

November 21, 2016

Report to:

Rick Obernolte
Access Environmental, Inc.
106 South White Tail Drive
Franktown, CO 80116-8825

Bill to:

Rick Obernolte
Access Environmental, Inc.
106 South White Tail Drive
Franktown, CO 80116-8825

cc: John Carmony

Project ID:

ACZ Project ID: L33782

Rick Obernolte:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 27, 2016. This project has been assigned to ACZ's project number, L33782. 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 L33782. 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 21, 2016. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Sue Webber has reviewed and
approved this report.



Access Environmental, Inc.

November 21, 2016

Project ID:

ACZ Project ID: L33782

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 soil samples from Access Environmental, Inc. on October 27, 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 L33782. 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 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 Polynuclear Aromatic Hydrocarbon (PAH) results for L33782 have been qualified with the N1 flag on the extended qualifier report. The chemist noted that the Preparatory Blank sample (PBS) was lost completely at final concentration when its 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; no significant impact on client data expected.

Access Environmental, Inc.

Project ID:

Sample ID: 1 E. SIDE OF LOC CT DR-S1 (3)

ACZ Sample ID: **L33782-01**

Date Sampled: 10/26/16 14:30

Date Received: 10/27/16

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	505	3.2			mg/Kg	0.1	0.5	11/08/16 12:45	enb
Barium, total (3050)	M6010B ICP	101	270		*	mg/Kg	0.3	2	11/08/16 11:47	aeb
Boron, total (3050)	M6010B ICP	101	2	B		mg/Kg	1	5	11/08/16 11:47	aeb
Cadmium, total (3050)	M6010B ICP	101		U	*	mg/Kg	0.5	2	11/08/16 11:47	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	2	0.743		*	meq/L	0.01	0.0499	11/15/16 13:33	gss
Chromium, total (3050)	M6010B ICP	101	26			mg/Kg	1	5	11/08/16 11:47	aeb
Chromium, Trivalent	Calculation (Total - Hexavalent)		26			mg/Kg	1	5	11/21/16 0:00	calc
Copper, total (3050)	M6010B ICP	101	12			mg/Kg	1	5	11/08/16 11:47	aeb
Lead, total (3050)	M6010B ICP	101	8	B		mg/Kg	3	20	11/08/16 11:47	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	2	0.315			meq/L	0.033	0.165	11/15/16 13:33	gss
Mercury by Direct Combustion AA	M7473	1	7.79	B	*	ng/g	2.09	10.45	11/14/16 13:03	pta
Nickel, total (3050)	M6010B ICP	101	32.7		*	mg/Kg	0.8	4	11/08/16 11:47	aeb
Selenium, total (3050)	M6010B ICP	101		U		mg/Kg	5	30	11/08/16 11:47	aeb
Silver, total (3050)	M6010B ICP	101		U		mg/Kg	1	3	11/08/16 11:47	aeb
Sodium Adsorption Ratio	Calculation		0.17						11/21/16 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	2	0.125			meq/L	0.0174	0.087	11/15/16 13:33	gss
Zinc, total (3050)	M6010B ICP	101	44			mg/Kg	1	5	11/08/16 11:47	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.124		*	mmhos/cm	0.001	0.01	11/15/16 0:00	rbt
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
Temperature		1	20.6		*	C	0.1	0.1	11/15/16 0:00	rbt
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
pH		1	6.0		*	units	0.1	0.1	11/15/16 0:00	rbt
Solids, Percent	D2216-80	1	82.3		*	%	0.1	0.5	11/03/16 20:11	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				*				11/03/16 8:10	rbt
Digestion - Alkaline	M3060A								11/16/16 9:43	cra
Digestion - Hot Plate	M3050B ICP								11/07/16 13:19	bcc
Digestion - Hot Plate	M3050B ICP-MS								11/07/16 13:19	bcc
Saturated Paste Extraction	USDA No. 60 (2)								11/14/16 13:45	rbt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2				*				11/07/16 9:05	rbt

Access Environmental, Inc.

