

2/16/2017

INFORMATION ONLY

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 New Mexico Oil Conservation Division District 1 1625 N. French Drive Hobbs, New Mexico 88240

Transmitted via email Tomas 'Doc' Obderling tomas.oberding@state.nm.us

Re: Report of Additional Soil Delineation at the Lea DS State No. 001, Unit E, Section 36, T-19-S, R-34-E, Lea County, New Mexico (1RP-1607)

Mr. Oberding:

Atkins Engineering Associates Inc. (AEA) on behalf of Trainer Partners, LTD (TPL) is pleased to submit this Report of Additional Soil Delineation (Report). This Report summarizes the soil delineation at the Lea DS State No. 001 (Site) located in Unit E, Section 36, Township 19S, Range 34E, N.M.P.M. Lea County, New Mexico.

Field work was conducted under work plan submitted to the New Mexico Oil Conservation Division (NMOCD) on August 15, 2016 and approved via email on September 1, 2016.

General Procedures

AEA personnel and equipment performed the delineation November 28-30, 2016. After constructing a decontamination and soil storage "pit" using 4"x4" and visqueen, and building ramps to access the legacy excavations, AEA began drilling. Where necessary composite mats were used to provide access into the boring locations.

Soil borings were advanced with an Ingersoll Rand 300-A drill rig using 4.25" inside diameter hollow stem augers. Split spoon samples were collected on 5 foot centers with a 140 lb. automatic drop hammer. Samples logged and screened for hydrocarbon contamination using visual/olfactory observations and a calibrated MiniRae 3000 photo-ionization detector. Split spoons were

decontaminated between samples using Alconox, and all drill tooling was steam pressure washed between borings.

Samples were collected in laboratory supplied glass jars with preservatives as necessary. Samples were labeled and stored in coolers on ice until shipped to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico under Chain of Custody procedures.

At the end of the delineation the visqueen was used to wrap the cuttings for storage on site. Soil borings were abandoned with native fill to within 10' of land surface and then filled with hydrated bentonite hole plug.

At the end of the delineation work, AEA technicians surveyed the boring locations with a Topcon GR-5 GPS to obtain horizontal and vertical positions.

Soil borings

A total of 13 soil borings were advanced on the site (Baseline BL-1 and Soil Borings SB-1 through SB-12). Figure 1 shows the boring locations with the previously surveyed excavation contours. The previous excavations created three distinct areas on the site which will be referred to as South east, West Excavation, and North Excavation

During drilling, no indication of hydrocarbon contamination was noted in any split spoon samples. All sample intervals from all borings were sent for analysis of Chlorides using EPA Method 300.0 and the deepest interval of soil borings SB-1 through SB-12 were sent for analysis for Total Petroleum Hydrocarbons (Gasoline, Diesel, Motor Oil Range) using EPA Method 8015M/D and Volatile Organic Compounds (Benzene, Toluene, Ethylbenzene, Total Xylenes using EPA Method 8021B.

Baseline

To help understand the background conditions a baseline boring was advanced north of the three excavations in a readily accessible area. The total depth of this boring was chosen to mirror the total depth of the additional soil borings to be advanced plus the existing depth of the excavations. This boring encountered increasing chloride levels at depth, though the last sampled interval began to show a decline.

Table 1:North Excavation Chloride(mg/Kg) by Boring Interval

	BL-1
Elevation LS (feet)	3,718.87
1-3'	140
4-6'	690
9-11'	970
14-16'	950
19-21'	1,900
24-26'	8,000
28-30'	4,000

Southeast Excavation

Four soil borings (SB-1, SB-2, SB-3, SB-4) were advanced in this excavation. Samples collected from the deepest interval in each of these borings did not report any TPH or VOCs above their respective laboratory detection limits. Samples collected from all intervals were analyzed for Chlorides and the following table summarizes the results.

Table 2: South Excavation Chlorides (mg/Kg) by Boring Interval

SB-1	SB-2	SB-3	SB-4
3,712.92	3,714.80	3,714.78	3,713.78
<30	470	<30	<30
<30	260	<30	<30
<30	43	<30	<30
	3,712.92 <30 <30	3,712.92 3,714.80 <30	3,712.92 3,714.80 3,714.78 <30

Soil boring SB-2 begins 5' below the surrounding land surface (outside the excavation) of 3,720 feet. While there appears to be some residual chlorides around SB-2, the boring achieved vertical delineation to < 250 mg/Kg.

West Excavation

Four soil borings (SB-5, SB-6, SB-7, SB-8) were advanced in this excavation. Samples collected from the deepest interval in each of these borings did not report any TPH or VOCs above their

respective laboratory detection limits. Samples collected from all intervals were analyzed for Chlorides and the following table summarizes the results.

	SB-5	SB-6	SB-7	SB-8
Elevation LS (feet)	3,710.24	3,708.69	3,711.41	3,711.25
4-6'	170	<30	99	<30
9-11'	<30	<30	980	41
14-16'	380	<30	1,900	1,300

Table 3: West Excavation Chloride(mg/Kg) by Boring Interval

North Excavation

Four soil borings (SB-9, SB-10, SB-11, SB-12) were advanced in this excavation. Samples collected from the deepest interval in each of these borings did not report any TPH or VOCs above their respective laboratory detection limits. Samples collected from all intervals were analyzed for Chlorides and the following table summarizes the results.

Table 4:North Excavation Chloride(mg/Kg) by Boring Interval

	SB-9	SB-10	SB-11	SB-12
Elevation LS (feet)	3,712.97	3,710.28	3,711.98	3,712.12
4-6'	4,900	170	170	770
9-11'	11,000	38	1,400	1,800
14-16'	7,300	76	2,800	1,800
19-21'	1,700	n/a	n/a	n/a

Groundwater and Geological Conditions

The site is located approximately 15,000 feet southwest of the Mescalero Ridge and the western edge of the Lea County Underground Water basin which derives water from the Ogallala Aquifer. Water well data is sparse through the area, and the mapping shown in the 1961 Nicholson Jr and Clebsch, Jr *Geology and Ground-Water conditions in Southern Lea County* does not present any shallow regional groundwater at the site.

Water may be found in transit downward in the alluvial, in layers in the Chinle formation, or in the Santa Rosa Sandstone formation below the Chinle. The Santa Rosa Sandstone is the likely source of regional groundwater near the site.

