

December 21, 2016

Report to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Bill to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

cc: Scott Legg

Project ID: PO-13-7

ACZ Project ID: L33950

Kristen Stocks:

Enclosed are revised analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 03, 2016 and originally reported on December 20, 2016. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L33950. 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 L33950. 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 19, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years.

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



Sue Webber has reviewed and
approved this report.



Entek GRB LLC

December 21, 2016

Project ID: PO-13-7

ACZ Project ID: L33950

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 7 soil samples from Entek GRB LLC on November 3, 2016. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L33950. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following required further explanation not provided by the Extended Qualifier Report:

1. For the BNA PBS flagged with an "N1" in the QC Summary, the Prep Blank Soil (PBS) was lost completely at final concentration when it's volumetric flask was spilled. Not enough of the sample was able to be recovered for it to be successfully analyzed on instrument. No false positives were found in the remaining QC and samples. All client samples were found to be nondetect.

This report was revised on 12/20/16 to report Boron, by hot water extraction. No other changes were made.

This report was revised on 12/21/16 to delete total boron since it was not requested. No other changes were made.

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSB @ 85"

ACZ Sample ID: **L33950-01**
Date Sampled: 11/03/16 10:38
Date Received: 11/03/16
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	505	4.5			mg/Kg	0.1	0.5	12/07/16 19:39	mfm
Barium, total (3050)	M6010B ICP	101	161		*	mg/Kg	0.3	2	12/06/16 14:14	aeb
Boron, soluble (Hot Water)	M6010B ICP	5	0.68			mg/Kg	0.05	0.3	12/19/16 16:42	gss
Cadmium, total (3050)	M6010B ICP	101		U		mg/Kg	0.5	2	12/06/16 12:06	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	1	2.79			meq/L	0.005	0.025	12/06/16 15:03	aeb
Chromium, total (3050)	M6010B ICP	101	10		*	mg/Kg	1	5	12/06/16 12:06	aeb
Chromium, Trivalent	Calculation (Total - Hexavalent)		10			mg/Kg	1	5	12/21/16 0:00	calc
Copper, total (3050)	M6010B ICP	101	9		*	mg/Kg	1	5	12/06/16 12:06	aeb
Lead, total (3050)	M6010B ICP	101	8	B	*	mg/Kg	3	20	12/06/16 12:06	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	1	3.92			meq/L	0.017	0.082	12/06/16 15:03	aeb
Mercury by Direct Combustion AA	M7473	1	21.4		*	ng/g	1.82	9.1	11/21/16 16:10	pta
Nickel, total (3050)	M6010B ICP	101	11.5			mg/Kg	0.8	4	12/06/16 12:06	aeb
Selenium, total (3050)	M6010B ICP	101		U		mg/Kg	5	30	12/06/16 12:06	aeb
Silver, total (3050)	M6010B ICP	101		U		mg/Kg	1	3	12/06/16 12:06	aeb
Sodium Adsorption Ratio	Calculation		1.8						12/21/16 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	1	3.21			meq/L	0.0087	0.0435	12/06/16 15:03	aeb
Zinc, total (3050)	M6010B ICP	101	27		*	mg/Kg	1	5	12/06/16 12:06	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	1.02		*	mmhos/cm	0.001	0.01	12/06/16 0:00	rbt
Max Particle Size		1	2000		*	um			12/06/16 0:00	rbt
Temperature		1	20.4		*	C	0.1	0.1	12/06/16 0:00	rbt
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	2000		*	um			12/06/16 0:00	rbt
pH		1	7.8		*	units	0.1	0.1	12/06/16 0:00	rbt
Solids, Percent	D2216-80	1	87.2		*	%	0.1	0.5	11/16/16 23:22	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								11/16/16 15:30	rbt
Digestion - Alkaline	M3060A								11/16/16 14:03	cra
Digestion - Hot Plate	M3050B ICP								12/05/16 20:15	bcc
Digestion - Hot Plate	M3050B ICP-MS								12/05/16 20:15	bcc
Hot Water Extraction	ASA No. 9 M80-3, M25-9								12/16/16 12:57	bcc
Saturated Paste Extraction	USDA No. 60 (2)								12/05/16 10:38	rbt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								11/18/16 8:30	rbt

Entek GRB LLCProject ID: PO-13-7
Sample ID: SSB @ 85"ACZ Sample ID: **L33950-01**
Date Sampled: 11/03/16 10:38
Date Received: 11/03/16
Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chromium, Hexavalent (3060)	M7196A	225		U	*	mg/Kg	1	5	11/17/16 10:40	sck



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>

Entek GRB LLC

ACZ Project ID: **L33950**

Arsenic, total (3050)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414364													
WG414364ICV	ICV	12/07/16 19:18	MS161128-3	.05		.0546	mg/L	109	90	110			
WG414364ICB	ICB	12/07/16 19:20				U	mg/L		-0.0006	0.0006			
WG414179PBS	PBS	12/07/16 19:31				.2	mg/Kg		-0.3	0.3			
WG414179LCSS	LCSS	12/07/16 19:34	PCN51903	97.5		103.6	mg/Kg		75.7	119			
WG414179LCSSD	LCSSD	12/07/16 19:36	PCN51903	97.5		110.3	mg/Kg		75.7	119	6	20	
L33950-01MS1	MS	12/07/16 19:41	MS161205-2	25.3005	4.5	31.59	mg/Kg	107	75	125			
L33950-01MSD1	MSD	12/07/16 19:44	MS161205-2	25.3005	4.5	34.34	mg/Kg	118	75	125	8	20	
WG414236PBS	PBS	12/07/16 19:46				.17	mg/Kg		-0.3	0.3			

Barium, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414266													
WG414266ICV	ICV	12/06/16 13:49	II161203-1	2		2.024	mg/L	101	90	110			
WG414266ICB	ICB	12/06/16 13:52				.0038	mg/L		-0.009	0.009			
WG414179PBS	PBS	12/06/16 14:05				.3	mg/Kg		-0.9	0.9			
WG414179LCSS	LCSS	12/06/16 14:08	PCN51903	306		291.3	mg/Kg		253	358			
WG414179LCSSD	LCSSD	12/06/16 14:11	PCN51903	306		294.3	mg/Kg		253	358	1	20	
L33950-01MS2	MS	12/06/16 14:20	II161130-2	50.5505	161	247.15	mg/Kg	170	75	125			M3
L33950-01MSD2	MSD	12/06/16 14:23	II161130-2	50.5505	161	266.94	mg/Kg	210	75	125	8	20	M3

Boron, soluble (Hot Water)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG415008													
WG415008ICV	ICV	12/19/16 16:23	II161209-1	2		1.962	mg/L	98	90	110			
WG415008ICB	ICB	12/19/16 16:26				U	mg/L		-0.03	0.03			
WG414903PBS	PBS	12/19/16 16:38				U	mg/Kg		-0.15	0.15			
L33950-01AS	AS	12/19/16 16:45	II161130-2	2.5025	.68	3.199	mg/Kg	101	75	125			
L33950-01ASD	ASD	12/19/16 16:48	II161130-2	2.5025	.68	3.133	mg/Kg	98	75	125	2	20	
L33950-01DUP	DUP	12/19/16 16:54			.68	.7	mg/Kg				3	20	

Cadmium, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	2		2.012	mg/L	101	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.015	0.015			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-1.5	1.5			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	76.6		74.26	mg/Kg		63.1	90.1			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	76.6		76.13	mg/Kg		63.1	90.1	2	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	50.702	U	46.81	mg/Kg	92	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	50.702	U	46.84	mg/Kg	92	75	125	0	20	

Calcium, soluble (Sat. Paste)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414276													
WG414276ICV	ICV	12/06/16 14:47	II161117-1	100		99.6	mg/L	100	90	110			
WG414276ICB	ICB	12/06/16 14:50				U	mg/L		-0.3	0.3			
L33950-01DUP	DUP	12/06/16 15:06			2.79	2.97	meq/L				6	20	