Project ID:

Sample ID: 1 E. SIDE OF LOC CT DR-S1 (3)

ACZ Sample ID: **L33782-01**

Date Sampled: 10/26/16 14:30

Date Received: 10/27/16

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chromium, Hexavalent (3060)	M7196A	240		U	*	mg/Kg	1	5	11/17/16 10:13	sck

Arizona license number: AZ0102

Access Environmental, Inc.

Project ID:

Sample ID: 2 S. SIDE OF LOC CT DR-S2 (3)

ACZ Sample ID: **L33782-02**

Date Sampled: 10/26/16 14:40

Date Received: 10/27/16

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	500	2.8		*	mg/Kg	0.1	0.5	11/07/16 22:51	enb
Barium, total (3050)	M6010B ICP	100	186		*	mg/Kg	0.3	2	11/08/16 12:02	aeb
Boron, total (3050)	M6010B ICP	100		U		mg/Kg	1	5	11/08/16 12:02	aeb
Cadmium, total (3050)	M6010B ICP	100		U	*	mg/Kg	0.5	2	11/08/16 12:02	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	2	0.287		*	meq/L	0.01	0.0499	11/15/16 13:36	gss
Chromium, total (3050)	M6010B ICP	100	30			mg/Kg	1	5	11/08/16 12:02	aeb
Chromium, Trivalent	Calculation (Total - Hexavalent)		30			mg/Kg	1	5	11/21/16 0:00	calc
Copper, total (3050)	M6010B ICP	100	15			mg/Kg	1	5	11/08/16 12:02	aeb
Lead, total (3050)	M6010B ICP	100	3	B		mg/Kg	3	20	11/08/16 12:02	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	2	0.170			meq/L	0.033	0.165	11/15/16 13:36	gss
Mercury by Direct Combustion AA	M7473	1	15.5		*	ng/g	1.93	9.65	11/14/16 13:09	pta
Nickel, total (3050)	M6010B ICP	100	53.4		*	mg/Kg	0.8	4	11/08/16 12:02	aeb
Selenium, total (3050)	M6010B ICP	100		U		mg/Kg	5	30	11/08/16 12:02	aeb
Silver, total (3050)	M6010B ICP	100		U		mg/Kg	1	3	11/08/16 12:02	aeb
Sodium Adsorption Ratio	Calculation		0.35						11/21/16 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	2	0.168			meq/L	0.0174	0.087	11/15/16 13:36	gss
Zinc, total (3050)	M6010B ICP	100	33			mg/Kg	1	5	11/08/16 12:02	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.0598		*	mmhos/cm	0.001	0.01	11/15/16 0:00	rbt
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
Temperature		1	20.6		*	C	0.1	0.1	11/15/16 0:00	rbt
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
pH		1	6.3		*	units	0.1	0.1	11/15/16 0:00	rbt
Solids, Percent	D2216-80	1	85		*	%	0.1	0.5	11/04/16 7:37	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				*				11/03/16 8:12	rbt
Digestion - Alkaline	M3060A								11/16/16 11:53	cra
Digestion - Hot Plate	M3050B ICP								11/07/16 14:44	bcc
Digestion - Hot Plate	M3050B ICP-MS								11/07/16 14:44	bcc
Saturated Paste Extraction	USDA No. 60 (2)								11/14/16 13:50	rbt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2				*				11/07/16 9:10	rbt

Access Environmental, Inc.

Project ID:

Sample ID: 2 S. SIDE OF LOC CT DR-S2 (3)

ACZ Sample ID: **L33782-02**

Date Sampled: 10/26/16 14:40

Date Received: 10/27/16

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chromium, Hexavalent (3060)	M7196A	240		U	*	mg/Kg	1	5	11/17/16 10:22	sck

Arizona license number: AZ0102

Access Environmental, Inc.