The nearest OSE well record is from an observation well at Marathon Road Water Station located in the SW ¼ NE ¼ SW ¼ SW¼ SE ¼ of Section 25, Township 19S, Range 34E N.M.P.M. This well drilled in 1985 shows a thin layer of sand from 28-31 feet bgs that yielded ½ gpm of water, followed by 81 feet of purple and red clay. Land surface at this location is 3,735 feet and at Lea DS is 3,720 feet. The boring BL-1 was extended 30 feet in depth and no indication of any water or purple/red clay was encountered. The top of the Chinle clay layer is likely <75 feet in the area, and no shallow regional groundwater is expected underneath the site.

The surface soil near the site consists of Kermit soils and dune land. The National Resources Conservation Service (NRCS) considers the top 60 inches to be fine sand with a 0 - 12 percent slope. Soil has very low run off and a high water transmitting capacity. Calcium carbonate in site is considered to be 3%, gypsum 1% with a nonsaline to very slightly saline profile. Minor soil components include Palomas, Pyote, Maljamar, and Wink.

Analysis

In general, the delineation work has identified the current condition of each excavated area. Figure 1 and Figure 2 shows the borings with chloride values and the existing grades/excavation.



Figure 1: Site borings with chlorides (mg/Kg) and grade



Figure 2:Site borings with chlorides (mg/Kg) and grade

The south excavation has been delineated with chlorides mostly reporting less than laboratory detection limits. While there appears to be some residual chlorides around SB-2, the boring achieved vertical delineation to < 250 mg/Kg. Soil boring SB-2 begins 5' below the surrounding land surface (outside the excavation) of 3,720 feet.

The west excavation in the deepest part, SB-6, achieved vertical delineation below 250 mg/Kg. At depth, SB-5 showed a slight increase at 380 mg/Kg, while SB-7 (1,300 mg/Kg) and SB-8 (1,700 mg/Kg) showed increasing chlorides at the deepest interval. Since these borings started 6 feet below the prevailing undisturbed land surface, it would not be practical to excavate chloride impacted soils from these depths.

The middle part of the north excavation near soil boring SB-10 has achieved vertical delineation to 250 mg/Kg. The northeast and southeast areas of this excavation report increasing chlorides at

depth beyond depths that can reasonably be excavated. The western area of the boring reports the highest levels of chlorides seen on the site. This boring was advanced further than the other borings. At depth this boring reported 1,700 mg/Kg. The highest reported interval was 9-11' which would be at an elevation of approximately 3,703 feet.

Lastly, north of the north excavation, the "baseline" boring BL-1 appears to have encountered elevated and increasing chlorides at depth.

Recommendations

No indications of hydrocarbon contamination were found during this delineation event. Large parts of the site have been delineated to depth. Some indication of chloride contamination was identified at depths that are not reasonable to excavate.

AEA recommends closing the excavations to date with compacted native fill to prevent further infiltration of precipitation and allow for ready access on the site.

An additional background boring in the pasture could help establish chlorides at depth. A boring at depth between soil borings SB-11 and SB-12 could document the vertical extent of the chlorides in that area. Additional borings could be advanced near SB-9 to establish the vertical/horizontal extent to the west. Lastly additional borings around BL-1 could establish the horizontal and lateral extent of the apparent elevated chlorides in that area.

We request a meeting with the NMOCD and New Mexico State Land Office to help refine the scope and move the site toward final closure. If you have any questions and to set this meeting up, please contact me at jim.coburn@atkinseng.com and Chris Cortez at chris@atkinseng.com

Sincerely,

Jun Colum

Jim Coburn P.E. Consulting Engineer

Figure 1 - Site Map, Attachment A Boring Logs, Attachment B: HEAL Report

Cc: Olivia Yu via email <u>Olivia.yu@state.nm.us</u> Kristen Lynch via email <u>Kristen.Lynch@state.nm.us</u> Amber Groves via email <u>agroves@slo.state.nm.us</u> Randall Mark Trainer via email <u>randall@trainerpartners.com</u>





At ENGIN 2904 W.	kir EERIN 2nd St.	G ASSOCIATES Roswell, NM 88201		-	g BL- e 1 of			
Client		Partners LTD	Completion Date		npletion Date 11-28-16		Latitude	32.61873243°
Location	Lea DS	S State No. 001	-	ontractor		ingineering Assoc. Inc.	0	-103.52060200°
	near H	obbs, NM	Drilling M			stem auger	Surface Elevation (ft)	
Purpose	Soil Sa	ampling	Boring Di Well Dian		8.675" N/A		TOC Elevation (ft)	N/A
Project		AD.ENV.16	Well Scre		N/A		Total Depth (ft)	30
Depth in feet		Descriptio		LAB TPH DRO/MRO GRO CI mg/Kg	PID ppm-v	Well C	Construction Deta	ail
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-20		Sandy clay, fine to medium grain sand brown, dry		nd/nd nd 1900	50		Native Fi	11
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Bottom of	Boring (ft) = 30 BGS						

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-10		CL	Sandy clay, fine to medium grain sand 5mm-10mm suban gravel, some calich streaks, brown, dry	gular ne	nd/nd nd <30	0.5		× × × × × × × × × × × × × × × × × × ×	1
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		-		Hollow-stem auger		Surface Elevation (ft)	3714.78
		Boring D	iameter	8.675"		TOC Elevation (ft)	N/A
				N/A		Total Depth (ft)	14.5
TPLLE	AD.ENV.16	Well Scre	en	N/A			
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SM						Native Fill	
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-5	SP	Sand with caliche, medium grain sand mixed caliche, red brown, dry	d,	nd/nd nd 170	1.0		Bentonite Seal	
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Depth in feet	nscs	Descriptio	n	LAB TPH DRO/MRO GRO CI mg/Kg	PID ppm-v	Well Con	struction Detai	I
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Client Location	Trainer Lea DS	Partners LTD S State No. 001 obbs, NM	Drilling M	ontractor lethod	Hollow-	Engineering Assoc. Inc.Longitude-103.52053240°-stem augerSurface Elevation (ft)3712.12
Purpose	Soil Sa	mpling	Boring Di Well Dian		8.675" N/A	TOC Elevation (ft)N/ATotal Depth (ft)14.5
Project	TPLLE	AD.ENV.16	Well Scre	en	N/A	
Depth in feet	nscs	Descriptio	'n	LAB TPH DRO/MRO GRO CI mg/Kg	PID ppm-v	Well Construction Detail
-10	SM	Silty sand, very fin grain sand, some & 10mm rounded gra tan, soft, dry Lean clay with cali streaks, red, dry Sandy clay with mi caliche, very fine to	5mm- avel, che che xed	nd/nd nd 770	7.1	Bentonite Seal
-10	CL	grain sand, brown, Lean clay, some ca brown, dry		1800 - <9.9/<49 <4.0 1800	1.3	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Bottom of	Boring (ft) = 14.5 BGS		<u> </u>		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 13, 2016

