outside of QC limits

7.1  
7

Accutest Mountain States		Apr 30, 2014 15:38 pm
Job Number:	D56995	
Account:	Grynberg Petroleum Company	
Project:	Chivington Pit Remediation	
Project Number:		
Legend:		Hit
Client Sample ID:		WASTE PILE 1
Lab Sample ID:		D56995-1
Date Sampled:		04/17/2014
Matrix:		Soil
<b>GC/MS Volatiles (SW846 8260B)</b>		
Acetone	ug/kg	ND (24000)
Benzene	ug/kg	480000
Bromodichloromethane	ug/kg	ND (600)
Bromoform	ug/kg	ND (600)
Carbon disulfide	ug/kg	ND (600)
Carbon tetrachloride	ug/kg	ND (600)
Chlorobenzene	ug/kg	ND (600)
Chloroethane	ug/kg	ND (1100)
2-Chloroethyl vinyl ether	ug/kg	ND (1700)
Chloroform	ug/kg	ND (600)
Dibromochloromethane	ug/kg	ND (600)
o-Dichlorobenzene	ug/kg	ND (600)
m-Dichlorobenzene	ug/kg	ND (600)
p-Dichlorobenzene	ug/kg	ND (600)
1,1-Dichloroethane	ug/kg	ND (600)
1,2-Dichloroethane	ug/kg	ND (600)
1,1-Dichloroethylene	ug/kg	ND (740)
cis-1,2-Dichloroethylene	ug/kg	ND (600)
trans-1,2-Dichloroethylene	ug/kg	ND (600)
1,2-Dichloropropane	ug/kg	ND (600)
cis-1,3-Dichloropropene	ug/kg	ND (600)
trans-1,3-Dichloropropene	ug/kg	ND (600)
Ethylbenzene	ug/kg	248000
2-Hexanone	ug/kg	ND (920)
Methyl bromide	ug/kg	ND (4100)
Methyl chloride	ug/kg	ND (3200)
Methylene chloride	ug/kg	ND (21000)
Methyl ethyl ketone	ug/kg	ND (3600)
4-Methyl-2-pentanone	ug/kg	ND (1700)
Styrene	ug/kg	ND (600)
1,1,2,2-Tetrachloroethane	ug/kg	ND (600)
Tetrachloroethylene	ug/kg	ND (680)
Toluene	ug/kg	1120000
1,1,1-Trichloroethane	ug/kg	ND (600)
1,1,2-Trichloroethane	ug/kg	ND (600)
Trichloroethylene	ug/kg	ND (840)
Vinyl Acetate	ug/kg	ND (2200)
Vinyl chloride	ug/kg	ND (1300)
Xylene (total)	ug/kg	1050000
<b>Metals Analysis</b>		

Arsenic	mg/kg	<3.1
Barium	mg/kg	7820
Cadmium	mg/kg	<1.3
Chromium	mg/kg	14.3
Lead	mg/kg	29.9
Mercury	mg/kg	<0.11
Selenium	mg/kg	<6.3
Silver	mg/kg	<3.8
<b>General Chemistry</b>		
Solids, Percent	%	77.2
Flashpoint At 620 mm Hg	Deg. F	70 <sup>a</sup>
pH	su	11.12
<b>Footnotes:</b>		
<sup>a</sup> Results confirmed by re-analysis.		

## Final Sampling Laboratory Results

December 30, 2015

## Report to:

Carl Colby  
Gadeco LLC  
3303 County Road 103

Craig, CO 81625

## Bill to:

Gene Webb  
Gadeco LLC  
3600 S. Yosemite  
Suite 900  
Denver, CO 80237

## Project ID:

ACZ Project ID: L28055

Carl Colby:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 07, 2015. This project has been assigned to ACZ's project number, L28055. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L28055. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 29, 2016. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and approved this report.



**Gadeco, LLC**

Project ID:

Sample ID: # 2

ACZ Sample ID: **L28055-02**

Date Sampled: 12/04/15 12:30

Date Received: 12/07/15

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	505	3.9		*	mg/Kg	0.1	0.5	12/21/15 15:37	msh
Barium, total (3050)	M6010B ICP	101	173			mg/Kg	0.3	2	12/16/15 16:13	aeb
Boron, total (3050)	M6010B ICP	101	8		*	mg/Kg	1	5	12/16/15 16:13	aeb
Cadmium, total (3050)	M6010B ICP	101		U		mg/Kg	0.5	2	12/16/15 16:13	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	1	2.13			meq/L	0.005	0.025	12/18/15 22:11	aeb
Chromium, total (3050)	M6010B ICP	101	19		*	mg/Kg	1	5	12/16/15 16:13	aeb
Copper, total (3050)	M6010B ICP	101	18			mg/Kg	1	5	12/16/15 16:13	aeb
Lead, total (3050)	M6010B ICP	101	15	B		mg/Kg	3	20	12/16/15 16:13	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	1	0.326			meq/L	0.017	0.082	12/18/15 22:11	aeb
Mercury by Direct Combustion AA	M7473	1	10.3			ng/g	1.62	8.1	12/22/15 11:28	pta
Nickel, total (3050)	M6010B ICP	101	13.3		*	mg/Kg	0.8	4	12/16/15 16:13	aeb
Selenium, total (3050)	M6010B ICP	101		U		mg/Kg	5	30	12/16/15 16:13	aeb
Silver, total (3050)	M6010B ICP	101		U		mg/Kg	1	3	12/16/15 16:13	aeb
Sodium Adsorption Ratio	Calculation		23						12/29/15 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	1	25.9			meq/L	0.0087	0.0435	12/18/15 22:11	aeb
Zinc, total (3050)	M6010B ICP	101	58			mg/Kg	1	5	12/16/15 16:13	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	3.36		*	mmhos/cm	0.001	0.01	12/15/15 0:00	jjo
Max Particle Size		1	2000		*	um			12/15/15 0:00	jjo
Temperature		1	17.5		*	C	0.1	0.1	12/15/15 0:00	jjo
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	2000		*	um			12/15/15 0:00	jjo
pH		1	7.5		*	units	0.1	0.1	12/15/15 0:00	jjo
Solids, Percent	D2216-80	1	90.3		*	%	0.1	0.5	12/11/15 9:53	rbt

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								12/09/15 10:10	rbt
Digestion - Hot Plate	M3050B ICP								12/16/15 7:26	bcc
Digestion - Hot Plate	M3050B ICP-MS								12/16/15 7:26	bcc
Saturated Paste Extraction	USDA No. 60 (2)								12/14/15 8:10	jjo
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								12/10/15 13:15	jjo



**Report Header Explanations**

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

**QC Sample Types**

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	Serial Dilution

**QC Sample Type Explanations**

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

**ACZ Qualifiers (Qual)**

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

**Method References**

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

**Comments**

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

Gadeco, LLC

ACZ Project ID: **L28055**

**Arsenic, total (3050)**

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG396191</b>													
WG396191ICV	ICV	12/21/15 14:58	MS151201-3	.05		.05324	mg/L	106	90	110			
WG396191ICB	ICB	12/21/15 15:00				U	mg/L		-0.0006	0.0006			
WG395614PBS	PBS	12/21/15 15:09				U	mg/Kg		-0.3	0.3			
WG395856PBS	PBS	12/21/15 15:26				U	mg/Kg		-0.3	0.3			
WG395856LCSS	LCSS	12/21/15 15:33	PCN49587	139		137.5	mg/Kg		109	169			
WG395856LCSSD	LCSSD	12/21/15 15:35	PCN49587	139		138.4	mg/Kg		109	169	1	20	
L28055-02MS	MS	12/21/15 15:41	MS151119-2	25.3005	3.9	27.1	mg/Kg	92	75	125			
L28055-02MSD	MSD	12/21/15 15:43	MS151119-2	25.3005	3.9	27.17	mg/Kg	92	75	125	0	20	

**Barium, total (3050)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.914	mg/L	96	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.009	0.009			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-0.9	0.9			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	203		183.9	mg/Kg		168	239			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	203		177.8	mg/Kg		168	239	3	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.5	62.1	112.21	mg/Kg	99	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.5	62.1	116.35	mg/Kg	107	75	125	4	20	

**Boron, total (3050)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		2.004	mg/L	100	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.03	0.03			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-3	3			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	133		126.3	mg/Kg		96.4	170			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	133		121.8	mg/Kg		96.4	170	4	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.5505	3	51.5	mg/Kg	96	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.5505	3	51.6	mg/Kg	96	75	125	0	20	

**Cadmium, total (3050)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.958	mg/L	98	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.015	0.015			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-1.5	1.5			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	96		88.8	mg/Kg		78.4	113			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	96		85.38	mg/Kg		78.4	113	4	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.5505	U	46.25	mg/Kg	91	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.5505	U	45.91	mg/Kg	91	75	125	1	20	

**Calcium, soluble (Sat. Paste)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG396105</b>													
WG396105ICV	ICV	12/18/15 21:55	II151210-1	100		102	mg/L	102	90	110			
WG396105ICB	ICB	12/18/15 21:58				U	mg/L		-0.3	0.3			
L28097-01DUP	DUP	12/18/15 22:17			5.67	6.2	meq/L				9	20	