Project ID:

Sample ID: 3 W. SIDE OF LOC CT DR-S3 (3)

ACZ Sample ID: **L33782-03**

Date Sampled: 10/26/16 14:50

Date Received: 10/27/16

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	505	1.6		*	mg/Kg	0.1	0.5	11/07/16 22:58	enb
Barium, total (3050)	M6010B ICP	101	254		*	mg/Kg	0.3	2	11/08/16 12:06	aeb
Boron, total (3050)	M6010B ICP	101		U		mg/Kg	1	5	11/08/16 12:06	aeb
Cadmium, total (3050)	M6010B ICP	101		U	*	mg/Kg	0.5	2	11/08/16 12:06	aeb
Calcium, soluble (Sat. Paste)	M6010B ICP	2	0.796		*	meq/L	0.01	0.0499	11/15/16 13:39	gss
Chromium, total (3050)	M6010B ICP	101	18			mg/Kg	1	5	11/08/16 12:06	aeb
Chromium, Trivalent	Calculation (Total - Hexavalent)		18			mg/Kg	1	5	11/21/16 0:00	calc
Copper, total (3050)	M6010B ICP	101	11			mg/Kg	1	5	11/08/16 12:06	aeb
Lead, total (3050)	M6010B ICP	101	3	B		mg/Kg	3	20	11/08/16 12:06	aeb
Magnesium, soluble (Sat. Paste)	M6010B ICP	2	0.555			meq/L	0.033	0.165	11/15/16 13:39	gss
Mercury by Direct Combustion AA	M7473	1	9.37		*	ng/g	1.76	8.8	11/14/16 13:22	pta
Nickel, total (3050)	M6010B ICP	101	31.3		*	mg/Kg	0.8	4	11/08/16 12:06	aeb
Selenium, total (3050)	M6010B ICP	101		U		mg/Kg	5	30	11/08/16 12:06	aeb
Silver, total (3050)	M6010B ICP	101		U		mg/Kg	1	3	11/08/16 12:06	aeb
Sodium Adsorption Ratio	Calculation		0.25						11/21/16 0:00	calc
Sodium, soluble (Sat. Paste)	M6010B ICP	2	0.205			meq/L	0.0174	0.087	11/15/16 13:39	gss
Zinc, total (3050)	M6010B ICP	101	26			mg/Kg	1	5	11/08/16 12:06	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity @25C	SM2510B									
Conductivity		1	0.0575		*	mmhos/cm	0.001	0.01	11/15/16 0:00	rbt
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
Temperature		1	20.3		*	C	0.1	0.1	11/15/16 0:00	rbt
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	2000		*	um			11/15/16 0:00	rbt
pH		1	6.7		*	units	0.1	0.1	11/15/16 0:00	rbt
Solids, Percent	D2216-80	1	83.9		*	%	0.1	0.5	11/04/16 13:20	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				*				11/03/16 8:15	rbt
Digestion - Alkaline	M3060A								11/16/16 13:20	cra
Digestion - Hot Plate	M3050B ICP-MS								11/07/16 15:13	bcc
Digestion - Hot Plate	M3050B ICP								11/07/16 15:13	bcc
Saturated Paste Extraction	USDA No. 60 (2)				*				11/14/16 13:55	rbt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2				*				11/07/16 9:15	rbt

Access Environmental, Inc.

Project ID:

Sample ID: 3 W. SIDE OF LOC CT DR-S3 (3)

ACZ Sample ID: **L33782-03**

Date Sampled: 10/26/16 14:50

Date Received: 10/27/16

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chromium, Hexavalent (3060)	M7196A	240		U	*	mg/Kg	1	5	11/17/16 10:37	sck

Arizona license number: **AZ0102**


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>

Access Environmental, Inc.