Christopher Cortez Atkins Engineering Associates 2904 West Second Street Roswell, NM 88201 TEL: (575) 624-2420 FAX (575) 624-2421

RE: Lea DS State No 001

OrderNo.: 1612153

Dear Christopher Cortez:

Hall Environmental Analysis Laboratory received 44 sample(s) on 12/2/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysi	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associates		(Client Samp	le ID: BL	-1 @ 1-3' BGS	
Project: Lea DS State No 001			Collection	Date: 11/	28/2016 7:00:00 AN	M
Lab ID: 1612153-001	Matrix:	SOIL	Received	Date: 12/	2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: LGT
Chloride	140	30	mg/Kg	20	12/6/2016 6:09:51 Pl	M 29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Detec
	S	% Recovery outside of range due to dilution or matrix	W	Sample containe

- ed in the associated Method Blank
- antitation range
- ed below quantitation limits Page 1 of 50

- t In Range
- ection Limit
- ner temperature is out of limit as specified

Hall Environmental Analysi	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associates			Client Samp	le ID: BI	-1 @ 4-6' BGS	
Project: Lea DS State No 001			Collection	Date: 11	/28/2016 7:40:00 AN	1
Lab ID: 1612153-002	Matrix:	SOIL	Received	Date: 12	/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: LGT
Chloride	690	30	mg/Kg	20	12/6/2016 6:47:03 PN	/ 29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte d
	D	Sample Diluted Due to Matrix	Е	Value abo
	Н	Holding times for preparation or analysis exceeded	J	Analyte d
	ND	Not Detected at the Reporting Limit	Р	Sample pl
	R	RPD outside accepted recovery limits	RL	Reporting
	S	% Recovery outside of range due to dilution or matrix	W	Sample co

- detected in the associated Method Blank
- oove quantitation range
- detected below quantitation limits Page 2 of 50

- pH Not In Range
- ng Detection Limit
- container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.			Lab Order 1612153 Date Reported: 12/13	/2016
CLIENT: Atkins Engineering Associates			Client Sample	e ID: BI	L-1 @ 9-11' BGS	
Project: Lea DS State No 001			Collection I	Date: 11	/28/2016 8:00:00 AM	1
Lab ID: 1612153-003	Matrix:	SOIL	Received I	Date: 12	/2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: LGT
Chloride	970	30	mg/Kg	20	12/6/2016 6:59:28 PN	1 29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte dete
	D	Sample Diluted Due to Matrix	Е	Value above
	Н	Holding times for preparation or analysis exceeded	J	Analyte dete
	ND	Not Detected at the Reporting Limit	Р	Sample pH N
	R	RPD outside accepted recovery limits	RL	Reporting De
	S	% Recovery outside of range due to dilution or matrix	W	Sample conta

- tected in the associated Method Blank
- ve quantitation range
- tected below quantitation limits Page 3 of 50

- Not In Range
- Detection Limit
- tainer temperature is out of limit as specified

Hall Environmental Analys	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associate	es		Client Samp	le ID: BI	1 @ 14-16' BGS	
Project: Lea DS State No 001			Collection	Date: 11,	/28/2016 8:30:00 AM	[
Lab ID: 1612153-004	Matrix:	SOIL	Received	Date: 12,	/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: LGT
Chloride	950	30	mg/Kg	20	12/6/2016 7:11:52 PM	29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qu
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Dete
	S	% Recovery outside of range due to dilution or matrix	W	Sample contain

- ted in the associated Method Blank
- quantitation range
- tted below quantitation limits Page 4 of 50

- ot In Range
- tection Limit
- iner temperature is out of limit as specified

Hall Environmental Analys		Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associate	es		Client Samp	e ID: BL-1	@ 19-21' BGS	
Project: Lea DS State No 001			Collection 1	Date: 11/28/	2016 9:15:00 AM	
Lab ID: 1612153-005	Matrix:	SOIL	Received	Date: 12/2/2	016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF Da	te Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	t: MRA
Chloride	1900	75	mg/Kg	50 12	/7/2016 4:14:32 PM	29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detecte
	D	Sample Diluted Due to Matrix	Е	Value above qu
	Н	Holding times for preparation or analysis exceeded	J	Analyte detecte
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Dete
	S	% Recovery outside of range due to dilution or matrix	W	Sample contain

- ted in the associated Method Blank
- uantitation range
- ted below quantitation limits Page 5 of 50

- ot In Range
- ection Limit
- ner temperature is out of limit as specified

Hall Environmental Analysis	Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associates			Client Sampl	e ID: BL-1 @ 24-26' BGS	
Project: Lea DS State No 001			Collection 1	Date: 11/28/2016 9:50:00 AM	[
Lab ID: 1612153-006	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	d Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	st: MRA
Chloride	8000	300	mg/Kg	200 12/7/2016 4:26:57 PN	29019

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qu
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH No
	R	RPD outside accepted recovery limits	RL	Reporting Dete
	S	% Recovery outside of range due to dilution or matrix	W	Sample contain

- ted in the associated Method Blank
- quantitation range
- ted below quantitation limits Page 6 of 50

- ot In Range
- tection Limit
- iner temperature is out of limit as specified

Hall Environmental Analy	sis Labora	Lab Order 1612153 Date Reported: 12/13/2016			
CLIENT: Atkins Engineering Associat	es		Client Samp	e ID: BL-1 @ 28-30' BGS	
Project: Lea DS State No 001			Collection 2	Date: 11/28/2016 11:15:00 A	M
Lab ID: 1612153-007	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	ĺ
Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	yst: MRA
Chloride	4000	150	mg/Kg	100 12/7/2016 4:39:21 P	M 29033