Gadeco, LLC

ACZ Project ID: **L28055**

**Chromium, total (3050) M6010B ICP**

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.945	mg/L	97	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.03	0.03			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-3	3			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	136		126.1	mg/Kg		107	164			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	136		122.6	mg/Kg		107	164	3	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.5505	8	55.5	mg/Kg	94	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.5505	8	55.6	mg/Kg	94	75	125	0	20	

**Conductivity @25C SM2510B**

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395830</b>													
L28097-01DUP	DUP	12/15/15 8:35			1.11	1.12	mmhos/cm				1	20	

**Copper, total (3050) M6010B ICP**

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.958	mg/L	98	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.03	0.03			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-3	3			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	168		153.8	mg/Kg		137	199			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	168		150.7	mg/Kg		137	199	2	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.399	7	55.5	mg/Kg	96	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.399	7	55	mg/Kg	95	75	125	1	20	

**Lead, total (3050) M6010B ICP**

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	4		3.969	mg/L	99	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.09	0.09			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-9	9			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	133		124.6	mg/Kg		109	158			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	133		123.9	mg/Kg		109	158	1	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	101.101	8	101.9	mg/Kg	93	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	101.101	8	101.6	mg/Kg	93	75	125	0	20	

**Magnesium, soluble (Sat. Paste) M6010B ICP**

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG396105</b>													
WG396105ICV	ICV	12/18/15 21:55	II151210-1	100		102	mg/L	102	90	110			
WG396105ICB	ICB	12/18/15 21:58				U	mg/L		-0.6	0.6			
L28097-01DUP	DUP	12/18/15 22:17			3.05	3.17	meq/L				4	20	

Gadeco, LLC

ACZ Project ID: **L28055**

**Mercury by Direct Combustion AA** M7473

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG391339</b>													
WG391339ICV1	ICV	09/29/15 8:47	HG150928-2	100		100	ng/g	100	90	110			
WG391339ICV2	ICV	09/29/15 8:57	HG150928-3	100		106	ng/g	106	90	110			
WG391339ICV3	ICV	09/29/15 9:10	HG150928-1	1000		1060	ng/g	106	90	110			
WG391339ICV4	ICV	09/29/15 9:25	HG150928-1	1000		1070	ng/g	107	90	110			
<b>WG395938</b>													
WG395938ICV1	ICV	12/22/15 9:29	HG151207-2	100		99.6	ng/g	100	90	110			
WG395938ICV2	ICV	12/22/15 9:41	HG151207-3	100		93.7	ng/g	94	90	110			
WG395938ICV3	ICV	12/22/15 10:07	HG151207-1	1000		1040	ng/g	104	90	110			
WG395938ICV4	ICV	12/22/15 10:19	HG151207-1	1000		1080	ng/g	108	90	110			
WG395938PBS	PBS	12/22/15 11:07				U	ng/g		-2	2			
WG395938LCSS	LCSS	12/22/15 11:14	PCN48335	80		81.5	ng/g		80	120			
WG395938LCSSD	LCSSD	12/22/15 11:21	PCN48335	80		78.7	ng/g		80	120	3	20	
L28097-01DUP	DUP	12/22/15 12:13			31.3	29.7	ng/g				5	20	
L28097-01MS	MS	12/22/15 12:20	PCN48335				ng/g	88	80	120			

**Nickel, total (3050)** M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.997	mg/L	100	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.024	0.024			
WG395856PBS	PBS	12/16/15 15:52				1	mg/Kg		-2.4	2.4			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	123		117.4	mg/Kg		101	146			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	123		113.7	mg/Kg		101	146	3	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.601	5.4	52.57	mg/Kg	93	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.601	5.4	52.63	mg/Kg	93	75	125	0	20	

**pH, Saturated Paste** EPA 600/2-78-054 section 3.2.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395830</b>													
WG395830ICV	ICV	12/15/15 8:12	PCN48827	4		4	units	100	3.9	4.1			
L28097-01DUP	DUP	12/15/15 8:35			8	8	units				0	20	

**Selenium, total (3050)** M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	4		4.121	mg/L	103	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.15	0.15			
WG395856PBS	PBS	12/16/15 15:52				6.5	mg/Kg		-15	15			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	177		176	mg/Kg		137	217			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	177		167.4	mg/Kg		137	217	5	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	100.899	7	97.3	mg/Kg	89	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	100.899	7	102.2	mg/Kg	94	75	125	5	20	