ACZ Project ID: **L33782**

Arsenic, total (3050)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412827													
WG412827ICV	ICV	11/07/16 22:19	MS160920-1	.05		.04819	mg/L	96	90	110			
WG412827ICB	ICB	11/07/16 22:22				U	mg/L		-0.0006	0.0006			
WG412778PBS	PBS	11/07/16 22:35				.12	mg/Kg		-0.3	0.3			
WG412778LCSS1	LCSS	11/07/16 22:39	PCN51903	97.5		100.2	mg/Kg		75.7	119			
WG412778LCSSD1	LCSSD	11/07/16 22:42	PCN51903	97.5		91.7	mg/Kg		75.7	119	9	20	
L33782-03MS	MS	11/07/16 23:07	MS161107-3	25.3005	1.6	28.13	mg/Kg	105	75	125			
L33782-03MSD	MSD	11/07/16 23:10	MS161107-3	25.3005	1.6	29.12	mg/Kg	109	75	125	3	20	
WG412862													
WG412862ICV	ICV	11/08/16 12:28	MS160920-1	.05		.05078	mg/L	102	90	110			
WG412862ICB	ICB	11/08/16 12:30				U	mg/L		-0.0006	0.0006			
WG412778PBS	PBS	11/08/16 12:38				U	mg/Kg		-0.3	0.3			
WG412778LCSS1	LCSS	11/08/16 12:39	PCN51903	97.5		104.8	mg/Kg		75.7	119			
WG412778LCSSD1	LCSSD	11/08/16 12:41	PCN51903	97.5		104.5	mg/Kg		75.7	119	0	20	
L33782-03MS	MS	11/08/16 12:51	MS161107-3	25.3005	1.6	26.47	mg/Kg	98	75	125			
L33782-03MSD	MSD	11/08/16 12:56	MS161107-3	25.3005	1.6	27.32	mg/Kg	102	75	125	3	20	

Barium, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		2.062	mg/L	103	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.009	0.009			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-0.9	0.9			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	306		299.3	mg/Kg		253	358			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	306		301.7	mg/Kg		253	358	1	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.5505	270	368.75	mg/Kg	195	75	125			M3
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.5505	270	362.49	mg/Kg	183	75	125	2	20	M3

Boron, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		2.078	mg/L	104	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.03	0.03			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-3	3			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	116		114.1	mg/Kg		84.7	148			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	116		117.4	mg/Kg		84.7	148	3	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.5505	2	53	mg/Kg	101	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.5505	2	52.4	mg/Kg	100	75	125	1	20	

Cadmium, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		2.048	mg/L	102	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.015	0.015			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-1.5	1.5			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	76.6		75.13	mg/Kg		63.1	90.1			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	76.6		77.43	mg/Kg		63.1	90.1	3	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.702	U	46.75	mg/Kg	92	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.702	U	45.68	mg/Kg	90	75	125	2	20	

Access Environmental, Inc.

ACZ Project ID: **L33782**

Calcium, soluble (Sat. Paste)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413236													
WG413236ICV	ICV	11/15/16 13:17	II161031-1	100		101	mg/L	101	90	110			
WG413236ICB	ICB	11/15/16 13:20				U	mg/L		-0.3	0.3			
L33782-03DUP	DUP	11/15/16 13:42			0.796	1.02	meq/L				25	20	RD

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			
L33782-01MS2	MS	11/17/16 10:19	SI160824-	1513.92024	U	1740	mg/Kg	115	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
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		1.995	mg/L	100	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.03	0.03			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-3	3			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	103		103.2	mg/Kg		82.1	125			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	103		104.5	mg/Kg		82.1	125	1	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.7525	26	80.1	mg/Kg	107	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.7525	26	78.4	mg/Kg	103	75	125	2	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413211													
L33782-03DUP	DUP	11/15/16 10:09			.0575	.0614	mmhos/cm				7	20	

Copper, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		2.07	mg/L	104	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.03	0.03			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-3	3			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	108		104.9	mg/Kg		87.8	128			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	108		107	mg/Kg		87.8	128	2	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.5505	12	59.1	mg/Kg	93	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.5505	12	60.3	mg/Kg	96	75	125	2	20	

Access Environmental, Inc.