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
	D	Sample Diluted Due to Matrix	Е	Value a
	Н	Holding times for preparation or analysis exceeded	J	Analyte
	ND	Not Detected at the Reporting Limit	Р	Sample
	R	RPD outside accepted recovery limits	RL	Reportin
	S	% Recovery outside of range due to dilution or matrix	W	Sample

- te detected in the associated Method Blank
- above quantitation range
- te detected below quantitation limits Page 7 of 50

- e pH Not In Range
- ting Detection Limit
- e container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.	Lab Order 1612153 Date Reported: 12/13/2016			
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-1 @ 4-6' BGS		
Project: Lea DS State No 001			Collection	Date: 11/28/2016 12:15:00 PM		
Lab ID: 1612153-008	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM		
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch		
EPA METHOD 300.0: ANIONS				Analyst: LGT		
Chloride	ND	30	mg/Kg	20 12/6/2016 9:15:59 PM 29033		

Qualifiers	*	Value exceeds Maximum Contaminant Level.	В	Analyte de
	D	Sample Diluted Due to Matrix	Е	Value abo
	Н	Holding times for preparation or analysis exceeded	J	Analyte de
	ND	Not Detected at the Reporting Limit	Р	Sample pH
	R	RPD outside accepted recovery limits	RL	Reporting
	S	% Recovery outside of range due to dilution or matrix	W	Sample co

- detected in the associated Method Blank
- ove quantitation range
- detected below quantitation limits Page 8 of 50

- H Not In Range
- g Detection Limit
- container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-1 @ 9-11' BGS
Project: Lea DS State No 001			Collection 2	Date: 11/28/2016 1:05:00 PM
Lab ID: 1612153-009	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batcl
EPA METHOD 300.0: ANIONS				Analyst: LGT
Chloride	ND	30	mg/Kg	20 12/6/2016 9:53:13 PM 2903

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Detec
	S	% Recovery outside of range due to dilution or matrix	W	Sample containe

- ted in the associated Method Blank
- uantitation range
- ted below quantitation limits Page 9 of 50

- ot In Range
- ection Limit
- ner temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-1 @ 14-16' BGS Collection Date: 11/28/2016 1:30:00 PM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-010	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analys	t: LGT	
Chloride	ND	30	mg/Kg	20	12/6/2016 10:05:37 PM	1 29033	
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: TOM	
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/12/2016 2:05:54 PM	1 29055	
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/12/2016 2:05:54 PM	1 29055	
Surr: DNOP	94.6	70-130	%Rec	1	12/12/2016 2:05:54 PM	1 29055	
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB	
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/7/2016 3:30:56 PM	SG3922	
Surr: BFB	87.5	68.3-144	%Rec	1	12/7/2016 3:30:56 PM	SG3922	
EPA METHOD 8021B: VOLATILES					Analys	t: NSB	
Benzene	ND	0.018	mg/Kg	1	12/7/2016 3:30:56 PM	R39221	
Toluene	ND	0.036	mg/Kg	1	12/7/2016 3:30:56 PM	R39221	
Ethylbenzene	ND	0.036	mg/Kg	1	12/7/2016 3:30:56 PM	R39221	
Xylenes, Total	ND	0.073	mg/Kg	1	12/7/2016 3:30:56 PM	R39221	
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	12/7/2016 3:30:56 PM	R39221	

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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
R		RPD outside accepted recovery limits
	S	% Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-2 @ 4-6' BGS
Project: Lea DS State No 001			Collection 3	Date: 11/28/2016 2:50:00 PM
Lab ID: 1612153-011	Matrix: S	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	al Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA
Chloride	470	30	mg/Kg	20 12/7/2016 1:45:25 PM 29033

o				
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above quar
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not Ir
	R	RPD outside accepted recovery limits	RL	Reporting Detecti
	S	% Recovery outside of range due to dilution or matrix	W	Sample container

- d in the associated Method Blank
- antitation range
- d below quantitation limits Page 11 of 50

- In Range
- ction Limit
- er temperature is out of limit as specified ŀ

Hall Environmental Analy	sis Labora	Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associat	tes		Client Samp	le ID: SB	-2 @ 9-11' BGS	
Project: Lea DS State No 001			Collection	Date: 11/	28/2016 3:10:00 PM	[
Lab ID: 1612153-012	Matrix:	SOIL	Received	Date: 12/	2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	260	30	mg/Kg	20	12/7/2016 1:57:49 PM	1 29033

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Detec
	S	% Recovery outside of range due to dilution or matrix	W	Sample containe

- ed in the associated Method Blank
- uantitation range
- ed below quantitation limits Page 12 of 50

- t In Range
- ection Limit
- ner temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-2 @ 14-16' BGS Collection Date: 11/28/2016 3:50:00 PM Provinged Data: 12/2/2016 0.15.00 AM

Lab ID: 1612153-013	Matrix: SOIL		Received Date: 12/2/2016 9:15:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	43	30	mg/Kg	20	12/7/2016 2:10:14 PM	29033
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	t: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/12/2016 2:33:34 PM	29055
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/12/2016 2:33:34 PM	29055
Surr: DNOP	73.0	70-130	%Rec	1	12/12/2016 2:33:34 PN	29055
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/7/2016 4:44:21 PM	SG3922
Surr: BFB	86.7	68.3-144	%Rec	1	12/7/2016 4:44:21 PM	SG3922
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.018	mg/Kg	1	12/7/2016 4:44:21 PM	R39221
Toluene	ND	0.036	mg/Kg	1	12/7/2016 4:44:21 PM	R39221
Ethylbenzene	ND	0.036	mg/Kg	1	12/7/2016 4:44:21 PM	R39221
Xylenes, Total	ND	0.073	mg/Kg	1	12/7/2016 4:44:21 PM	R39221
Surr: 4-Bromofluorobenzene	98.0	80-120	%Rec	1	12/7/2016 4:44:21 PM	R39221

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

Q	ualifiers:	*	Value exceeds Maximum Contaminant Level.	В	A
		D	Sample Diluted Due to Matrix	Е	١
		Н	Holding times for preparation or analysis exceeded	J	A
		ND	Not Detected at the Reporting Limit	Р	S
		R	RPD outside accepted recovery limits	RL	F
		S	% Recovery outside of range due to dilution or matrix	W	S