Gadeco, LLC

ACZ Project ID: **L28055**

**Silver, total (3050)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	1.001		.996	mg/L	100	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.03	0.03			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-3	3			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	40.2		36.2	mg/Kg		30.1	50.4			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	40.2		36	mg/Kg		30.1	50.4	1	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.702	U	48	mg/Kg	95	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.702	U	47.5	mg/Kg	94	75	125	1	20	

**Sodium, soluble (Sat. Paste)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG396105</b>													
WG396105ICV	ICV	12/18/15 21:55	II151210-1	100		98.5	mg/L	99	90	110			
WG396105ICB	ICB	12/18/15 21:58				U	mg/L		-0.6	0.6			
L28097-01DUP	DUP	12/18/15 22:17			3.18	2.77	meq/L				14	20	

**Solids, Percent**

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395710</b>													
L28055-02DUP	DUP	12/11/15 9:53			90.3	90.21	%				0	20	
WG395710PBS	PBS	12/11/15 9:53				U	%		-0.1	0.1			

**Zinc, total (3050)**

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG395963</b>													
WG395963ICV	ICV	12/16/15 15:37	II151215-2	2		1.928	mg/L	96	90	110			
WG395963ICB	ICB	12/16/15 15:40				U	mg/L		-0.03	0.03			
WG395856PBS	PBS	12/16/15 15:52				U	mg/Kg		-3	3			
WG395856LCSS	LCSS	12/16/15 15:55	PCN49587	189		176.3	mg/Kg		154	224			
WG395856LCSSD	LCSSD	12/16/15 15:58	PCN49587	189		175.2	mg/Kg		154	224	1	20	
L27931-01MS	MS	12/16/15 16:04	II151202-8	50.4495	30	76.9	mg/Kg	95	75	125			
L27931-01MSD	MSD	12/16/15 16:07	II151202-8	50.4495	30	78.4	mg/Kg	98	75	125	2	20	

Gadeco, LLC

ACZ Project ID: **L28055**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L28055-02	WG396191	Arsenic, total (3050)	M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 100 times the MDL.
	WG395963	Boron, total (3050)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Chromium, total (3050)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Nickel, total (3050)	M6010B ICP	ZG	The ICP Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 1

ACZ Sample ID: **L28055-01**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 14:32  
 Analysis Date: 12/14/15 14:32

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	95.7		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	98.9		1		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 1

ACZ Sample ID: **L28055-01**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:16  
 Analysis Date: 12/15/15 5:25

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28			U	33.3		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	82.9		33.3		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 2

ACZ Sample ID: **L28055-02**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 15:02  
 Analysis Date: 12/14/15 15:02

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	90.2		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	93.2		1		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 2

ACZ Sample ID: **L28055-02**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:18  
 Analysis Date: 12/15/15 5:52

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		178		33.2		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	94.4		33.2		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 2

ACZ Sample ID: **L28055-02**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Polynuclear Aromatic Hydrocarbons GC/M**

Analysis Method: **M8270C GC/MS**  
 Extract Method: **M3540**

**Workgroup: WG395796**

Analyst: wfg  
 Extract Date: 12/10/15 13:50  
 Analysis Date: 12/14/15 13:30

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
2-Methylnaphthalene	91-57-6		U	333	*	ug/Kg	700	3000
Acenaphthene	83-32-9		U	333	*	ug/Kg	700	3000
Acenaphthylene	208-96-8		U	333	*	ug/Kg	700	3000
Anthracene	120-12-7		U	333	*	ug/Kg	700	3000
Benzo(a)anthracene	56-55-3		U	333	*	ug/Kg	700	3000
Benzo(a)pyrene	50-32-8		U	333	*	ug/Kg	700	3000
Benzo(b)fluoranthene	205-99-2		U	333	*	ug/Kg	700	3000
Benzo(g,h,i)perylene	191-24-2		U	333	*	ug/Kg	700	3000
Benzo(k)fluoranthene	207-08-9		U	333	*	ug/Kg	700	3000
Chrysene	218-01-9		U	333	*	ug/Kg	700	3000
Dibenzo(a,h)anthracene	53-70-3		U	333	*	ug/Kg	700	3000
Fluoranthene	206-44-0		U	333	*	ug/Kg	700	3000
Fluorene	86-73-7		U	333	*	ug/Kg	700	3000
Indeno(1,2,3-cd)pyrene	193-39-5		U	333	*	ug/Kg	700	3000
Naphthalene	91-20-3		U	333	*	ug/Kg	700	3000
Phenanthrene	85-01-8		U	333	*	ug/Kg	700	3000
Pyrene	129-00-0		U	333	*	ug/Kg	700	3000
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
2-Fluorobiphenyl	321-60-8	76.3		333	*	%	45	105
Nitrobenzene-d5	4165-60-0	65.1		333	*	%	35	100
Terphenyl-d14	1718-51-0	96.8		333	*	%	30	125