Entek GRB LLC

ACZ Project ID: **L33950**

Chromium, Hexavalent (3060)

M7196A

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413384													
WG413384ICV	ICV	11/17/16 10:05	WC160609-4	.05		.0502	mg/L	100	90	110			
WG413384ICB	ICB	11/17/16 10:07				U	mg/L		-0.005	0.005			
L33782-01MS1	MS	11/17/16 10:16	SI161115-	48.01944	U	40.2	mg/Kg	84	75	125			
L33782-02DUP	DUP	11/17/16 10:28			U	U	mg/Kg				0	20	RA
WG413232LCSS	LCSS	11/17/16 10:43	PCN51373	44.7		31.2	mg/Kg		14.7	74.6			
WG413232PBS	PBS	11/17/16 10:46				U	mg/Kg		-1	1			

Chromium, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	2		1.964	mg/L	98	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.03	0.03			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-3	3			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	103		99.7	mg/Kg		82.1	125			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	103		101.5	mg/Kg		82.1	125	2	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	50.7525	10	60	mg/Kg	99	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	50.7525	10	62.3	mg/Kg	103	75	125	4	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414240													
L33950-01DUP	DUP	12/06/16 10:56			1.02	1.02	mmhos/cm				0	20	

Copper, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	2		2.015	mg/L	101	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.03	0.03			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-3	3			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	108		103.4	mg/Kg		87.8	128			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	108		103.9	mg/Kg		87.8	128	0	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	50.5505	9	56.2	mg/Kg	93	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	50.5505	9	56.3	mg/Kg	94	75	125	0	20	

Lead, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	4		3.859	mg/L	96	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.09	0.09			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-9	9			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	96.7		89.3	mg/Kg		79	114			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	96.7		91.1	mg/Kg		79	114	2	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	101.101	8	101.8	mg/Kg	93	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	101.101	8	103.5	mg/Kg	94	75	125	2	20	

Entek GRB LLC

ACZ Project ID: **L33950**

Magnesium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414276													
WG414276ICV	ICV	12/06/16 14:47	II161117-1	100		98.5	mg/L	99	90	110			
WG414276ICB	ICB	12/06/16 14:50				U	mg/L		-0.6	0.6			
L33950-01DUP	DUP	12/06/16 15:06			3.92	3.95	meq/L				1	20	

Mercury by Direct Combustion AA M7473

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412642													
WG412642ICV1	ICV	11/09/16 11:13	HG161103-3	100		95.9	ng/g	96	90	110			
WG412642ICV2	ICV	11/09/16 11:24	HG161103-4	100		90.6	ng/g	91	90	110			
WG412642ICV3	ICV	11/09/16 11:34	HG161103-5	1000		919	ng/g	92	90	110			
WG412642ICV4	ICV	11/09/16 11:43	HG161103-5	1000		910	ng/g	91	90	110			
WG413609													
WG413609ICV1	ICV	11/21/16 9:30	HG161121-1	100		99.4	ng/g	99	90	110			
WG413609ICV2	ICV	11/21/16 9:38	HG161121-2	100		96.2	ng/g	96	90	110			
WG413609ICV4	ICV	11/21/16 9:57	HG161121-3	1000		896	ng/g	90	90	110			
WG413609ICV3	ICV	11/21/16 10:07	HG161121-3	1000		922	ng/g	92	90	110			
WG413609PBS	PBS	11/21/16 13:44				U	ng/g		-6	6			
WG413609LCSS	LCSS	11/21/16 13:51	PCN50110	80		70.9	ng/g		80	120			
WG413609LCSSD	LCSSD	11/21/16 13:57	PCN50110	80		71.9	ng/g		80	120	1	20	
L33918-01MS	MS	11/21/16 14:23	PCN50110				ng/g	95	80	120			
L33918-04DUP	DUP	11/21/16 14:50			7.55	8.5	ng/g				12	20	RA

Nickel, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	2.002		2.033	mg/L	102	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.024	0.024			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-2.4	2.4			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	153		152.3	mg/Kg		126	180			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	153		155.3	mg/Kg		126	180	2	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	50.298	11.5	58.86	mg/Kg	94	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	50.298	11.5	59.98	mg/Kg	96	75	125	2	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
WG414240													
WG414240ICV	ICV	12/06/16 10:18	PCN50759	4		4	units	100	3.9	4.1			
L33950-01DUP	DUP	12/06/16 10:56			7.8	7.8	units				0	20	

Entek GRB LLC

ACZ Project ID: **L33950**

Selenium, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	4		4.038	mg/L	101	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.15	0.15			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-15	15			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	161		162.8	mg/Kg		125	198			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	161		158.4	mg/Kg		125	198	3	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	101.0707	U	97.9	mg/Kg	97	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	101.0707	U	99.4	mg/Kg	98	75	125	2	20	

Silver, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	1.002		1.012	mg/L	101	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.03	0.03			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-3	3			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	49.3		46.4	mg/Kg		37	61.7			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	49.3		46.7	mg/Kg		37	61.7	1	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	50.601	U	47.4	mg/Kg	94	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	50.601	U	47.5	mg/Kg	94	75	125	0	20	

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414276													
WG414276ICV	ICV	12/06/16 14:47	II161117-1	100		96.9	mg/L	97	90	110			
WG414276ICB	ICB	12/06/16 14:50				U	mg/L		-0.6	0.6			
L33950-01DUP	DUP	12/06/16 15:06			3.21	3.05	meq/L				5	20	

Solids, Percent D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413353													
WG413353PBS	PBS	11/16/16 15:30				U	%		-0.1	0.1			
L33950-01DUP	DUP	11/17/16 7:15			87.2	85.25	%				2	20	

Zinc, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG414238													
WG414238ICV	ICV	12/06/16 11:41	II161203-1	2		2.01	mg/L	101	90	110			
WG414238ICB	ICB	12/06/16 11:44				U	mg/L		-0.03	0.03			
WG414179PBS	PBS	12/06/16 11:56				U	mg/Kg		-3	3			
WG414179LCSS	LCSS	12/06/16 12:00	PCN51903	229		222.1	mg/Kg		188	271			
WG414179LCSSD	LCSSD	12/06/16 12:03	PCN51903	229		222.8	mg/Kg		188	271	0	20	
L33950-01MS2	MS	12/06/16 12:12	II161130-2	49.9142	27	78	mg/Kg	102	75	125			
L33950-01MSD2	MSD	12/06/16 12:15	II161130-2	49.9142	27	78	mg/Kg	102	75	125	0	20	

Entek GRB LLC

ACZ Project ID: **L33950**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L33950-01	WG414266	Barium, total (3050)	M6010B ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG414238	Chromium, total (3050)	M6010B ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	M6010B ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Lead, total (3050)	M6010B ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG413609	Mercury by Direct Combustion AA	M7473	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG414238	Zinc, total (3050)	M6010B ICP	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG413384	Chromium, Hexavalent (3060)	M7196A	DA	Sample required dilution due to reactivity.
M7196A			QD	Reported value is the background-corrected concentration, as described by the method.	
M7196A			RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).	

