ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

November 01, 2017

Report to:
John Thomas
Robert L. Bayless, Producer LLC
P.O. Box 168
Farmington, NM 87499

cc: Helen Trujillo

Bill to:
Brandon Shaw
Robert L. Bayless, Producer LLC
PO BOX 168
Farmington, NM 87499

Project ID:
ACZ Project ID: L40493

Foster State Drill Cuttings
PASSED

John Thomas:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 12, 2017. This project has been assigned to ACZ's project number, L40493. 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 L40493. 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 December 01, 2017. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

Max Janicek has reviewed and approved this report.

Robert L. Bayless, Producer LLC

November 01, 2017

Project ID:
ACZ Project ID: L40493

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 soil sample from Robert L. Bayless, Producer LLC on October 12, 2017. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L40493. 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

This sample was analyzed for organic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

The surrogate recovery for the BTEX/GRO analysis for L40493-01 was qualified with the N1 flag on the extended qualifier report. The chemist noted that the recovery for this surrogate was below the method acceptance criteria. Low surrogate recovery is likely attributed to sample matrix; other target analyte concentrations may be biased low as well. . Comparison of results to historical levels and/or data qualification may be necessary.

Robert L. Bayless, Producer LLC
Project ID:
Sample ID: FOSTER STATE #1

ACZ Sample ID: ***L40493-01***
Date Sampled: *10/11/17 11:00*
Date Received: *10/12/17*
Sample Matrix: *Soil*

BTEX/Gasoline Range Organics (C6-C10)

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

Workgroup: WG434572
Analyst: jel
Extract Date: 10/25/17 20:33
Analysis Date: 10/25/17 20:33

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Benzene	71-43-2		U	10	*	ug/Kg	10	10
Ethylbenzene	100-41-4		U	10	*	ug/Kg	10	10
m p Xylene	1330-20-7		U	10	*	ug/Kg	20	20
o Xylene	95-47- 6		U	10	*	ug/Kg	10	10
Toluene	108-88-3		U	10	*	ug/Kg	10	10
TVH C6 to C10	TVH		U	10	*	mg/Kg	0.5	0.5
Surrogate Recoveries	**CAS**	**% Recovery**		**Dilution**	**XQ**	**Units**	**LCL**	**UCL**
Bromofluorobenzene	460-00-4	64.4		10	*	%	70	130
Bromofluorobenzene (TVH)	460-00 4	66.1		10	*	%	70	130

Robert L. Bayless, Producer LLC
Project ID:
Sample ID: FOSTER STATE #1

ACZ Sample ID: ***L40493-01***
Date Sampled: *10/11/17 11:00*
Date Received: *10/12/17*
Sample Matrix: *Soil*

Diesel Range Organics (C10-C28)

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

Workgroup: WG433818
Analyst: jmm
Extract Date: 10/16/17 19:00
Analysis Date: 10/18/17 20:44

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		170		200		mg/Kg	20	100
Surrogate Recoveries	**CAS**	**% Recovery**		**Dilution**	**XQ**	**Units**	**LCL**	**UCL**
OTP	84-15-1	82.9		200		%	60	115

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)
LCL	Lower Control Limit
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #4) 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. Synonymous with the EPA term "minimum level".
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)
UCL	Upper Control Limit
Sample	Value of the Sample of interest

QC Sample Types

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

Robert L. Bayless, Producer LLC

ACZ Project ID: ***L40493***

BTEX/Gasoline Range Organics (C6-C10)

M8021B/8015D GC/PID/FID

WG434572

AS **Sample ID: L40493-01AS** **PCN/SCN: B171025-2-CCV** **Analyzed: 10/25/17 21:03**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
BENZENE	500	U	487	ug/Kg	97.0	70	130			
ETHYLBENZENE	500	U	406	ug/Kg	81.0	70	130			
M P XYLENE	1000	U	778	ug/Kg	78.0	70	130			
O XYLENE	500	U	410	ug/Kg	82.0	70	130			
TOLUENE	500	U	447	ug/Kg	89.0	70	130			
TVH C6 TO C10	5	U	4.27	mg/Kg	85.0	70	130			
BROMOFLUOROBENZENE (surr)				%	69.9	70	130			N1A
BROMOFLUOROBENZENE (TVH) (surr)				%	72.6	70	130			

ASD **Sample ID: L40493-01ASD** **PCN/SCN: B171025-2-CCV** **Analyzed: 10/25/17 21:33**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
BENZENE	500	U	467	ug/Kg	93.0	70	130	4	20	
ETHYLBENZENE	500	U	398	ug/Kg	80.0	70	130	2	20	
M P XYLENE	1000	U	767	ug/Kg	77.0	70	130	1	20	
O XYLENE	500	U	408	ug/Kg	82.0	70	130	0	20	
TOLUENE	500	U	430	ug/Kg	86.0	70	130	4	20	
TVH C6 TO C10	5	U	4.22	mg/Kg	84.0	70	130	1	20	
BROMOFLUOROBENZENE (surr)				%	73.4	70	130			
BROMOFLUOROBENZENE (TVH) (surr)				%	76.9	70	130			

LCSS **Sample ID: WG434572LCSS** **PCN/SCN: B171025-3-ICV** **Analyzed: 10/25/17 18:06**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
BENZENE	25.1		24.6	ug/Kg	98.0	70	130			
ETHYLBENZENE	25		24.6	ug/Kg	98.0	70	130			
M P XYLENE	50.4		49.5	ug/Kg	98.0	70	130			
O XYLENE	50.3		48.5	ug/Kg	97.0	70	130			
TOLUENE	75.3		73.4	ug/Kg	97.0	70	130			
TVH C6 TO C10	.5		.458	mg/Kg	101.0	70	130			
BROMOFLUOROBENZENE (surr)				%	93.9	70	130			
BROMOFLUOROBENZENE (TVH) (surr)				%	99.3	70	130			