Gadeco, LLC  
 Project ID:  
 Sample ID: # 3

ACZ Sample ID: **L28055-03**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 15:32  
 Analysis Date: 12/14/15 15:32

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	92.3		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	95.8		1		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 3

ACZ Sample ID: **L28055-03**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:20  
 Analysis Date: 12/15/15 6:20

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		7	J	33.3		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	86.9		33.3		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 4

ACZ Sample ID: **L28055-04**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 18:31  
 Analysis Date: 12/14/15 18:31

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	95.8		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	99.1		1		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 4

ACZ Sample ID: **L28055-04**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:22  
 Analysis Date: 12/15/15 6:48

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		7	J	33.2		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	88.2		33.2		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 5

ACZ Sample ID: **L28055-05**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 19:01  
 Analysis Date: 12/14/15 19:01

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	95.2		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	98.2		1		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 5

ACZ Sample ID: **L28055-05**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:25  
 Analysis Date: 12/15/15 7:16

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		17	J	33.2		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	91.3		33.2		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 6

ACZ Sample ID: **L28055-06**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 19:31  
 Analysis Date: 12/14/15 19:31

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	84.6		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	87.7		1		%	70	130

**Gadeco, LLC**

Project ID:

Sample ID: # 6

ACZ Sample ID: **L28055-06**

Date Sampled: 12/04/15 12:30

Date Received: 12/07/15

Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**Analysis Method: **M8015D GC/FID**Extract Method: **M3540****Workgroup:** WG395880

Analyst: mmn

Extract Date: 12/10/15 17:27

Analysis Date: 12/15/15 7:44

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		128		33.3		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	93.4		33.3		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 7

ACZ Sample ID: **L28055-07**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 20:01  
 Analysis Date: 12/14/15 20:01

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	88.6		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	90.9		1		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 7

ACZ Sample ID: **L28055-07**  
 Date Sampled: 12/04/15 12:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG396334**  
 Analyst: itm  
 Extract Date: 12/18/15 12:47  
 Analysis Date: 12/24/15 7:54

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		480		161	*	mg/Kg	20	80
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	86.7		161		%	70	130

**Gadeco, LLC**  
 Project ID:  
 Sample ID: # 8

ACZ Sample ID: **L28055-08**  
 Date Sampled: 12/04/15 14:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**BTEX/Gasoline Range Organics (C6-C10)**

Analysis Method: **M8021B/8015D GC/PID/FID**  
 Extract Method: **5035A**

**Workgroup: WG395896**

Analyst: rgt  
 Extract Date: 12/14/15 20:31  
 Analysis Date: 12/14/15 20:31

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	1	*	ug/Kg	1	1
Ethylbenzene	100-41-4		U	1	*	ug/Kg	1	1
m p Xylene	1330-20-7		U	1	*	ug/Kg	2	2
o Xylene	95-47-6		U	1	*	ug/Kg	1	1
Toluene	108-88-3		U	1	*	ug/Kg	1	1
TVH C6 to C10	TVH		U	1	*	mg/Kg	0.05	0.05
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
Bromofluorobenzene	460-00-4	94.3		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	98		1		%	70	130

Gadeco, LLC  
 Project ID:  
 Sample ID: # 8

ACZ Sample ID: **L28055-08**  
 Date Sampled: 12/04/15 14:30  
 Date Received: 12/07/15  
 Sample Matrix: Soil

**Diesel Range Organics (C10-C28)**

Analysis Method: **M8015D GC/FID**  
 Extract Method: **M3540**

**Workgroup: WG395880**  
 Analyst: mmn  
 Extract Date: 12/10/15 17:31  
 Analysis Date: 12/15/15 8:11

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		122		33.3		mg/Kg	3	20
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	94.2		33.3		%	70	130

**Report Header Explanations**

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #4) Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

**QC Sample Types**

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

**QC Sample Type Explanations**

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.