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSB @ 85"

ACZ Sample ID: **L33950-01**
Date Sampled: 11/03/16 10:38
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 17:24
Analysis Date: 11/09/16 17:24

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	100		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	98.9		1		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSB @ 85"

ACZ Sample ID: **L33950-01**
Date Sampled: 11/03/16 10:38
Date Received: 11/03/16
Sample Matrix: Soil

Diesel Range Organics (C10-C28)

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

Workgroup: WG413139

Analyst: mmn
Extract Date: 11/09/16 14:13
Analysis Date: 11/11/16 17:48

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		20	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.2		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSB @ 85"

ACZ Sample ID: **L33950-01**
Date Sampled: 11/03/16 10:38
Date Received: 11/03/16
Sample Matrix: Soil

Polynuclear Aromatic Hydrocarbons GC/M

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

Workgroup: WG413033

Analyst: itm
Extract Date: 11/03/16 15:00
Analysis Date: 11/10/16 22:00

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
2-Methylnaphthalene	91-57-6		U	200	*	ug/Kg	400	2000
Acenaphthene	83-32-9		U	200	*	ug/Kg	400	2000
Acenaphthylene	208-96-8		U	200	*	ug/Kg	400	2000
Anthracene	120-12-7		U	200	*	ug/Kg	400	2000
Benzo(a)anthracene	56-55-3		U	200	*	ug/Kg	400	2000
Benzo(a)pyrene	50-32-8		U	200	*	ug/Kg	400	2000
Benzo(b)fluoranthene	205-99-2		U	200	*	ug/Kg	400	2000
Benzo(g,h,i)perylene	191-24-2		U	200	*	ug/Kg	400	2000
Benzo(k)fluoranthene	207-08-9		U	200	*	ug/Kg	400	2000
Chrysene	218-01-9		U	200	*	ug/Kg	400	2000
Dibenzo(a,h)anthracene	53-70-3		U	200	*	ug/Kg	400	2000
Fluoranthene	206-44-0		U	200	*	ug/Kg	400	2000
Fluorene	86-73-7		U	200	*	ug/Kg	400	2000
Indeno(1,2,3-cd)pyrene	193-39-5		U	200	*	ug/Kg	400	2000
Naphthalene	91-20-3		U	200	*	ug/Kg	400	2000
Phenanthrene	85-01-8		U	200	*	ug/Kg	400	2000
Pyrene	129-00-0		U	200	*	ug/Kg	400	2000
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
2-Fluorobiphenyl	321-60-8	76.1		200	*	%	45	105
Nitrobenzene-d5	4165-60-0	71.5		200	*	%	35	100
Terphenyl-d14	1718-51-0	88.2		200	*	%	30	125

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSS @ 78

ACZ Sample ID: **L33950-02**
Date Sampled: 11/03/16 10:41
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 17:54
Analysis Date: 11/09/16 17:54

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	91.8		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	89.1		1		%	70	130

Entek GRB LLCProject ID: PO-13-7
Sample ID: SSS @ 78ACZ Sample ID: **L33950-02**
Date Sampled: 11/03/16 10:41
Date Received: 11/03/16
Sample Matrix: Soil**Diesel Range Organics (C10-C28)**Analysis Method: **M8015D GC/FID**
Extract Method: **M3540****Workgroup:** WG413139Analyst: mmn
Extract Date: 11/09/16 14:18
Analysis Date: 11/11/16 18:43

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		30	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	97.5		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSW @ 79

ACZ Sample ID: **L33950-03**
Date Sampled: 11/03/16 10:42
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 21:20
Analysis Date: 11/09/16 21:20

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	104.2		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	102.6		1		%	70	130

Entek GRB LLC

Project ID: PO-13-7
 Sample ID: SSW @ 79

ACZ Sample ID: **L33950-03**
 Date Sampled: 11/03/16 10:42
 Date Received: 11/03/16
 Sample Matrix: Soil

Diesel Range Organics (C10-C28)

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

Workgroup: WG413139

Analyst: mmn
 Extract Date: 11/09/16 14:24
 Analysis Date: 11/11/16 19:38

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		20	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	96.3		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSN @ 80

ACZ Sample ID: **L33950-04**
Date Sampled: 11/03/16 10:47
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 21:49
Analysis Date: 11/09/16 21:49

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	84.2		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	82.9		1		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSN @ 80

ACZ Sample ID: **L33950-04**
Date Sampled: 11/03/16 10:47
Date Received: 11/03/16
Sample Matrix: Soil

Diesel Range Organics (C10-C28)

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

Workgroup: WG413139

Analyst: mmn
Extract Date: 11/09/16 14:26
Analysis Date: 11/11/16 20:05

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		20	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.2		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: SSE @ 83

ACZ Sample ID: **L33950-05**
Date Sampled: 11/03/16 10:51
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 22:19
Analysis Date: 11/09/16 22:19

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	82.5		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	80.1		1		%	70	130

Entek GRB LLCProject ID: PO-13-7
Sample ID: SSE @ 83ACZ Sample ID: **L33950-05**
Date Sampled: 11/03/16 10:51
Date Received: 11/03/16
Sample Matrix: Soil**Diesel Range Organics (C10-C28)**Analysis Method: **M8015D GC/FID**
Extract Method: **M3540****Workgroup:** WG413139Analyst: mmn
Extract Date: 11/09/16 14:29
Analysis Date: 11/11/16 20:33

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		40	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.2		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: MS-N

ACZ Sample ID: **L33950-06**
Date Sampled: 11/03/16 10:55
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 22:48
Analysis Date: 11/09/16 22:48

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	85.8		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	83.3		1		%	70	130

Entek GRB LLCProject ID: PO-13-7
Sample ID: MS-NACZ Sample ID: **L33950-06**
Date Sampled: 11/03/16 10:55
Date Received: 11/03/16
Sample Matrix: Soil**Diesel Range Organics (C10-C28)**Analysis Method: **M8015D GC/FID**
Extract Method: **M3540****Workgroup: WG413139**Analyst: mmn
Extract Date: 11/09/16 14:32
Analysis Date: 11/11/16 21:27

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		40	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	100.6		100		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: MS-S

ACZ Sample ID: **L33950-07**
Date Sampled: 11/03/16 10:57
Date Received: 11/03/16
Sample Matrix: Soil

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG413015

Analyst: rgt
Extract Date: 11/09/16 23:18
Analysis Date: 11/09/16 23:18

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	82.2		1		%	70	130
Bromofluorobenzene (TVH)	460-00 4	80		1		%	70	130

Entek GRB LLC

Project ID: PO-13-7
Sample ID: MS-S

ACZ Sample ID: **L33950-07**
Date Sampled: 11/03/16 10:57
Date Received: 11/03/16
Sample Matrix: Soil

Diesel Range Organics (C10-C28)

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

Workgroup: WG413139

Analyst: mmn
Extract Date: 11/09/16 14:35
Analysis Date: 11/11/16 21:55

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		40	J	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	101		100		%	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>

Entek GRB LLC

ACZ Project ID: **L33950**

BTEX/Gasoline Range Organics (C6-C10)

M8021B/8015D GC/PID/FID

WG413015

AS	Sample ID: L33782-03AS			PCN/SCN: B161005-2-CCV			Analyzed: 11/09/16 20:21				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	50	U	51.3	ug/Kg	103.0	70	130				
ETHYLBENZENE	50	U	53.9	ug/Kg	108.0	70	130				
M P XYLENE	100	U	104.8	ug/Kg	105.0	70	130				
O XYLENE	50	U	52.6	ug/Kg	105.0	70	130				
TOLUENE	50	U	50.9	ug/Kg	102.0	70	130				
TVH C6 TO C10	.5	U	.496	mg/Kg	99.0	70	130				
BROMOFLUOROBENZENE (surr)				%	104.7	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	104.0	70	130				

ASD	Sample ID: L33782-03ASD			PCN/SCN: B161005-2-CCV			Analyzed: 11/09/16 20:51				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	50	U	50.3	ug/Kg	101.0	70	130	2	20		
ETHYLBENZENE	50	U	52.5	ug/Kg	105.0	70	130	3	20		
M P XYLENE	100	U	101.9	ug/Kg	102.0	70	130	3	20		
O XYLENE	50	U	51.6	ug/Kg	103.0	70	130	2	20		
TOLUENE	50	U	49.7	ug/Kg	99.0	70	130	2	20		
TVH C6 TO C10	.5	U	.513	mg/Kg	103.0	70	130	3	20		
BROMOFLUOROBENZENE (surr)				%	106.1	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	104.7	70	130				