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 13 of 50
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified
| Hall Environmental Analysis | tory, Inc. | Lab Order 1612153
Date Reported: 12/13/2016 | | | | |
|---------------------------------------|------------|--|-------------|--------------------------------|--|--|
| CLIENT: Atkins Engineering Associates | | | Client Samp | le ID: SB-3 @ 4-6' BGS | | |
| Project: Lea DS State No 001 | | | Collection | Date: 11/28/2016 4:35:00 PM | | |
| Lab ID: 1612153-014 | Matrix: | SOIL | Received | Date: 12/2/2016 9:15:00 AM | | |
| Analyses | Result | PQL Qua | l Units | DF Date Analyzed Batch | | |
| EPA METHOD 300.0: ANIONS | | | | Analyst: LGT | | |
| Chloride | ND | 30 | mg/Kg | 20 12/6/2016 10:55:16 PM 29033 | | |

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte dete
	D	Sample Diluted Due to Matrix	Е	Value above
	Н	Holding times for preparation or analysis exceeded	J	Analyte dete
	ND	Not Detected at the Reporting Limit	Р	Sample pH
	R	RPD outside accepted recovery limits	RL	Reporting D
	S	% Recovery outside of range due to dilution or matrix	W	Sample con

- etected in the associated Method Blank
- ve quantitation range
- etected below quantitation limitsPage 14 of 50

- I Not In Range
- Detection Limit
- ntainer temperature is out of limit as specified

Hall Environmental Analysis	Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associates		(Client Samp	le ID: SB-3 @ 9-11' BGS	
Project: Lea DS State No 001			Collection	Date: 11/29/2016 7:00:00 AM	
Lab ID: 1612153-015	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	Units	DF Date Analyzed Batc	
EPA METHOD 300.0: ANIONS				Analyst: LGT	
Chloride	ND	30	mg/Kg	20 12/6/2016 11:07:40 PM 2903	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above quar
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not I
	R	RPD outside accepted recovery limits	RL	Reporting Detect
	S	% Recovery outside of range due to dilution or matrix	W	Sample container

- ed in the associated Method Blank
- antitation range
- below quantitation limits Page 15 of 50

- In Range
- ction Limit
- er temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-3 @ 14-16' BGS Collection Date: 11/29/2016 7:40:00 AM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-016	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	LGT		
Chloride	ND	30	mg/Kg	20	12/6/2016 11:44:54 PM	29033		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	том		
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/12/2016 3:44:54 PM	29055		
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/12/2016 3:44:54 PM	29055		
Surr: DNOP	113	70-130	%Rec	1	12/12/2016 3:44:54 PM	29055		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	2.8	mg/Kg	1	12/7/2016 5:57:54 PM	SG3922		
Surr: BFB	91.2	68.3-144	%Rec	1	12/7/2016 5:57:54 PM	SG3922		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.014	mg/Kg	1	12/7/2016 5:57:54 PM	R39221		
Toluene	ND	0.028	mg/Kg	1	12/7/2016 5:57:54 PM	R39221		
Ethylbenzene	ND	0.028	mg/Kg	1	12/7/2016 5:57:54 PM	R39221		
Xylenes, Total	ND	0.055	mg/Kg	1	12/7/2016 5:57:54 PM	R39221		
Surr: 4-Bromofluorobenzene	107	80-120	%Rec	1	12/7/2016 5:57:54 PM	R39221		

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

Keter to the QC Summary report and sumple togin checknist for hugged QC data and preservation mile

- * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix

Oualifiers:

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 16 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-4 @ 4-6' BGS				
Project: Lea DS State No 001			Collection 2	Date: 11/29/2016 8:30:00 AM				
Lab ID: 1612153-017	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch				
EPA METHOD 300.0: ANIONS				Analyst: LGT				
Chloride	ND	30	mg/Kg	20 12/6/2016 11:57:19 PM 29033				

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyt
	D	Sample Diluted Due to Matrix	Е	Value
	Н	Holding times for preparation or analysis exceeded	J	Analyt
	ND	Not Detected at the Reporting Limit	Р	Sample
	R	RPD outside accepted recovery limits	RL	Report
	S	% Recovery outside of range due to dilution or matrix	W	Sample

- yte detected in the associated Method Blank
- above quantitation range
- yte detected below quantitation limit Page 17 of 50

- ole pH Not In Range
- rting Detection Limit
- ble container temperature is out of limit as specified

Hall Environmental Analysis	Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associates		(Client Samp	le ID: SB-4 @ 9-11' BGS	=
Project: Lea DS State No 001			Collection	Date: 11/29/2016 8:50:00 AM	
Lab ID: 1612153-018	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	Units	DF Date Analyzed Bat	ch
EPA METHOD 300.0: ANIONS				Analyst: LG	т
Chloride	ND	30	mg/Kg	20 12/7/2016 12:09:44 AM 290	133

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Detec
	S	% Recovery outside of range due to dilution or matrix	W	Sample containe

- ed in the associated Method Blank
- uantitation range
- ed below quantitation limits Page 18 of 50

- ot In Range
- ection Limit
- ner temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-4 @ 14-16' BGS Collection Date: 11/29/2016 9:20:00 AM Provised Data: 12/2/2016 0:15:00 AM

Lab ID: 1612153-019	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analys	: LGT		
Chloride	ND	30	mg/Kg	20	12/7/2016 12:22:08 AM	29033		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: TOM		
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/12/2016 3:28:33 PM	29055		
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	12/12/2016 3:28:33 PM	29055		
Surr: DNOP	71.8	70-130	%Rec	1	12/12/2016 3:28:33 PM	29055		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	II NSB		
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	12/7/2016 6:22:25 PM	SG3922		
Surr: BFB	85.3	68.3-144	%Rec	1	12/7/2016 6:22:25 PM	SG3922		
EPA METHOD 8021B: VOLATILES					Analys	II NSB		
Benzene	ND	0.019	mg/Kg	1	12/7/2016 6:22:25 PM	R39221		
Toluene	ND	0.038	mg/Kg	1	12/7/2016 6:22:25 PM	R39221		
Ethylbenzene	ND	0.038	mg/Kg	1	12/7/2016 6:22:25 PM	R39221		
Xylenes, Total	ND	0.075	mg/Kg	1	12/7/2016 6:22:25 PM	R39221		
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	12/7/2016 6:22:25 PM	R39221		