**ACZ Qualifiers (Qual)**

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
O	Analyte concentration is estimated due to result exceeding calibration range.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
J	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

**Method References**

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

**Comments**

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<http://www.acz.com/public/extquallist.pdf>

Gadeco, LLC

ACZ Project ID: **L28055**

**BTEX/Gasoline Range Organics (C6-C10)**

M8021B/8015D GC/PID/FID

**WG395896**

AS	Sample ID: L28055-03AS			PCN/SCN: B151209-1-CCV			Analyzed: 12/14/15 16:02				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	50	U	41.2	ug/Kg	82.0	70	130				
ETHYLBENZENE	50	U	40.8	ug/Kg	82.0	70	130				
M P XYLENE	100	U	80.9	ug/Kg	81.0	70	130				
O XYLENE	50	U	41.4	ug/Kg	83.0	70	130				
TOLUENE	50	U	41.2	ug/Kg	82.0	70	130				
TVH C6 TO C10	.5	U	.413	mg/Kg	83.0	70	130				
BROMOFLUOROBENZENE (surr)				%	95.9	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	99.0	70	130				

ASD	Sample ID: L28055-03ASD			PCN/SCN: B151209-1-CCV			Analyzed: 12/14/15 16:31				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	50	U	42.2	ug/Kg	84.0	70	130	2	20		
ETHYLBENZENE	50	U	41.6	ug/Kg	83.0	70	130	2	20		
M P XYLENE	100	U	82.3	ug/Kg	82.0	70	130	2	20		
O XYLENE	50	U	42.2	ug/Kg	84.0	70	130	2	20		
TOLUENE	50	U	42	ug/Kg	84.0	70	130	2	20		
TVH C6 TO C10	.5	U	.427	mg/Kg	85.0	70	130	3	20		
BROMOFLUOROBENZENE (surr)				%	96.0	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	100.0	70	130				

LCSS	Sample ID: WG395896LCSS			PCN/SCN: B151203-1-ICV			Analyzed: 12/14/15 12:03				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	25.1		21.9	ug/Kg	87.0	70	130				
ETHYLBENZENE	25		22	ug/Kg	88.0	70	130				
M P XYLENE	50.4		45.5	ug/Kg	90.0	70	130				
O XYLENE	50.3		44.3	ug/Kg	88.0	70	130				
TOLUENE	75.3		66.2	ug/Kg	88.0	70	130				
TVH C6 TO C10	.5		.414	mg/Kg	83.0	70	130				
BROMOFLUOROBENZENE (surr)				%	103.8	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	107.5	70	130				

LCSSD	Sample ID: WG395896LCSSD			PCN/SCN: B151203-1-ICV			Analyzed: 12/14/15 12:33				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	25.1		23.5	ug/Kg	94.0	70	130	7	20		
ETHYLBENZENE	25		23.6	ug/Kg	94.0	70	130	7	20		
M P XYLENE	50.4		48.5	ug/Kg	96.0	70	130	6	20		
O XYLENE	50.3		46.7	ug/Kg	93.0	70	130	5	20		
TOLUENE	75.3		70.9	ug/Kg	94.0	70	130	7	20		
TVH C6 TO C10	.5		.443	mg/Kg	88.0	70	130	7	20		
BROMOFLUOROBENZENE (surr)				%	103.0	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	106.7	70	130				

Gadeco, LLC

ACZ Project ID: **L28055**

<b>PBS</b>		<b>Sample ID: WG395896PBS</b>						<b>Analyzed: 12/14/15 13:03</b>			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE			U	ug/Kg		-1	1				
ETHYLBENZENE			U	ug/Kg		-1	1				
M P XYLENE			U	ug/Kg		-2	2				
O XYLENE			U	ug/Kg		-1	1				
TOLUENE			U	ug/Kg		-1	1				
TVH C6 TO C10			U	mg/Kg		-.05	.05				
BROMOFLUOROBENZENE (surr)				%	100.3	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	104.1	70	130				

Gadeco, LLC

ACZ Project ID: **L28055**

**Diesel Range Organics (C10-C28)**

M8015D GC/FID

**WG395880**

MS	Sample ID: L28097-01MS		PCN/SCN: OPTPH151111-2				Analyzed: 12/15/15 9:35			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8	32	104	mg/Kg	87.0	70	130			
OTP (surr)				%	92.1	70	130			

DUP	Sample ID: L28097-02DUP		PCN/SCN: OPTPH151111-2				Analyzed: 12/15/15 10:30			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28		1390	1604	mg/Kg				14	20	
OTP (surr)				%	129.1	70	130			

LCSS	Sample ID: WG395657LCSS		PCN/SCN: OPTPH151111-2				Analyzed: 12/15/15 4:29			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8		70.8	mg/Kg	85.0	70	130			
OTP (surr)				%	87.6	70	130			

LCSSD	Sample ID: WG395657LCSSD		PCN/SCN: OPTPH151111-2				Analyzed: 12/15/15 4:57			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8		70.8	mg/Kg	85.0	70	130	0	20	
OTP (surr)				%	92.1	70	130			

PBS	Sample ID: WG395657PBS		PCN/SCN: OPTPH151111-2				Analyzed: 12/15/15 4:01			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28			U	mg/Kg		-20	20			
OTP (surr)				%	84.8	70	130			