ACZ Project ID: **L33782**

Lead, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	4		3.906	mg/L	98	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.09	0.09			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-9	9			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	96.7		90	mg/Kg		79	114			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	96.7		88.7	mg/Kg		79	114	1	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	101.101	8	99.7	mg/Kg	91	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	101.101	8	98.4	mg/Kg	89	75	125	1	20	

Magnesium, soluble (Sat. Paste)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413236													
WG413236ICV	ICV	11/15/16 13:17	II161031-1	100		101	mg/L	101	90	110			
WG413236ICB	ICB	11/15/16 13:20				U	mg/L		-0.6	0.6			
L33782-03DUP	DUP	11/15/16 13:42			0.555	.666	meq/L				18	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			
WG413142													
WG413142ICV1	ICV	11/14/16 10:08	HG161114-1	100		98.7	ng/g	99	90	110			
WG413142ICV2	ICV	11/14/16 10:17	HG161114-2	100		96.5	ng/g	97	90	110			
WG413142ICV3	ICV	11/14/16 10:28	HG161114-3	1000		919	ng/g	92	90	110			
WG413142ICV4	ICV	11/14/16 10:36	HG161114-3	1000		901	ng/g	90	90	110			
WG413142PBS	PBS	11/14/16 11:06				U	ng/g		-6	6			
WG413142LCSS	LCSS	11/14/16 11:12	PCN50110	80		76	ng/g		80	120			
WG413142LCSSD	LCSSD	11/14/16 11:19	PCN50110	80		71.8	ng/g		80	120	6	20	
L33725-01DUP	DUP	11/14/16 12:07			23.8	11.1	ng/g				73	20	RA
L33725-02MS	MS	11/14/16 12:20	PCN50110				ng/g	90	80	120			

Nickel, total (3050)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2.002		2.009	mg/L	100	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.024	0.024			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-2.4	2.4			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	153		149.1	mg/Kg		126	180			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	153		152	mg/Kg		126	180	2	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.298	32.7	83.88	mg/Kg	102	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.298	32.7	81.97	mg/Kg	98	75	125	2	20	

Access Environmental, Inc.

ACZ Project ID: **L33782**

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
WG413211													
WG413211ICV	ICV	11/15/16 9:46	PCN50759	4		4	units	100	3.9	4.1			
L33782-03DUP	DUP	11/15/16 10:09			6.7	6.7	units				0	20	

Selenium, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	4		4.102	mg/L	103	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.15	0.15			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-15	15			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	161		159.7	mg/Kg		125	198			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	161		167.7	mg/Kg		125	198	5	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	101.0707	U	99.2	mg/Kg	98	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	101.0707	U	94.7	mg/Kg	94	75	125	5	20	

Silver, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	1.002		1.023	mg/L	102	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.03	0.03			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-3	3			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	49.3		48.8	mg/Kg		37	61.7			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	49.3		48	mg/Kg		37	61.7	2	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.601	U	47.8	mg/Kg	94	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.601	U	46.2	mg/Kg	91	75	125	3	20	

Sodium, soluble (Sat. Paste) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG413236													
WG413236ICV	ICV	11/15/16 13:17	II161031-1	100		99.5	mg/L	100	90	110			
WG413236ICB	ICB	11/15/16 13:20				U	mg/L		-0.6	0.6			
L33782-03DUP	DUP	11/15/16 13:42			0.205	.209	meq/L				2	20	

Solids, Percent D2216-80

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412614													
WG412614PBS	PBS	11/03/16 8:45				U	%		-0.1	0.1			
L33782-01DUP	DUP	11/04/16 1:54			82.3	82.78	%				1	20	

Zinc, total (3050) M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG412839													
WG412839ICV	ICV	11/08/16 11:06	II161103-1	2		2.056	mg/L	103	90	110			
WG412839ICB	ICB	11/08/16 11:09				U	mg/L		-0.03	0.03			
WG412778PBS	PBS	11/08/16 11:22				U	mg/Kg		-3	3			
WG412778LCSS1	LCSS	11/08/16 11:25	PCN51903	229		224.1	mg/Kg		188	271			
WG412778LCSSD1	LCSSD	11/08/16 11:28	PCN51903	229		231.5	mg/Kg		188	271	3	20	
L33782-01MS	MS	11/08/16 11:50	II161031-3	50.4495	44	95.3	mg/Kg	102	75	125			
L33782-01MSD	MSD	11/08/16 11:59	II161031-3	50.4495	44	95	mg/Kg	101	75	125	0	20	

Access Environmental, Inc.