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits
	S	% Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 19 of 50 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Hall Environmental Analy	sis Labora	Lab Order 1612153 Date Reported: 12/13/2016				
CLIENT: Atkins Engineering Associat	tes		Client Sampl	e ID: SB-5 @ 4-	6' BGS	
Project: Lea DS State No 001			Collection 3	Date: 11/29/2016	5 10:45:00 AN	M
Lab ID: 1612153-020	Matrix:	SOIL	Received	Date: 12/2/2016	9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF Date A	nalyzed	Batch
EPA METHOD 300.0: ANIONS					Analys	st: MRA
Chloride	170	30	mg/Kg	20 12/7/20	016 2:22:39 PM	29033

Qua	lifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
		D	Sample Diluted Due to Matrix	Е	Value al
		Н	Holding times for preparation or analysis exceeded	J	Analyte
		ND	Not Detected at the Reporting Limit	Р	Sample
		R	RPD outside accepted recovery limits	RL	Reportir
		S	% Recovery outside of range due to dilution or matrix	W	Sample

- te detected in the associated Method Blank
- above quantitation range
- te detected below quantitation limit. Page 20 of 50
- e pH Not In Range
- ting Detection Limit
- e container temperature is out of limit as specified

Analytical Report Lab Order 1612152

Hall Environmental Analysis	s Labora	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates		(Client Samp	le ID: SB-5 @ 9-11' BGS
Project: Lea DS State No 001			Collection	Date: 11/29/2016 11:20:00 AM
Lab ID: 1612153-021	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA
Chloride	ND	30	mg/Kg	20 12/7/2016 2:35:04 PM 29033

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qua
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not I
	R	RPD outside accepted recovery limits	RL	Reporting Detect
	S	% Recovery outside of range due to dilution or matrix	W	Sample container

- ed in the associated Method Blank
- antitation range
- ed below quantitation limits Page 21 of 50

- In Range
- ction Limit
- er temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-5 @ 14-16' BGS Collection Date: 11/29/2016 11:55:00 AM Previved Data: 12/2/2016 0.15.00 AM

Lab ID: 1612153-022	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch					
EPA METHOD 300.0: ANIONS					Analyst	MRA					
Chloride	380	30	mg/Kg	20	12/7/2016 2:47:28 PM	29033					
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	том					
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/12/2016 4:15:39 PM	29055					
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/12/2016 4:15:39 PM	29055					
Surr: DNOP	73.7	70-130	%Rec	1	12/12/2016 4:15:39 PM	29055					
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB					
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/7/2016 6:46:57 PM	SG3922					
Surr: BFB	87.1	68.3-144	%Rec	1	12/7/2016 6:46:57 PM	SG3922					
EPA METHOD 8021B: VOLATILES					Analyst	: NSB					
Benzene	ND	0.019	mg/Kg	1	12/7/2016 6:46:57 PM	R39221					
Toluene	ND	0.039	mg/Kg	1	12/7/2016 6:46:57 PM	R39221					
Ethylbenzene	ND	0.039	mg/Kg	1	12/7/2016 6:46:57 PM	R39221					
Xylenes, Total	ND	0.077	mg/Kg	1	12/7/2016 6:46:57 PM	R39221					
Surr: 4-Bromofluorobenzene	99.5	80-120	%Rec	1	12/7/2016 6:46:57 PM	R39221					

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

			`		1	··· F ·	0		- 80				
Oualifiers	:	*	Value exce	eds Maxi	imum Conta	minant I	Level.		В	Analyte dete	cted in the a	ssociated	Metho

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 22 of 50 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Sampl	le ID: SB-6 @ 4-6' BGS
Project: Lea DS State No 001			Collection 3	Date: 11/29/2016 12:35:00 PM
Lab ID: 1612153-023	Matrix: S	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batcl
EPA METHOD 300.0: ANIONS				Analyst: LGT
Chloride	ND	30	mg/Kg	20 12/7/2016 1:11:46 AM 29033

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected
	D	Sample Diluted Due to Matrix	Е	Value above qu
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not
	R	RPD outside accepted recovery limits	RL	Reporting Dete
	S	% Recovery outside of range due to dilution or matrix	W	Sample contain

- ted in the associated Method Blank
- quantitation range
- ted below quantitation limits Page 23 of 50

- ot In Range
- tection Limit
- iner temperature is out of limit as specified

Hall Environmental Analysis	s Labora	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-6 @ 9-11' BGS
Project: Lea DS State No 001			Collection	Date: 11/29/2016 12:55:00 PM
Lab ID: 1612153-024	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: LGT
Chloride	ND	30	mg/Kg	20 12/7/2016 1:24:11 AM 29033

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detect
	D	Sample Diluted Due to Matrix	Е	Value above q
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected
	ND	Not Detected at the Reporting Limit	Р	Sample pH No
	R	RPD outside accepted recovery limits	RL	Reporting Dete
	S	% Recovery outside of range due to dilution or matrix	W	Sample contain

- cted in the associated Method Blank
- quantitation range
- cted below quantitation limits Page 24 of 50

- lot In Range
- etection Limit
- ainer temperature is out of limit as specified

Analytical Report Lab Order 1612153

Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-6 @ 14-16' BGS Collection Date: 11/29/2016 1:15:00 PM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-025	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch					
EPA METHOD 300.0: ANIONS					Analyst	: MRA					
Chloride	ND	30	mg/Kg	20	12/7/2016 1:45:38 PM	29050					
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	t: TOM					
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/7/2016 3:11:43 PM	29025					
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/7/2016 3:11:43 PM	29025					
Surr: DNOP	90.8	70-130	%Rec	1	12/7/2016 3:11:43 PM	29025					
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB					
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/7/2016 8:48:45 PM	SG3922					
Surr: BFB	86.3	68.3-144	%Rec	1	12/7/2016 8:48:45 PM	SG3922					
EPA METHOD 8021B: VOLATILES					Analyst	II NSB					
Benzene	ND	0.020	mg/Kg	1	12/7/2016 8:48:45 PM	R39221					
Toluene	ND	0.039	mg/Kg	1	12/7/2016 8:48:45 PM	R39221					
Ethylbenzene	ND	0.039	mg/Kg	1	12/7/2016 8:48:45 PM	R39221					
Xylenes, Total	ND	0.078	mg/Kg	1	12/7/2016 8:48:45 PM	R39221					
Surr: 4-Bromofluorobenzene	98.8	80-120	%Rec	1	12/7/2016 8:48:45 PM	R39221					