LCSS	Sample ID: WG413015LCSS			PCN/SCN: B161101-1-ICV			Analyzed: 11/09/16 13:28				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	25.1		24.9	ug/Kg	99.0	70	130				
ETHYLBENZENE	25		25.6	ug/Kg	102.0	70	130				
M P XYLENE	50.4		51.7	ug/Kg	103.0	70	130				
O XYLENE	50.3		49.8	ug/Kg	99.0	70	130				
TOLUENE	75.3		72.3	ug/Kg	96.0	70	130				
TVH C6 TO C10	.5		.428	mg/Kg	95.0	70	130				
BROMOFLUOROBENZENE (surr)				%	101.7	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	101.5	70	130				

LCSSD	Sample ID: WG413015LCSSD			PCN/SCN: B161101-1-ICV			Analyzed: 11/09/16 13:57				
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
BENZENE	25.1		25.3	ug/Kg	101.0	70	130	2	20		
ETHYLBENZENE	25		26	ug/Kg	104.0	70	130	2	20		
M P XYLENE	50.4		52.5	ug/Kg	104.0	70	130	2	20		
O XYLENE	50.3		50.6	ug/Kg	101.0	70	130	2	20		
TOLUENE	75.3		73.3	ug/Kg	97.0	70	130	1	20		
TVH C6 TO C10	.5		.445	mg/Kg	99.0	70	130	4	20		
BROMOFLUOROBENZENE (surr)				%	101.3	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	100.4	70	130				

Entek GRB LLC

ACZ Project ID: **L33950**

PBS		Sample ID: WG413015PBS						Analyzed: 11/09/16 14:27			
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)				%	98.9	70	130				
BROMOFLUOROBENZENE (TVH) (surr)				%	100.7	70	130				

Entek GRB LLC

ACZ Project ID: **L33950**

Diesel Range Organics (C10-C28)

M8015D GC/FID

WG413139

MS		Sample ID: L33950-01MS		PCN/SCN: OPTPH161109-1				Analyzed: 11/11/16 18:16			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	2500	20	261	mg/Kg	96.0	70	130				
OTP (surr)				%	102.2	70	130				

DUP		Sample ID: L33950-02DUP						Analyzed: 11/11/16 19:10			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28		30	22	mg/Kg				31	20	RA	
OTP (surr)				%	98.6	70	130				

LCSS		Sample ID: WG412932LCSS		PCN/SCN: OPTPH161109-1				Analyzed: 11/11/16 16:54			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	2500		85.4	mg/Kg	102.0	70	130				
OTP (surr)				%	98.5	70	130				

LCSSD		Sample ID: WG412932LCSSD		PCN/SCN: OPTPH161109-1				Analyzed: 11/11/16 17:21			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28	2500		81.1	mg/Kg	97.0	70	130	5	20		
OTP (surr)				%	98.6	70	130				

PBS		Sample ID: WG412932PBS						Analyzed: 11/11/16 16:26			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
TPH C10 TO C28			U	mg/Kg		-20	20				
OTP (surr)				%	92.0	70	130				

Entek GRB LLC

ACZ Project ID: **L33950**

Polynuclear Aromatic Hydrocarbons GC/MS

M8270C GC/MS

WG413033

MS	Sample ID: L33782-01MS			PCN/SCN: OPBNA160810-1			Analyzed: 11/10/16 17:37			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ACENAPHTHENE	50007	U	8080	ug/Kg	81.0	45	110			
PYRENE	50003	U	9570	ug/Kg	96.0	45	125			
2,4,6-TRIBROMOPHENOL (surr)				%	92.9	35	125			
2-FLUOROBIPHENYL (surr)				%	81.6	45	105			
2-FLUOROPHENOL (surr)				%	76.6	35	105			
NITROBENZENE-D5 (surr)				%	72.1	35	100			
PHENOL-D6 (surr)				%	77.1	40	100			
TERPHENYL-D14 (surr)				%	96.5	30	125			

DUP	Sample ID: L33782-02DUP			Analyzed: 11/10/16 18:42						
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
2-METHYLNAPHTHALENE		U	U	ug/Kg				0	20	RA
ACENAPHTHENE		U	U	ug/Kg				0	20	RA
ACENAPHTHYLENE		U	U	ug/Kg				0	20	RA
ANTHRACENE		U	U	ug/Kg				0	20	RA
BENZO(A)ANTHRACENE		U	U	ug/Kg				0	20	RA
BENZO(A)PYRENE		U	U	ug/Kg				0	20	RA
BENZO(B)FLUORANTHENE		U	U	ug/Kg				0	20	RA
BENZO(G,H,I)PERYLENE		U	U	ug/Kg				0	20	RA
BENZO(K)FLUORANTHENE		U	U	ug/Kg				0	20	RA
CHRYSENE		U	U	ug/Kg				0	20	RA
DIBENZO(A,H)ANTHRACENE		U	U	ug/Kg				0	20	RA
FLUORANTHENE		U	U	ug/Kg				0	20	RA
FLUORENE		U	U	ug/Kg				0	20	RA
INDENO(1,2,3-CD)PYRENE		U	U	ug/Kg				0	20	RA
NAPHTHALENE		U	U	ug/Kg				0	20	RA
PHENANTHRENE		U	U	ug/Kg				0	20	RA
PYRENE		U	U	ug/Kg				0	20	RA
2-FLUOROBIPHENYL (surr)				%	85.6	45	105			
NITROBENZENE-D5 (surr)				%	77.5	35	100			
TERPHENYL-D14 (surr)				%	96.2	30	125			

LCSS	Sample ID: WG412639LCSS			PCN/SCN: OPBNA160810-1			Analyzed: 11/10/16 15:57			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ACENAPHTHENE	50007		1368	ug/Kg	82.0	45	110			
PYRENE	50003		1594	ug/Kg	96.0	45	125			
2,4,6-TRIBROMOPHENOL (surr)				%	84.1	35	125			
2-FLUOROBIPHENYL (surr)				%	82.7	45	105			
2-FLUOROPHENOL (surr)				%	79.9	35	105			
NITROBENZENE-D5 (surr)				%	74.9	35	100			
PHENOL-D6 (surr)				%	78.5	40	100			
TERPHENYL-D14 (surr)				%	94.9	30	125			

Entek GRB LLC

ACZ Project ID: **L33950**

LCSSD		Sample ID: WG412639LCSSD		PCN/SCN: OPBNA160810-1			Analyzed: 11/10/16 16:30			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
ACENAPHTHENE	50007		1519	ug/Kg	91.0	45	110	10	20	
PYRENE	50003		1675	ug/Kg	100.0	45	125	5	20	
2,4,6-TRIBROMOPHENOL (surr)				%	87.4	35	125			
2-FLUOROBIPHENYL (surr)				%	89.2	45	105			
2-FLUOROPHENOL (surr)				%	87.7	35	105			
NITROBENZENE-D5 (surr)				%	81.8	35	100			
PHENOL-D6 (surr)				%	86.1	40	100			
TERPHENYL-D14 (surr)				%	98.7	30	125			

PBS		Sample ID: WG412639PBS					Analyzed: 11/10/16 15:24			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
2-METHYLNAPHTHALENE			U	ug/Kg		-300	300			N1
ACENAPHTHENE			U	ug/Kg		-300	300			N1
ACENAPHTHYLENE			U	ug/Kg		-300	300			N1
ANTHRACENE			U	ug/Kg		-300	300			N1
BENZO(A)ANTHRACENE			U	ug/Kg		-300	300			N1
BENZO(A)PYRENE			U	ug/Kg		-300	300			N1
BENZO(B)FLUORANTHENE			U	ug/Kg		-300	300			N1
BENZO(G,H,I)PERYLENE			U	ug/Kg		-300	300			N1
BENZO(K)FLUORANTHENE			U	ug/Kg		-300	300			N1
CHRYSENE			U	ug/Kg		-300	300			N1
DIBENZO(A,H)ANTHRACENE			U	ug/Kg		-300	300			N1
FLUORANTHENE			U	ug/Kg		-300	300			N1
FLUORENE			U	ug/Kg		-300	300			N1
INDENO(1,2,3-CD)PYRENE			U	ug/Kg		-300	300			N1
NAPHTHALENE			U	ug/Kg		-300	300			N1
PHENANTHRENE			U	ug/Kg		-300	300			N1
PYRENE			U	ug/Kg		-300	300			N1
2,4,6-TRIBROMOPHENOL (surr)				%	0.0	35	125			N1
2-FLUOROBIPHENYL (surr)				%	0.0	45	105			N1
2-FLUOROPHENOL (surr)				%	0.0	35	105			N1
NITROBENZENE-D5 (surr)				%	0.0	35	100			N1
PHENOL-D6 (surr)				%	0.0	40	100			N1
TERPHENYL-D14 (surr)				%	0.0	30	125			N1

ACZ Project ID: **L33950**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L33950-01	WG413015	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.
		WG413139	TPH C10 to C28	M8015D GC/FID	D1
M8015D GC/FID	RA			Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).	
WG413033	*All Compounds*	M8270C GC/MS	D1	Sample required dilution due to matrix.	
		M8270C GC/MS	N1	See Case Narrative.	
		M8270C GC/MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).	
L33950-02	WG413015	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.
		WG413139	TPH C10 to C28	M8015D GC/FID	D1
M8015D GC/FID	RA			Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).	
L33950-03	WG413015	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.