ACZ Project ID: **L33782**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L33782-01	WG412839	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.
		Cadmium, 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.
	WG413236	Calcium, soluble (Sat. Paste)	M6010B ICP	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG413142	Mercury by Direct Combustion AA	M7473	Q6	Sample was received above recommended temperature.
			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).
	WG412839	Nickel, 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	Q6	Sample was received above recommended temperature.
			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).
L33782-02	WG412827	Arsenic, total (3050)	M6020 ICP-MS	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.
	WG412839	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.
		Cadmium, 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.
	WG413236	Calcium, soluble (Sat. Paste)	M6010B ICP	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG413142	Mercury by Direct Combustion AA	M7473	Q6	Sample was received above recommended temperature.
			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).
	WG412839	Nickel, 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	Q6	Sample was received above recommended temperature.
			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).

Access Environmental, Inc.

ACZ Project ID: **L33782**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L33782-03	WG412827	Arsenic, total (3050)	M6020 ICP-MS	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.
	WG412839	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.
		Cadmium, 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.
	WG413236	Calcium, soluble (Sat. Paste)	M6010B ICP	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG413142	Mercury by Direct Combustion AA	M7473	Q6	Sample was received above recommended temperature.
			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).
	WG412839	Nickel, 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	Q6	Sample was received above recommended temperature.
			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).

Access Environmental, Inc.

Project ID:

Sample ID: 1 E. SIDE OF LOC CT DR-S1 (3)

ACZ Sample ID: **L33782-01**

Date Sampled: 10/26/16 14:30

Date Received: 10/27/16

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 15:55

Analysis Date: 11/09/16 15:55

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	76		1	*	%	70	130
Bromofluorobenzene (TVH)	460-00-4	74		1	*	%	70	130

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:

Sample ID: 1 E. SIDE OF LOC CT DR-S1 (3)

ACZ Sample ID: **L33782-01**

Date Sampled: 10/26/16 14:30

Date Received: 10/27/16

Sample Matrix: Soil

Diesel Range Organics (C10-C28)

Analysis Method: **M8015D GC/FID**

Extract Method: **M3540**

Workgroup: WG412916

Analyst: mmn

Extract Date: 11/02/16 12:45

Analysis Date: 11/09/16 13:53

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28		7	J	66.7	*	mg/Kg	7	30
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	102.3		66.7	*	%	70	130

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:

Sample ID: 1 E. SIDE OF LOC CT DR-S1 (3)

ACZ Sample ID: **L33782-01**

Date Sampled: 10/26/16 14:30

Date Received: 10/27/16

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 14:26

Analysis Date: 11/10/16 17:03

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	75.5		200	*	%	45	105
Nitrobenzene-d5	4165-60-0	68.7		200	*	%	35	100
Terphenyl-d14	1718-51-0	92.9		200	*	%	30	125

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:

Sample ID: 2 S. SIDE OF LOC CT DR-S2 (3)

ACZ Sample ID: **L33782-02**

Date Sampled: 10/26/16 14:40

Date Received: 10/27/16

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 18:53

Analysis Date: 11/09/16 18:53

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	103.8		1	*	%	70	130
Bromofluorobenzene (TVH)	460-00-4	102.4		1	*	%	70	130

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:

Sample ID: 2 S. SIDE OF LOC CT DR-S2 (3)

ACZ Sample ID: **L33782-02**

Date Sampled: 10/26/16 14:40

Date Received: 10/27/16

Sample Matrix: Soil

Diesel Range Organics (C10-C28)

Analysis Method: **M8015D GC/FID**

Extract Method: **M3540**

Workgroup: WG412916

Analyst: mmn

Extract Date: 11/02/16 12:52

Analysis Date: 11/09/16 14:48

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28			U	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	99.2		100	*	%	70	130

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:
 Sample ID: 2 S. SIDE OF LOC CT DR-S2 (3)

ACZ Sample ID: **L33782-02**
 Date Sampled: 10/26/16 14:40
 Date Received: 10/27/16
 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 14:33
 Analysis Date: 11/10/16 18:10

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	88.1		200	*	%	45	105
Nitrobenzene-d5	4165-60-0	80.9		200	*	%	35	100
Terphenyl-d14	1718-51-0	93.9		200	*	%	30	125

Arizona license number: AZ0102

Access Environmental, Inc.