**WG396334**

DUP	Sample ID: L28055-07DUP		PCN/SCN: OPTPH151111-2				Analyzed: 12/24/15 8:49			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28		480	1079	mg/Kg				77	20	
OTP (surr)				%	86.4	70	130			

MS	Sample ID: L28055-07MS		PCN/SCN: OPTPH151111-2				Analyzed: 12/24/15 8:22			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8	480	911	mg/Kg	105.0	70	130			
OTP (surr)				%	92.0	70	130			

LCSS	Sample ID: WG396120LCSS		PCN/SCN: OPTPH151111-2				Analyzed: 12/24/15 6:59			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8		76.6	mg/Kg	91.0	70	130			
OTP (surr)				%	90.8	70	130			

LCSSD	Sample ID: WG396120LCSSD		PCN/SCN: OPTPH151111-2				Analyzed: 12/24/15 7:26			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.8		74.3	mg/Kg	90.0	70	130	3	20	
OTP (surr)				%	91.3	70	130			

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ACZ Project ID: **L28055**

PBS		Sample ID: WG396120PBS						Analyzed: 12/24/15 6:31			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28			U	mg/Kg		-20	20				
OTP (surr)				%	86.2	70	130				

Gadeco, LLC

ACZ Project ID: **L28055**

**Polynuclear Aromatic Hydrocarbons GC/MS**

M8270C GC/MS

**WG395796**

<b>MS</b>		<b>Sample ID: L28097-01MS</b>		<b>PCN/SCN: OPBNA151026-4</b>				<b>Analyzed: 12/14/15 14:36</b>			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
ACENAPHTHENE	50007	U	13030	ug/Kg	78.0	45	110				
PYRENE	50003	U	16180	ug/Kg	97.0	45	125				
2,4,6-TRIBROMOPHENOL (surr)				%	88.2	35	125				
2-FLUOROBIPHENYL (surr)				%	80.2	45	105				
2-FLUOROPHENOL (surr)				%	76.8	35	105				
NITROBENZENE-D5 (surr)				%	73.0	35	100				
PHENOL-D6 (surr)				%	80.0	40	100				
TERPHENYL-D14 (surr)				%	105.8	30	125				

<b>LCSS</b>		<b>Sample ID: WG395645LCSS</b>		<b>PCN/SCN: OPBNA151026-4</b>				<b>Analyzed: 12/14/15 12:23</b>			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
ACENAPHTHENE	50007		1308	ug/Kg	78.0	45	110				
PYRENE	50003		1562	ug/Kg	94.0	45	125				
2,4,6-TRIBROMOPHENOL (surr)				%	80.1	35	125				
2-FLUOROBIPHENYL (surr)				%	84.2	45	105				
2-FLUOROPHENOL (surr)				%	76.6	35	105				
NITROBENZENE-D5 (surr)				%	75.8	35	100				
PHENOL-D6 (surr)				%	80.2	40	100				
TERPHENYL-D14 (surr)				%	104.4	30	125				

<b>LCSSD</b>		<b>Sample ID: WG395645LCSSD</b>		<b>PCN/SCN: OPBNA151026-4</b>				<b>Analyzed: 12/14/15 12:56</b>			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
ACENAPHTHENE	50007		1290	ug/Kg	77.0	45	110	1	20		
PYRENE	50003		1579	ug/Kg	95.0	45	125	1	20		
2,4,6-TRIBROMOPHENOL (surr)				%	77.3	35	125				
2-FLUOROBIPHENYL (surr)				%	82.1	45	105				
2-FLUOROPHENOL (surr)				%	76.6	35	105				
NITROBENZENE-D5 (surr)				%	76.1	35	100				
PHENOL-D6 (surr)				%	79.3	40	100				
TERPHENYL-D14 (surr)				%	100.9	30	125				

<b>PBS</b>		<b>Sample ID: WG395645PBS</b>						<b>Analyzed: 12/14/15 11:50</b>			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
2-METHYLNAPHTHALENE			U	ug/Kg		-300	300				
ACENAPHTHENE			U	ug/Kg		-300	300				
ACENAPHTHYLENE			U	ug/Kg		-300	300				
ANTHRACENE			U	ug/Kg		-300	300				
BENZO(A)ANTHRACENE			U	ug/Kg		-300	300				
BENZO(A)PYRENE			U	ug/Kg		-300	300				
BENZO(B)FLUORANTHENE			U	ug/Kg		-300	300				
BENZO(G,H,I)PERYLENE			U	ug/Kg		-300	300				
BENZO(K)FLUORANTHENE			U	ug/Kg		-300	300				
CHRYSENE			U	ug/Kg		-300	300				
DIBENZO(A,H)ANTHRACENE			U	ug/Kg		-300	300				