ACZ Project ID: **L33950**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		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.
	WG413139	TPH C10 to C28	M8015D GC/FID M8015D GC/FID	D1 RA	Sample required dilution due to matrix. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L33950-04	WG413015	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.
	WG413139	TPH C10 to C28	M8015D GC/FID M8015D GC/FID	D1 RA	Sample required dilution due to matrix. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L33950-05	WG413015	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.
	WG413139	TPH C10 to C28	M8015D GC/FID M8015D GC/FID	D1 RA	Sample required dilution due to matrix. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L33950-06	WG413015	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

ACZ Project ID: **L33950**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		TVH C6 to C10	M8021B/8015D GC/PID/FID	ZM	does not have a closed-system purge and trap as 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.
	WG413139	TPH C10 to C28	M8015D GC/FID M8015D GC/FID	D1 RA	Sample required dilution due to matrix. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L33950-07	WG413015	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.
	WG413139	TPH C10 to C28	M8015D GC/FID M8015D GC/FID	D1 RA	Sample required dilution due to matrix. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Entek GRB LLC

ACZ Project ID: **L33950**

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

Entek GRB LLC
 PO-13-7

ACZ Project ID: L33950
 Date Received: 11/03/2016 15:05
 Received By:
 Date Printed: 11/3/2016

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?		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? ¹			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

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA25046	2.6	<=6.0	14	N/A

Was ice present in the shipment container(s)?

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

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

Entek GRB LLC
PO-13-7

ACZ Project ID: L33950
Date Received: 11/03/2016 15:05
Received By:
Date Printed: 11/3/2016

¹ 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), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc. L33950

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

CHAIN of CUSTODY

Report to:

Name: Kristen Stocks
Company: Entek Energy
E-mail: KStocks@entekenergy.com

Address: PO Box 218
441 South Penland, Baggs, WY 82321
Telephone: 307-200-1930

Copy of Report to:

Name: Scott Legg
Company: Aquionix

E-mail: slegg@aquionix.com
Telephone: 303-289-7520

Invoice to:

Name: Kristen Stocks
Company: Entek Energy
E-mail: KStocks@entekenergy.com

Address: PO Box 218
441 South Penland, Baggs, WY 82321
Telephone: 307-200-1930

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 [X] NO []

Are samples for SDWA Compliance Monitoring? Yes [] No [X]
If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Scott Legg Sampler's Site Information State CO Zip code 80128 Time Zone M

*Sampler's Signature [Signature] 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

Quote #:
PO#: PO-13-7
Reporting state for compliance testing: CO
Check box if samples include NRC licensed material? []

ANALYSES REQUESTED (attach list or use quote number)

Table with columns: SAMPLE IDENTIFICATION, DATE TIME, Matrix, # of Containers, and 10 analysis columns. Rows include samples like SS Be 85", SSS @ 78, SSW @ 79, SSN @ 80, SSE @ 23, MS-A, MS-S.

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

Signature: Scott Legg DATE: 11-3-16/15:00 Signature: [Signature] DATE: 11/3/16 15:00

ACZ Laboratories, Inc.

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

Analytical Quote

Kristen Stocks
Entek GRB LLC
165 S Union Blvd Suite 366
Lakewood, CO 80228

Page 1 of 3
8/20/2015

Quote Number: 910-1-SO

Matrix: Soil Soil Samples- COGCC Table 910-1 including Hexavalent Chromium.

Parameter	Method	Detection Limit	Cost/Sample
Gas Chromatography			
BTEX/Gasoline Range Organics (C6-C10)	M8021B/8015D GC/PID/FID		\$80.00
Benzene		1 ug/Kg	\$0.00
Ethylbenzene		1 ug/Kg	\$0.00
m p Xylene		2 ug/Kg	\$0.00
o Xylene		1 ug/Kg	\$0.00
Toluene		1 ug/Kg	\$0.00
TVH C6 to C10		0.05 mg/Kg	\$0.00
Diesel Range Organics (C10-C28)	M8015D GC/FID	3.333 mg/Kg	\$55.00
GC/MS			
Polynuclear Aromatic Hydrocarbons GC/MS	M8270C GC/MS	66.66 ug/Kg	\$160.00
Metals Analysis			
Arsenic, total (3050)	M6020 ICP-MS	0.1 mg/Kg	\$15.20
Barium, total (3050)	M6010B ICP	0.3 mg/Kg	\$8.00
Boron, total (3050)	M6010B ICP	1 mg/Kg	\$8.00
Cadmium, total (3050)	M6010B ICP	0.5 mg/Kg	\$8.00
Calcium, soluble (Sat. Paste)	M6010B ICP	0.1 meq/L	\$8.00
Chromium, total (3050)	M6010B ICP	1 mg/Kg	\$8.00
Chromium, Trivalent	Calculation (Total - Hexavalent)	Calculation	\$0.00
Copper, total (3050)	M6010B ICP	1 mg/Kg	\$8.00
Lead, total (3050)	M6010B ICP	3 mg/Kg	\$8.00
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.2 meq/L	\$8.00
Mercury by Direct Combustion AA	M7473	2 ng/g	\$19.20
Nickel, total (3050)	M6010B ICP	0.8 mg/Kg	\$8.00
Selenium, total (3050)	M6010B ICP	5 mg/Kg	\$8.00
Silver, total (3050)	M6010B ICP	1 mg/Kg	\$8.00
Sodium Adsorption Ratio	Calculation	Calculation	\$0.00
Sodium, soluble (Sat. Paste)	M6010B ICP	0.2 meq/L	\$8.00
Zinc, total (3050)	M6010B ICP	1 mg/Kg	\$8.00
Misc.			
Electronic Data Deliverable			\$0.00
Quality Control Summary			\$0.00
Setup charge for ICPMS			\$16.00

REPAD.09.06.05.01

S/ sw D/ ## P/ 40

ACZ Laboratories, Inc.