Project ID:

Sample ID: 3 W. SIDE OF LOC CT DR-S3 (3)

ACZ Sample ID: **L33782-03**

Date Sampled: 10/26/16 14:50

Date Received: 10/27/16

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 16:55

Analysis Date: 11/09/16 16:55

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	100.2		1	*	%	70	130
Bromofluorobenzene (TVH)	460-00-4	99		1	*	%	70	130

Arizona license number: AZ0102

Access Environmental, Inc.

Project ID:

Sample ID: 3 W. SIDE OF LOC CT DR-S3 (3)

ACZ Sample ID: **L33782-03**

Date Sampled: 10/26/16 14:50

Date Received: 10/27/16

Sample Matrix: Soil

Diesel Range Organics (C10-C28)

Analysis Method: **M8015D GC/FID**

Extract Method: **M3540**

Workgroup: WG412916

Analyst: mmn

Extract Date: 11/02/16 13:00

Analysis Date: 11/09/16 15:43

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
TPH C10 to C28			U	100	*	mg/Kg	10	50
Surrogate Recoveries	CAS	% Recovery		Dilution	XQ	Units	LCL	UCL
OTP	84-15-1	96.7		100	*	%	70	130

Arizona license number: **AZ0102**

Access Environmental, Inc.

Project ID:
 Sample ID: 3 W. SIDE OF LOC CT DR-S3 (3)

ACZ Sample ID: **L33782-03**
 Date Sampled: 10/26/16 14:50
 Date Received: 10/27/16
 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 14:41
 Analysis Date: 11/10/16 19:15

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	86.6		200	*	%	45	105
Nitrobenzene-d5	4165-60-0	83.8		200	*	%	35	100
Terphenyl-d14	1718-51-0	95.5		200	*	%	30	125

Arizona license number: AZ0102


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>

Access Environmental, Inc.

ACZ Project ID: **L33782**

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			

Access Environmental, Inc.

ACZ Project ID: **L33782**

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			

Access Environmental, Inc.

ACZ Project ID: **L33782**

Diesel Range Organics (C10-C28)

M8015D GC/FID

WG412916

MS	Sample ID: L33782-01MS		PCN/SCN: OPTPH160810-1				Analyzed: 11/09/16 14:20			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2501.2	7	178.3	mg/Kg	103.0	70	130			
OTP (surr)				%	107.2	70	130			

DUP		Sample ID: L33782-02DUP						Analyzed: 11/09/16 15:15		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28		U	U	mg/Kg				0	20	RA
OTP (surr)				%	99.7	70	130			

LCSS		Sample ID: WG412506LCSS		PCN/SCN: OPTPH160810-1				Analyzed: 11/09/16 12:31		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2501.2		89.8	mg/Kg	108.0	70	130			
OTP (surr)				%	107.6	70	130			

LCSSD		Sample ID: WG412506LCSSD		PCN/SCN: OPTPH160810-1			Analyzed: 11/09/16 12:58			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28	2501.2		88.6	mg/Kg	106.0	70	130	1	20	
OTP (surr)				%	106.1	70	130			

PBS		Sample ID: WG412506PBS						Analyzed: 11/09/16 12:03		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
TPH C10 TO C28			U	mg/Kg		-20	20			
OTP (surr)				%	97.7	70	130			

Access Environmental, Inc.

ACZ Project ID: **L33782**

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				

Access Environmental, Inc.