LCSSD **Sample ID: WG434572LCSSD** **PCN/SCN: B171025-3-ICV** **Analyzed: 10/25/17 18:35**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
BENZENE	25.1		24.7	ug/Kg	98.0	70	130	0	20	
ETHYLBENZENE	25		24.7	ug/Kg	99.0	70	130	0	20	
M P XYLENE	50.4		49.4	ug/Kg	98.0	70	130	0	20	
O XYLENE	50.3		48.4	ug/Kg	96.0	70	130	0	20	
TOLUENE	75.3		73.4	ug/Kg	97.0	70	130	0	20	
TVH C6 TO C10	.5		.457	mg/Kg	101.0	70	130	0	20	
BROMOFLUOROBENZENE (surr)				%	95.3	70	130			
BROMOFLUOROBENZENE (TVH) (surr)				%	100.5	70	130			

Robert L. Bayless, Producer LLC

ACZ Project ID: ***L40493***

PBS **Sample ID: WG434572PBS** **Analyzed: 10/25/17 19:05**

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)				%	87.4	70	130			
BROMOFLUOROBENZENE (TVH) (surr)				%	92.8	70	130			

Robert L. Bayless, Producer LLC

ACZ Project ID: ***L40493***

Diesel Range Organics (C10-C28)

M8015D GC/FID

WG433818

MS **Sample ID: L40493-01MS** **PCN/SCN: OPTPH170815-1** **Analyzed: 10/18/17 21:08**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.1	170	532	mg/Kg	72.0	70	130			
OTP (surr)				%	93.8	60	115			

MSD **Sample ID: L40493-01MSD** **PCN/SCN: OPTPH170815-1** **Analyzed: 10/18/17 21:31**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.1	170	519	mg/Kg	70.0	70	130	2	20	
OTP (surr)				%	95.1	60	115			

LCSS **Sample ID: WG433624LCSS** **PCN/SCN: OPTPH170815-1** **Analyzed: 10/18/17 19:57**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.1		81	mg/Kg	97.0	70	130			
OTP (surr)				%	89.4	60	115			

LCSSD **Sample ID: WG433624LCSSD** **PCN/SCN: OPTPH170815-1** **Analyzed: 10/18/17 20:21**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2500.1		81.5	mg/Kg	98.0	70	130	1	20	
OTP (surr)				%	90.1	60	115			

PBS **Sample ID: WG433624PBS** **Analyzed: 10/18/17 19:34**

Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28			U	mg/Kg		-20	20			
OTP (surr)				%	71.4	60	115			

ACZ Project ID: ***L40493***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L40493-01	WG434572	*All Compounds*	M8021B/8015D GC/PID/FID	D1	Sample required dilution due to matrix.
		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.
		Bromofluorobenzene	M8021B/8015D GC/PID/FID	N1	See Case Narrative.
		Bromofluorobenzene (TVH)	M8021B/8015D GC/PID/FID	N1	See Case Narrative.
		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.

Certification Qualifiers

Robert L. Bayless, Producer LLC ACZ Project ID: ***L40493***

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Robert L. Bayless, Producer LLC

ACZ Project ID: L40493
Date Received: 10/12/2017 11:30
Received By:
Date Printed: 10/13/2017

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		

NA indicates Not Applicable

Chain of Custody Related Remarks

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

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
1893	5	<=6.0	12	Yes

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.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Robert L. Bayless, Producer LLC

ACZ Project ID:	L40493
Date Received:	10/12/2017 11:30
Received By:	
Date Printed:	10/13/2017

[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).

ACZ Laboratories, Inc. L40493

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

CHAIN of CUSTODY

Report to:

Name: Bayless Producers Hellen	Address:
Company:	
E-mail:	Telephone:

Copy of Report to:

Name: Hellen	E-mail:
Company: Bayless Producers	Telephone:

Invoice to:

Name: Bayless	Address:
Company:	
E-mail:	Telephone:

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

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

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

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

Sampler's Name: Lane **Sampler's Site Information** **State** CO **Zip code** 81638 **Time Zone** MT

***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#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
Foster State #1	11:00 AM	SO	2								

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

REMARKS

Drill Cuttings Foster State #1 well

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
		BCR	10/18/17 1130

L40493 Chain of Custody

ACZ Laboratories, Inc.

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

Bottle Order Packing List

Account: BAYLESS/Robert L. Bayless, Produc
Bottle Order: BO38528

Bill to Account: Bill to ACZ
Ship Date Requested: 09/26/2017
Request Placed at: 09/25/2017 17:04
Service Requested: UPS Ground

Sampling supplies

PACK	Qty	ACZ ID	Type	Description
	1	COC	Chain of Custody	Chain of Custody, 1 for 10 samples.
	2	SEAL	Custody Seal	Custody seals for cooler, two for each cooler.
	1	RETURN	Return Address	Return Address label, one for each cooler.
	2	LABELS	Sample Labels	ACZ supplied labels for sample containers

ACZ Coolers

PACK	Qty	ACZ ID	Size	Weight	UPS Tracking Number
	1	1893	Small	4	1Z8101300375164256

Quote number: BTV-DRO-SOIL
Sample Quantity: 1

BTEX/BTV and DRO analysis of soil -- follow-up analyses

ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	Instructions
	1	SJ ORG	8 OZ	Raw	Soil analyses - Completely fill jar with a homogenous sample.
	1	SJ ORG VOA	4 OZ	Raw	Soil analyses - Completely fill jar with a homogenous sample.

Prepared By/Date: _____

mjj