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

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- * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix

Oualifiers:

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 25 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	ory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-7 @ 4-6' BGS
Project: Lea DS State No 001			Collection 2	Date: 11/29/2016 2:00:00 PM
Lab ID: 1612153-026	Matrix: S	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA
Chloride	99	30	mg/Kg	20 12/7/2016 2:22:51 PM 29050

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analy
	D	Sample Diluted Due to Matrix	Е	Value
	Н	Holding times for preparation or analysis exceeded	J	Analy
	ND	Not Detected at the Reporting Limit	Р	Samp
	R	RPD outside accepted recovery limits	RL	Repor
	S	% Recovery outside of range due to dilution or matrix	W	Samp

- lyte detected in the associated Method Blank
- e above quantitation range
- lyte detected below quantitation limits Page 26 of 50

- ple pH Not In Range
- orting Detection Limit
- ple container temperature is out of limit as specified

Hall Environmental Analys	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associate	s		Client Samp	le ID: SB	-7 @ 9-11' BGS	
Project: Lea DS State No 001			Collection	Date: 11,	/29/2016 2:20:00 PM	1
Lab ID: 1612153-027	Matrix:	SOIL	Received	Date: 12,	/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	vst: MRA
Chloride	980	30	mg/Kg	20	12/7/2016 2:35:15 PM	A 29050

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
	D	Sample Diluted Due to Matrix	Е	Value a
	Н	Holding times for preparation or analysis exceeded	J	Analyte
	ND	Not Detected at the Reporting Limit	Р	Sample
	R	RPD outside accepted recovery limits	RL	Reportin
	S	% Recovery outside of range due to dilution or matrix	W	Sample

- te detected in the associated Method Blank
- above quantitation range
- te detected below quantitation limit. Page 27 of 50

- e pH Not In Range
- ting Detection Limit
- e container temperature is out of limit as specified

Analytical Report
Lab Order 1612153

Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-7 @ 14-16' BGS Collection Date: 11/29/2016 2:55:00 PM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-028	Matrix:	Received	Received Date: 12/2/2016 9:15:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	LGT
Chloride	1900	75	mg/Kg	50	12/8/2016 4:46:47 PM	29050
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	ТОМ
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/7/2016 3:33:19 PM	29025
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/7/2016 3:33:19 PM	29025
Surr: DNOP	88.9	70-130	%Rec	1	12/7/2016 3:33:19 PM	29025
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	12/7/2016 9:13:06 PM	SG3922
Surr: BFB	88.8	68.3-144	%Rec	1	12/7/2016 9:13:06 PM	SG3922 ⁻
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.022	mg/Kg	1	12/7/2016 9:13:06 PM	R39221
Toluene	ND	0.044	mg/Kg	1	12/7/2016 9:13:06 PM	R39221
Ethylbenzene	ND	0.044	mg/Kg	1	12/7/2016 9:13:06 PM	R39221
Xylenes, Total	ND	0.089	mg/Kg	1	12/7/2016 9:13:06 PM	R39221
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	12/7/2016 9:13:06 PM	R39221

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

Refer to the QC building report and sample togin checkinst for hagged QC data and preservation into

- Qualifiers:
 *
 Value exceeds Maximum Contaminant Level.

 D
 Sample Diluted Due to Matrix

 H
 Holding times for preparation or analysis exceeded
 - H Holding times for preparation of analysis excee
 - ND Not Detected at the Reporting Limit
 - R RPD outside accepted recovery limits
 - S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 28 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-8 @ 4-6' BGS
Project: Lea DS State No 001			Collection	Date: 11/29/2016 3:30:00 PM
Lab ID: 1612153-029	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA
Chloride	ND	30	mg/Kg	20 12/7/2016 3:24:54 PM 29050

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detect
	D	Sample Diluted Due to Matrix	Е	Value above q
	Н	Holding times for preparation or analysis exceeded	J	Analyte detect
	ND	Not Detected at the Reporting Limit	Р	Sample pH No
	R	RPD outside accepted recovery limits	RL	Reporting Det
	S	% Recovery outside of range due to dilution or matrix	W	Sample contai

- cted in the associated Method Blank
- quantitation range
- cted below quantitation limit Page 29 of 50

- Not In Range
- etection Limit
- ainer temperature is out of limit as specified

Hall Environmental Analys	Lab Order 1612153 Date Reported: 12/13/2016					
CLIENT: Atkins Engineering Associate	S		Client Samp	le ID: SE	8-8 @ 9-11' BGS	
Project: Lea DS State No 001			Collection	Date: 11.	/29/2016 3:55:00 PM	1
Lab ID: 1612153-030	Matrix:	SOIL	Received	Date: 12	/2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: MRA
Chloride	41	30	mg/Kg	20	12/7/2016 3:37:19 PM	VI 29050

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected is
	D	Sample Diluted Due to Matrix	Е	Value above quant
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected b
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In
	R	RPD outside accepted recovery limits	RL	Reporting Detection
	S	% Recovery outside of range due to dilution or matrix	W	Sample container

- in the associated Method Blank
- ntitation range
- l below quantitation limits Page 30 of 50

- In Range
- tion Limit
- r temperature is out of limit as specified

Analytical Report Lab Order 1612153

Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-8 @ 14-16' BGS Collection Date: 11/29/2016 4:30:00 PM Previved Data: 12/2/2016 0.15.00 AM

Lab ID: 1612153-031	Matrix:	Received	Received Date: 12/2/2016 9:15:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst	LGT
Chloride	1300	75	mg/Kg	50	12/8/2016 4:59:12 PM	29050
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	: ТОМ
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	12/7/2016 3:54:53 PM	29025
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/7/2016 3:54:53 PM	29025
Surr: DNOP	85.9	70-130	%Rec	1	12/7/2016 3:54:53 PM	29025
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/7/2016 9:37:25 PM	SG3922 [,]
Surr: BFB	88.0	68.3-144	%Rec	1	12/7/2016 9:37:25 PM	SG3922 ²
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.020	mg/Kg	1	12/7/2016 9:37:25 PM	R39221
Toluene	ND	0.039	mg/Kg	1	12/7/2016 9:37:25 PM	R39221
Ethylbenzene	ND	0.039	mg/Kg	1	12/7/2016 9:37:25 PM	R39221
Xylenes, Total	ND	0.078	mg/Kg	1	12/7/2016 9:37:25 PM	R39221
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	12/7/2016 9:37:25 PM	R39221