ACZ Project ID: **L33782**

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: **L33782**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L33782-01	WG413015	*All Compounds*	M8021B/8015D GC/PID/FID	Q6	Sample was received above recommended temperature.
		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.
	WG412916	*All Compounds*	M8015D GC/FID	Q6	Sample was received above recommended temperature.
		TPH C10 to C28	M8015D GC/FID	D1	Sample required dilution due to matrix.
			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	Q6	Sample was received above recommended temperature.
			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).
	WG413015	*All Compounds*	M8021B/8015D GC/PID/FID	Q6	Sample was received above recommended temperature.
		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.
	WG412916	*All Compounds*	M8015D GC/FID	Q6	Sample was received above recommended temperature.
		TPH C10 to C28	M8015D GC/FID	D1	Sample required dilution due to matrix.
			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	Q6	Sample was received above recommended temperature.
			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).
L33782-03	WG413015	*All Compounds*	M8021B/8015D GC/PID/FID	Q6	Sample was received above recommended temperature.

REPAD.15.06.05.01

ACZ Project ID: **L33782**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		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.
WG412916		*All Compounds*	M8015D GC/FID	Q6	Sample was received above recommended temperature.
		TPH C10 to C28	M8015D GC/FID	D1	Sample required dilution due to matrix.
			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	Q6	Sample was received above recommended temperature.
			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).

Access Environmental, Inc.

ACZ Project ID: **L33782**

Soil Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

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

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

Access Environmental, Inc.

ACZ Project ID: L33782

Date Received: 10/27/2016 09:25

Received By: kmo

Date Printed: 10/27/2016

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? The sample matrix was entered per the requested quotation.		X	
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples? A change was made in the ID Line 4 and 7 and Invoice to: section prior to ACZ custody.	X		

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? 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?
4840	11	<=6.0	17	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.

Access Environmental, Inc.

ACZ Project ID: L33782

Date Received: 10/27/2016 09:25

Received By: kmo

Date Printed: 10/27/2016

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).

Report to:

Name: <u>RICK OBERNOCTE</u>	Address:	
Company: <u>ACCESS AMBIENTAL</u>		
E-mail:	Telephone:	

Copy of Report to:

Name: JOHN CARMONY	E-mail: jcar75@msa.com
Company: CARMONY EXPLORATION	Telephone: 303-489-3277 cell.

Invoice to:

Name: <u>ASU</u>		Address:	
Company: <u>ALETS ENVIRONMENTAL</u>			
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: <u>CARMON 2</u>	Sampler's Site Information	State	Zip code	Time Zone
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*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

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

Quote #:						# of Containers												
PO#:																		
Reporting state for compliance testing:																		
Check box if samples include NRC licensed material?																		
SAMPLE IDENTIFICATION		DATE:TIME	Matrix															
(1) E. SIDE OF LOC CT DR-S 1 (3)		10/26 2:30 PM.																
2 S SIDE OF LOC CT DR-S 2 (3)		10/26 2:40 PM.																
3 W SIDE OF CX DR-S 3 (3)		10/26 2:50 PM.																
Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)																	

REMARKS

3 SETS OF SOIL SAMPLES -	ARM - DUNCAN RANCH 11-89-36 #3-4
DR-S1 3 SAMPLES -	PEITROLEUM RESOURCE MANAGEMENT
DR-S2 3 SAMPLES.	
DR S3 3 SAMPLES.	

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

John Cymony

[Signature]

6.276 085

Account: ACCESS/Access Environmental, Inc.
Bottle Order: BO36360

Bill to Account: Bill to ACZ
Ship Date Requested: 10/24/2016
Request Placed at: 10/19/2016 14:59
Service Requested: Pick Up

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.
	12	LABELS	Sample Labels	ACZ supplied labels for sample containers

Quote number: 910-1-15-DAY-W-CR6

15 Day TAT. Soil Samples- COGCC Table 910-1 including Hexa
metals, Chromium

Sample Quantity: 3

ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	Instructions
	1	1 GAL ZIPLOCK	1 GAL	Raw	Fill bag with a homogenous sample.
	1	SJ INORG	8 OZ	Raw	Soil analyses - Completely fill jar with a homogenous sample.
	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