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ACZ Project ID: **L28055**

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FLUORANTHENE	U	ug/Kg	-300	300	
FLUORENE	U	ug/Kg	-300	300	
INDENO(1,2,3-CD)PYRENE	U	ug/Kg	-300	300	
NAPHTHALENE	U	ug/Kg	-300	300	
PHENANTHRENE	U	ug/Kg	-300	300	
PYRENE	U	ug/Kg	-300	300	
2,4,6-TRIBROMOPHENOL (surr)		%	68.0	35	125
2-FLUOROBIPHENYL (surr)		%	72.5	45	105
2-FLUOROPHENOL (surr)		%	66.0	35	105
NITROBENZENE-D5 (surr)		%	62.9	35	100
PHENOL-D6 (surr)		%	69.5	40	100
TERPHENYL-D14 (surr)		%	95.1	30	125

Gadeco, LLC

ACZ Project ID: **L28055**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
<b>L28055-01</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
<b>L28055-02</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
	WG395796	*All Compounds*	M8270C GC/MS	D1	Sample required dilution due to matrix.
			M8270C GC/MS	Q9	Insufficient sample received to meet method QC requirements.
<b>L28055-03</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
<b>L28055-04</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.

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ACZ Project ID: **L28055**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		o Xylene	M8021B/8015D GC/PID/FID	ZM	described in method 5035. Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
<b>L28055-05</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
<b>L28055-06</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
<b>L28055-07</b>	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
	WG396334	TPH C10 to C28	M8015D GC/FID	D1	Sample required dilution due to matrix.

REPAD.15.06.05.01

Gadeco, LLC

ACZ Project ID: **L28055**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L28055-08	WG395896	Benzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Ethylbenzene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		m p Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		o Xylene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		Toluene	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	Data is estimated because result is below 200 ug/Kg; ACZ does not have a closed-system purge and trap as described in method 5035.

**Gadeco, LLC**

ACZ Project ID: **L28055**

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Conductivity @25C	SM2510B
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2
Solids, Percent	D2216-80

Gadeco, LLC

ACZ Project ID: L28055  
 Date Received: 12/07/2015 12:20  
 Received By: ddp  
 Date Printed: 12/7/2015

**Receipt Verification**

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody form or other directive shipping papers present?	X		
3) Does this project require special handling procedures such as CLP protocol?			X
4) Are any samples NRC licensable material?			X
5) If samples are received past hold time, proceed with requested short hold time analyses?	X		
6) Is the Chain of Custody form complete and accurate?	X		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples? A change was made in the Quote #, # of Containers, Analyses Requested section prior to ACZ custody.	X		

**Samples/Containers**

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? <sup>1</sup>			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?		X	
18) Were all samples received within hold time?	X		

**Chain of Custody Related Remarks**

The 'Relinquished By' field on the COC was not completed. The project manager is contacting the client.

**Client Contact Remarks**

**Shipping Containers**

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(μR/Hr)	Custody Seal Intact?
4318	3.6	<=6.0	14	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

**Gadeco, LLC**

ACZ Project ID: L28055  
Date Received: 12/07/2015 12:20  
Received By: ddp  
Date Printed: 12/7/2015

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc.

28055

CHAIN of CUSTODY

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Report to:

Name: Carl Colby	Address: 3303 County Road 103
Company: Wild West Excavating	Craig, CO 81625
E-mail: WildWestExcavating@gmail.com	Telephone: 970-326-5776

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

Name: Gene Webb	Address: Email Invoice
Company: Gadeco LLC	Do not mail
E-mail: gadecoinvoiles@grynberg.com	Telephone: 303-840-7490

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES  NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes  No

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Carl Colby Sampler's Site Information State CO Zip code 81625 Time Zone MT

\*Sampler's Signature: Carl Colby I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: B034404	# of Containers																			
PO#:																				
Reporting state for compliance testing: Colorado																				
Check box if samples include NRC licensed material?																				
SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers																	
# 1	12-4-15 12:30pm	SO	2	BTEX																
# 2	12-4-15	SO	4	910																
# 3	12-4-15	SO	2	BTEX TPH																
# 4	12-4-15	SO	2	BTEX TPH																
# 5	12-4-15	SO	2	BTEX TPH																
# 6	12-4-15	SO	2	BTEX TPH																
# 7	12-4-15	SO	2	BTEX TPH																
# 8	12-4-15 2:30pm	SO	2	BTEX TPH																

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
		RC 12-7-15 12:00	

28055 Chain of Custody