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

Analytical Quote

Kristen Stocks
Entek GRB LLC
165 S Union Blvd Suite 366
Lakewood, CO 80228

Page 2 of 3
8/20/2015

Organic Prep

BNA Soxhlet Extraction	M3540		\$0.00
TPH Soxhlet Extraction	M3540		\$0.00

Sample Preparation

Air Dry at 34 Degrees C	USDA No. 1, 1972		\$6.40
Digestion - Alkaline	M3060A		\$85.00
Digestion - Hot Plate	M3050B ICP		\$12.80
Digestion - Hot Plate	M3050B ICP-MS		\$0.00
Saturated Paste Extraction	USDA No. 60 (2)		\$14.40
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		\$9.60

Soil Analysis

Conductivity @25C	SM2510B	0.001 mmhos/cm	\$6.40
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2	0.1 units	\$6.40
Solids, Percent	D2216-80	0.1 %	\$6.40

Wet Chemistry

Chromium, Hexavalent (3060)	M7196A	1 mg/Kg	\$15.00
-----------------------------	--------	---------	---------

Cost/Sample: \$611.80

This quote is based on a Standard Turn Around Time of approximately 21 days for soil and solid matrices (15 working days). This quote is for minimum batch quantity of 3 samples, for 2 samples please multiply price by X 1.5 and for 1 sample please multiply price by X 3. ACZ will add samples to in house work groups to eliminate surcharges when possible. Please contact your PM if RUSH TAT is required to assure that due dates can be met. Pricing includes standard reporting formats and standard ACZ EDD's. Please note that method detection limits are estimates and may be elevated depending on sample matrix that require dilution. Pricing includes coolers, soil jars or bags, labels, COC's and ice-packs if needed for your analysis, shipped to your site or office via UPS ground. Return shipping is the responsibility of the client. Please allow ample time for your bottles to arrive. Please note that soil preparation charges may fluctuate dependant on the condition and volume of samples upon receipt. Wet samples may increase your TAT if air-drying is needed per your analysis. Your Project Manager at ACZ is Scott Habermehl at 970-879-6590 ext. 101, email scottth@acz.com.

ACZ Laboratories, Inc.

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

Analytical Quote

Kristen Stocks
Entek GRB LLC
165 S Union Blvd Suite 366
Lakewood, CO 80228

Page 1 of 2
11/3/2016

Quote Number: COGCC-ORGANICS

Matrix: Soil Analysis of Soil Samples for Organics

Parameter	Method	Detection Limit	Cost/Sample
Gas Chromatography			
BTEX/Gasoline Range Organics (C6-C10)	M8021B/8015D GC/PID/FID		\$80.00
Benzene		1 ug/Kg	\$0.00
Ethylbenzene		1 ug/Kg	\$0.00
m p Xylene		2 ug/Kg	\$0.00
o Xylene		1 ug/Kg	\$0.00
Toluene		1 ug/Kg	\$0.00
TVH C6 to C10		0.05 mg/Kg	\$0.00
Diesel Range Organics (C10-C28)	M8015D GC/FID	3.333 mg/Kg	\$55.00
Misc.			
Electronic Data Deliverable			\$0.00
Quality Control Summary			\$0.00
Organic Prep			
TPH Soxhlet Extraction	M3540		\$0.00
		Cost/Sample:	\$135.00

This quote is based on a Standard Turn Around Time of approximately 21 days for soil and solid matrices (15 business days). TAT may vary with seasonal heavy workload. Please contact your PM if rush TAT is required. Rush TAT needs to be pre-approved prior to sample shipment to assure that due dates can be met. Pricing includes standard reporting formats and standard ACZ EDDs. All projects received are subject to a \$125.00 Minimum Charge. Please note that method detection limits are estimates and may be elevated depending on sample matrix that require dilution. Pricing includes coolers, soil jars or bags, labels, COCs and ice-packs (if needed for your analysis), shipped to your site or office via UPS ground. Return shipping is the responsibility of the client. Please allow ample time for your bottles to arrive. Please note that soil preparation charges may change based on the condition and volume of sample(s) upon receipt. Wet samples may increase the TAT if air-drying is needed required. ACZ assigns a Project Manager to all of our clients. Your Project Manager is Sue Webber and she will serve as your main point of contact for all bottle orders, report statuses, questions on your data and changes to your account. Sue can be reached at suew@acz.com or 970-879-6590 ext 110.

REPAD.09.06.05.01

S/ sw D/ ## P/

Arsenic Background Soil Sample Results
Entek's Previous Pit Closure Projects in NW Colorado
Battle Mountain & Focus Ranch Unit Projects

October 21, 2015

Report to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Bill to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Project ID:

ACZ Project ID: L27154

Kristen Stocks:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 09, 2015. This project has been assigned to ACZ's project number, L27154. 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 L27154. 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 November 20, 2015. 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.



Sue Webber has reviewed and approved this report.



Entek GRB LLC

Project ID:
Sample ID: FRU 12-1 BACKGROUND

ACZ Sample ID: **L27154-01**
Date Sampled: 10/07/15 10:00
Date Received: 10/09/15
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	510	7			mg/Kg	0.1	0.5	10/20/15 0:03	msh

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.612		*	mmhos/cm	0.001	0.01	10/20/15 0:00	jjo
Max Particle Size		1	2000		*	um			10/20/15 0:00	jjo
Temperature		1	21.0		*	C	0.1	0.1	10/20/15 0:00	jjo
Solids, Percent	D2216-80	1	93		*	%	0.1	0.5	10/18/15 7:03	jjo/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								10/16/15 11:29	jjo/rbt
Digestion - Hot Plate	M3050B ICP-MS								10/19/15 14:10	bcc
Saturated Paste Extraction	USDA No. 60 (2)								10/19/15 11:21	jjo
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								10/19/15 8:56	jjo/rbt

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>

October 21, 2015

Report to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Bill to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Project ID:

ACZ Project ID: L27152

Kristen Stocks:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 09, 2015. This project has been assigned to ACZ's project number, L27152. 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 L27152. 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 November 20, 2015. 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.



Sue Webber has reviewed and approved this report.



Entek GRB LLC

Project ID:
Sample ID: FRU 12-1 BACKGROUND

ACZ Sample ID: **L27152-01**
Date Sampled: 10/07/15 10:00
Date Received: 10/09/15
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	510	6			mg/Kg	0.1	0.5	10/19/15 23:58	msh

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.204		*	mmhos/cm	0.001	0.01	10/20/15 0:00	jjo
Max Particle Size		1	2000		*	um			10/20/15 0:00	jjo
Temperature		1	21.2		*	C	0.1	0.1	10/20/15 0:00	jjo
Solids, Percent	D2216-80	1	93.1		*	%	0.1	0.5	10/17/15 18:42	jjo/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								10/16/15 11:25	jjo/rbt
Digestion - Hot Plate	M3050B ICP-MS								10/19/15 13:18	bcc
Saturated Paste Extraction	USDA No. 60 (2)								10/19/15 11:18	jjo
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								10/19/15 8:50	jjo/rbt



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>

Entek GRB LLC

ACZ Project ID: **L27152**

Arsenic, total (3050)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392623													
WG392623ICV	ICV	10/19/15 23:18	MS151001-1	.05		.05133	mg/L	103	90	110			
WG392623ICB	ICB	10/19/15 23:20				U	mg/L		-0.0006	0.0006			
WG392572PBS	PBS	10/19/15 23:30				U	mg/Kg		-0.3	0.3			
WG392572LCSS	LCSS	10/19/15 23:32	PCN49588	139		150.5	mg/Kg		109	169			
WG392572LCSSD	LCSSD	10/19/15 23:35	PCN49588	139		148.6	mg/Kg		109	169	1	20	
L27151-01MS	MS	10/19/15 23:49	MS150918-3	25.8015	5.4	29.46	mg/Kg	93	75	125			
L27151-01MSD	MSD	10/19/15 23:56	MS150918-3	25.8015	5.4	29.82	mg/Kg	95	75	125	1	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392690													
L26780-01DUP	DUP	10/20/15 14:58			.07	.0703	mmhos/cm				0	20	

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392496													
WG392496PBS	PBS	10/16/15 11:50				U	%		-0.1	0.1			
L27188-01DUP	DUP	10/19/15 1:34			89.2	88.97	%				0	20	

Entek GRB LLC

ACZ Project ID: **L27152**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
--------	---------	-----------	--------	------	-------------

No extended qualifiers associated with this analysis

Entek GRB LLC

ACZ Project ID: **L27152**

Soil Analysis

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

Conductivity @25C	SM2510B
Solids, Percent	D2216-80

Entek GRB LLC

ACZ Project ID: L27152
 Date Received: 10/09/2015 12:32
 Received By: ddp
 Date Printed: 10/9/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody 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 complete and accurate? The 'sampled by' field on the Chain of Custody was not completed.		X	
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?		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 match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? ¹			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

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA22706	14.6	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

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

Entek GRB LLC

ACZ Project ID: L27152
Date Received: 10/09/2015 12:32
Received By: ddp
Date Printed: 10/9/2015

¹ 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), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

October 21, 2015

Report to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Bill to:

Kristen Stocks
Entek GRB LLC
165 S Union Blvd
Suite 366
Lakewood, CO 80228

Project ID:

ACZ Project ID: L27155

Kristen Stocks:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 09, 2015. This project has been assigned to ACZ's project number, L27155. 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 L27155. 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 November 20, 2015. 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.



Sue Webber has reviewed and approved this report.



Entek GRB LLC

Project ID:
Sample ID: FRU 12-1 BACKGROUND

ACZ Sample ID: **L27155-01**
Date Sampled: 10/07/15 10:00
Date Received: 10/09/15
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	510	5.3			mg/Kg	0.1	0.5	10/20/15 0:05	msh

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.410		*	mmhos/cm	0.001	0.01	10/20/15 0:00	jjo
Max Particle Size		1	2000		*	um			10/20/15 0:00	jjo
Temperature		1	20.9		*	C	0.1	0.1	10/20/15 0:00	jjo
Solids, Percent	D2216-80	1	95		*	%	0.1	0.5	10/18/15 13:13	jjo/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								10/16/15 11:31	jjo/rbt
Digestion - Hot Plate	M3050B ICP-MS								10/19/15 14:36	bcc
Saturated Paste Extraction	USDA No. 60 (2)								10/19/15 11:22	jjo
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								10/19/15 8:59	jjo/rbt



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>

Entek GRB LLC

ACZ Project ID: **L27155**

Arsenic, total (3050)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392623													
WG392623ICV	ICV	10/19/15 23:18	MS151001-1	.05		.05133	mg/L	103	90	110			
WG392623ICB	ICB	10/19/15 23:20				U	mg/L		-0.0006	0.0006			
WG392572PBS	PBS	10/19/15 23:30				U	mg/Kg		-0.3	0.3			
WG392572LCSS	LCSS	10/19/15 23:32	PCN49588	139		150.5	mg/Kg		109	169			
WG392572LCSSD	LCSSD	10/19/15 23:35	PCN49588	139		148.6	mg/Kg		109	169	1	20	
L27151-01MS	MS	10/19/15 23:49	MS150918-3	25.8015	5.4	29.46	mg/Kg	93	75	125			
L27151-01MSD	MSD	10/19/15 23:56	MS150918-3	25.8015	5.4	29.82	mg/Kg	95	75	125	1	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392690													
L26780-01DUP	DUP	10/20/15 14:58			.07	.0703	mmhos/cm				0	20	

Solids, Percent

D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG392496													
WG392496PBS	PBS	10/16/15 11:50				U	%		-0.1	0.1			
L27188-01DUP	DUP	10/19/15 1:34			89.2	88.97	%				0	20	

Entek GRB LLC

ACZ Project ID: **L27155**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
--------	---------	-----------	--------	------	-------------

No extended qualifiers associated with this analysis

Entek GRB LLC

ACZ Project ID: **L27155**

Soil Analysis

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

Conductivity @25C	SM2510B
Solids, Percent	D2216-80

Entek GRB LLC

ACZ Project ID: L27155
 Date Received: 10/09/2015 12:32
 Received By: ddp
 Date Printed: 10/9/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody 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 complete and accurate? The 'sampled by' field on the Chain of Custody was not completed.		X	
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Remarks 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 match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? ¹			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

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA22706	14.6	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

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

Entek GRB LLC

ACZ Project ID: L27155
Date Received: 10/09/2015 12:32
Received By: ddp
Date Printed: 10/9/2015

¹ 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), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

August 25, 2011

Report to:

Kristen Stocks
Entek GRB LLC
535 16th Street Suite 620
Denver, CO 80202

Bill to:

Lauri Wetherell
Entek GRB LLC
1660 Lincoln Street Suite 2150
Denver, CO 80264

cc: Sean O'Hearn

Project ID:

ACZ Project ID: L89563

Kristen Stocks:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 29, 2011. This project has been assigned to ACZ's project number, L89563. 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 L89563. 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 September 25, 2011. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years.

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



Sue Webber has reviewed and
approved this report.



Entek GRB LLC

August 25, 2011

Project ID:

ACZ Project ID: L89563

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 6 soil samples from Entek GRB LLC on July 29, 2011. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L89563. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times except for BTEX/TVH values flagged with an "H2", which were initially analyzed within the hold time.

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following anomalies required further explanation not provided by the Extended Qualifier Report:

1. The samples were received outside of the recommended temperature range of 0 to 6 degrees C. They were hand delivered immediately after sampling.
2. For PAH surrogates flagged with an "S13", terphenyl-d14 recovered high in the LCSS/LCSSD. The LCSS/LCSSD were within control limits so no further action was taken.
3. For PAH surrogates flagged with an "S4" and an "S1" in the PBS, the recoveries were high.

Entek GRB LLC

Project ID:

Sample ID: 32-10-1

ACZ Sample ID: **L89563-01**

Date Sampled: 07/29/11 10:45

Date Received: 07/29/11

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	9.4			mg/Kg	0.3	1	08/17/11 18:01	msh
Barium, total (3050)	M6010B ICP	7060		*	mg/Kg	3	20	08/17/11 10:04	aeb
Boron, total (3050)	M6010B ICP		U	*	mg/Kg	1	5	08/16/11 20:54	aeb
Cadmium, total (3050)	M6010B ICP	2.0			mg/Kg	0.5	2	08/16/11 20:54	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	19.90			meq/L	0.01	0.05	08/17/11 11:05	aeb
Chromium, total (3050)	M6010B ICP	32			mg/Kg	1	5	08/16/11 20:54	aeb
Copper, total (3050)	M6010B ICP	59			mg/Kg	1	5	08/16/11 20:54	aeb
Lead, total (3050)	M6010B ICP	18	B	*	mg/Kg	4	20	08/16/11 20:54	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	7.76			meq/L	0.02	0.08	08/17/11 11:05	aeb
Mercury, total	M7471A CVAA	0.05	B		mg/Kg	0.04	0.2	08/23/11 17:57	erf
Nickel, total (3050)	M6010B ICP	34			mg/Kg	1	5	08/16/11 20:54	aeb
Selenium, total (3050)	M6010B ICP		U	*	mg/Kg	6	30	08/16/11 20:54	aeb
Silver, total (3050)	M6010B ICP		U		mg/Kg	1	3	08/16/11 20:54	aeb
Sodium Absorption Ratio	Calculation	7.82				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	29.10			meq/L	0.01	0.09	08/17/11 11:05	aeb
Zinc, total (3050)	M6010B ICP	96		*	mg/Kg	1	5	08/16/11 20:54	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	6.380		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	7.9		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	89.7		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:20	jms
Crush and Pulverize	USDA No. 1, 1972							08/10/11 13:00	ndj
Digestion - Hot Plate	M3050B ICP							08/16/11 3:02	mss2
Digestion - Hot Plate	M3050B ICP-MS							08/16/11 3:02	mss2
Saturated Paste Extraction	USDA No. 60 (2)							08/15/11 9:00	ndj

Entek GRB LLC

Project ID:

Sample ID: 32-10-2

ACZ Sample ID: **L89563-02**

Date Sampled: 07/29/11 10:50

Date Received: 07/29/11

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	6.5			mg/Kg	0.3	1	08/17/11 18:04	msh
Barium, total (3050)	M6010B ICP	770		*	mg/Kg	0.3	2	08/16/11 21:04	aeb
Boron, total (3050)	M6010B ICP	15		*	mg/Kg	1	5	08/16/11 21:04	aeb
Cadmium, total (3050)	M6010B ICP	0.7	B		mg/Kg	0.5	2	08/16/11 21:04	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	13.50			meq/L	0.01	0.05	08/17/11 11:08	aeb
Chromium, total (3050)	M6010B ICP	33			mg/Kg	1	5	08/16/11 21:04	aeb
Copper, total (3050)	M6010B ICP	21			mg/Kg	1	5	08/16/11 21:04	aeb
Lead, total (3050)	M6010B ICP	16	B	*	mg/Kg	4	20	08/16/11 21:04	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	8.82			meq/L	0.02	0.08	08/17/11 11:08	aeb
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/11 17:59	erf
Nickel, total (3050)	M6010B ICP	36			mg/Kg	1	5	08/16/11 21:04	aeb
Selenium, total (3050)	M6010B ICP		U	*	mg/Kg	6	30	08/16/11 21:04	aeb
Silver, total (3050)	M6010B ICP		U		mg/Kg	1	3	08/16/11 21:04	aeb
Sodium Absorption Ratio	Calculation	4.04				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	13.50			meq/L	0.01	0.09	08/17/11 11:08	aeb
Zinc, total (3050)	M6010B ICP	80		*	mg/Kg	1	5	08/16/11 21:04	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	3.030		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	7.8		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	93.2		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:22	jms
Crush and Pulverize	USDA No. 1, 1972							08/10/11 13:00	ndj
Digestion - Hot Plate	M3050B ICP							08/16/11 4:08	mss2
Digestion - Hot Plate	M3050B ICP-MS							08/16/11 4:08	mss2
Saturated Paste Extraction	USDA No. 60 (2)							08/15/11 9:00	ndj

Entek GRB LLC

Project ID:

Sample ID: 32-10-3

ACZ Sample ID: **L89563-03**

Date Sampled: 07/29/11 10:55

Date Received: 07/29/11

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	6.9			mg/Kg	0.3	1	08/17/11 18:07	msh
Barium, total (3050)	M6010B ICP	1840		*	mg/Kg	0.3	2	08/16/11 21:11	aeb
Boron, total (3050)	M6010B ICP	9		*	mg/Kg	1	5	08/16/11 21:11	aeb
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/16/11 21:11	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	5.51		*	meq/L	0.02	0.1	08/17/11 11:11	aeb
Chromium, total (3050)	M6010B ICP	26			mg/Kg	1	5	08/16/11 21:11	aeb
Copper, total (3050)	M6010B ICP	26			mg/Kg	1	5	08/16/11 21:11	aeb
Lead, total (3050)	M6010B ICP	14	B	*	mg/Kg	4	20	08/16/11 21:11	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	2.93		*	meq/L	0.03	0.2	08/17/11 11:11	aeb
Mercury, total	M7471A CVAA		U		mg/Kg	0.05	0.2	08/23/11 18:10	erf
Nickel, total (3050)	M6010B ICP	23			mg/Kg	1	5	08/16/11 21:11	aeb
Selenium, total (3050)	M6010B ICP		U	*	mg/Kg	6	30	08/16/11 21:11	aeb
Silver, total (3050)	M6010B ICP		U		mg/Kg	1	3	08/16/11 21:11	aeb
Sodium Absorption Ratio	Calculation	15.30				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	31.40		*	meq/L	0.03	0.1	08/17/11 11:11	aeb
Zinc, total (3050)	M6010B ICP	77		*	mg/Kg	1	5	08/16/11 21:11	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	3.700		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	8.1		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	82.2		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:24	jms
Crush and Pulverize	USDA No. 1, 1972							08/10/11 13:00	ndj
Digestion - Hot Plate	M3050B ICP							08/16/11 5:13	mss2
Digestion - Hot Plate	M3050B ICP-MS							08/16/11 5:13	mss2
Saturated Paste Extraction	USDA No. 60 (2)							08/15/11 9:00	ndj

Entek GRB LLC
Project ID:
Sample ID: 32-10-4

ACZ Sample ID: **L89563-04**
Date Sampled: 07/29/11 11:00
Date Received: 07/29/11
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	8.0			mg/Kg	0.3	1	08/17/11 18:10	msh
Barium, total (3050)	M6010B ICP	1570		*	mg/Kg	0.3	2	08/16/11 21:14	aeb
Boron, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/16/11 21:14	aeb
Cadmium, total (3050)	M6010B ICP	0.9	B		mg/Kg	0.5	2	08/16/11 21:14	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	8.06			meq/L	0.01	0.05	08/17/11 11:35	aeb
Chromium, total (3050)	M6010B ICP	24			mg/Kg	1	5	08/16/11 21:14	aeb
Copper, total (3050)	M6010B ICP	34			mg/Kg	1	5	08/16/11 21:14	aeb
Lead, total (3050)	M6010B ICP	20		*	mg/Kg	4	20	08/16/11 21:14	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	3.43			meq/L	0.02	0.08	08/17/11 11:35	aeb
Mercury, total	M7471A CVAA		U		mg/Kg	0.05	0.2	08/23/11 18:12	erf
Nickel, total (3050)	M6010B ICP	24			mg/Kg	1	5	08/16/11 21:14	aeb
Selenium, total (3050)	M6010B ICP		U	*	mg/Kg	6	30	08/16/11 21:14	aeb
Silver, total (3050)	M6010B ICP		U		mg/Kg	1	3	08/16/11 21:14	aeb
Sodium Absorption Ratio	Calculation	12.40				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	29.80			meq/L	0.01	0.09	08/17/11 11:35	aeb
Zinc, total (3050)	M6010B ICP	87		*	mg/Kg	1	5	08/16/11 21:14	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	4.080		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	7.9		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	77.4		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:26	jms
Crush and Pulverize	USDA No. 1, 1972							08/10/11 13:00	ndj
Digestion - Hot Plate	M3050B ICP							08/16/11 6:19	mss2
Digestion - Hot Plate	M3050B ICP-MS							08/16/11 6:19	mss2
Saturated Paste Extraction	USDA No. 60 (2)							08/15/11 9:00	ndj

Entek GRB LLC

Project ID:

Sample ID: 32-10-A BACKGROUND

ACZ Sample ID: **L89563-05**

Date Sampled: 07/29/11 11:05

Date Received: 07/29/11

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	5.8			mg/Kg	0.3	1	08/17/11 18:20	msh
Calcium, soluble (Sat. Paste)	M6010B ICP	1.56			meq/L	0.01	0.05	08/17/11 11:38	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	0.91			meq/L	0.02	0.08	08/17/11 11:38	aeb
Sodium Absorption Ratio	Calculation	0.66				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.74			meq/L	0.01	0.09	08/17/11 11:38	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	0.309		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	7.6		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	94.3		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:27	jms
Digestion - Hot Plate Saturated Paste Extraction	M3050B ICP-MS USDA No. 60 (2)							08/16/11 7:24 08/15/11 9:00	mss2 ndj
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							08/11/11 9:00	ndj

Entek GRB LLC

Project ID:

Sample ID: 32-10-B BACKGROUND

ACZ Sample ID: **L89563-06**

Date Sampled: 07/29/11 11:10

Date Received: 07/29/11

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	5.9			mg/Kg	0.3	1	08/17/11 18:23	msh
Calcium, soluble (Sat. Paste)	M6010B ICP	3.48		*	meq/L	0.02	0.1	08/17/11 11:41	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	2.00		*	meq/L	0.03	0.2	08/17/11 11:41	aeb
Sodium Absorption Ratio	Calculation	0.59				0.03	0.15	08/25/11 10:34	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	0.99		*	meq/L	0.03	0.1	08/17/11 11:41	aeb

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B	0.661		*	mmhos/cm	0.001	0.01	08/16/11 16:00	ndj
pH, Saturated Paste	USDA No. 60 (21A)	7.4		*	units	0.1	0.1	08/16/11 16:00	ndj
Solids, Percent	CLPSOW390, PART F, D-98	92.7		*	%	0.1	0.5	08/10/11 9:00	ndj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							08/03/11 10:29	jms
Digestion - Hot Plate Saturated Paste Extraction	M3050B ICP-MS USDA No. 60 (2)							08/16/11 8:29 08/15/11 9:00	mss2 ndj
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2							08/11/11 9:00	ndj

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	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.
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.
- (5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
- (6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

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.

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

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