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	
	D	Sample Diluted Due to Matrix	
	Н	Holding times for preparation or analysis exceeded	
	ND	Not Detected at the Reporting Limit	
	R	RPD outside accepted recovery limits	
	S	% Recovery outside of range due to dilution or matrix	
	R	RPD outside accepted recovery limits	

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 31 of 50 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13	/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-9 @ 4-6' BGS	
Project: Lea DS State No 001			Collection	Date: 11/30/2016 7:50:00 AN	1
Lab ID: 1612153-032	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	4900	300	mg/Kg	200 12/8/2016 5:11:36 PM	/ 29050

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte deter
	D	Sample Diluted Due to Matrix	Е	Value above
	Н	Holding times for preparation or analysis exceeded	J	Analyte deter
	ND	Not Detected at the Reporting Limit	Р	Sample pH N
	R	RPD outside accepted recovery limits	RL	Reporting De
	S	% Recovery outside of range due to dilution or matrix	W	Sample conta

- tected in the associated Method Blank
- ve quantitation range
- tected below quantitation limits Page 32 of 50

- Not In Range
- Detection Limit
- tainer temperature is out of limit as specified

Hall Environmental Analysis	s Labora	tory, Inc.		Lab Order 1612153 Date Reported: 12/13	/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-9 @ 9-11' BGS	
Project: Lea DS State No 001			Collection	Date: 11/30/2016 8:15:00 AN	1
Lab ID: 1612153-033	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	st: LGT
Chloride	11000	750	mg/Kg	500 12/8/2016 6:38:26 PM	1 29065

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in
	D	Sample Diluted Due to Matrix	Е	Value above quant
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected b
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In
	R	RPD outside accepted recovery limits	RL	Reporting Detection
	S	% Recovery outside of range due to dilution or matrix	W	Sample container t

- in the associated Method Blank
- ntitation range
- below quantitation limits Page 33 of 50

- n Range
- ion Limit
- temperature is out of limit as specified

Hall Environmental Analysi	s Labora	tory, Inc.		Lab Order 1612153 Date Reported: 12/13	3/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-9 @ 14-16' BGS	
Project: Lea DS State No 001			Collection	Date: 11/30/2016 8:55:00 AM	Ν
Lab ID: 1612153-034	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qu	al Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analy	/st: LGT
Chloride	7300	300	mg/Kg	200 12/8/2016 5:24:00 PM	M 29065

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
	D	Sample Diluted Due to Matrix	E
	Н	Holding times for preparation or analysis exceeded	J
	ND	Not Detected at the Reporting Limit	Р
	R	RPD outside accepted recovery limits	RL
	S	% Recovery outside of range due to dilution or matrix	W

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 34 of 50

- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-9 @ 19-21' BGS Collection Date: 11/30/2016 10:15:00 AM Provised Data: 12/2/2016 0:15:00 AM

Lab ID: 1612153-035	Matrix: SOIL		Received	Received Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	LGT		
Chloride	1700	75	mg/Kg	50	12/8/2016 6:50:50 PM	29065		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	: ТОМ		
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	12/7/2016 4:16:26 PM	29025		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/7/2016 4:16:26 PM	29025		
Surr: DNOP	88.2	70-130	%Rec	1	12/7/2016 4:16:26 PM	29025		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/7/2016 10:01:46 PM	SG3922		
Surr: BFB	91.8	68.3-144	%Rec	1	12/7/2016 10:01:46 PM	SG3922		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.020	mg/Kg	1	12/7/2016 10:01:46 PM	R39221		
Toluene	ND	0.039	mg/Kg	1	12/7/2016 10:01:46 PM	R39221		
Ethylbenzene	ND	0.039	mg/Kg	1	12/7/2016 10:01:46 PM	R39221		
Xylenes, Total	ND	0.078	mg/Kg	1	12/7/2016 10:01:46 PM	R39221		
Surr: 4-Bromofluorobenzene	107	80-120	%Rec	1	12/7/2016 10:01:46 PM	R39221		

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
	D	Sample Diluted Due to Matrix	Е
	Н	Holding times for preparation or analysis exceeded	J
	ND	Not Detected at the Reporting Limit	Р
	R	RPD outside accepted recovery limits	RL
	S	% Recovery outside of range due to dilution or matrix	W

- Analyte detected in the associated Method Blank B
- Ξ Value above quantitation range
- Analyte detected below quantitation limits Page 35 of 50
- Sample pH Not In Range
- Reporting Detection Limit Ľ
- Sample container temperature is out of limit as specified V

Hall Environmental Analysis	s Laborat	tory, Inc.			Lab Order 1612153 Date Reported: 12/1	3/2016
CLIENT: Atkins Engineering Associates			Client Sample	e ID: SE	3-10 @ 4-6' BGS	
Project: Lea DS State No 001			Collection I	Date: 11	/30/2016 11:40:00 Å	AM
Lab ID: 1612153-036	Matrix:	SOIL	Received I	Date: 12	/2/2016 9:15:00 AM	ſ
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Anal	yst: MRA
Chloride	170	30	mg/Kg	20	12/7/2016 4:51:35 P	M 29065

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 36 of 50
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Laborat	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016	
CLIENT: Atkins Engineering Associates			Client Sampl	le ID: SB-10 @ 9-11' BGS	
Project: Lea DS State No 001			Collection 1	Date: 11/30/2016 11:50:00 AM	
Lab ID: 1612153-037	Matrix: S	SOIL	Received	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	d Units	DF Date Analyzed Bat	ch
EPA METHOD 300.0: ANIONS				Analyst: MR	A
Chloride	38	30	mg/Kg	20 12/7/2016 5:03:59 PM 290	65

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detec
	D	Sample Diluted Due to Matrix	Е	Value above of
	Н	Holding times for preparation or analysis exceeded	J	Analyte detec
	ND	Not Detected at the Reporting Limit	Р	Sample pH N
	R	RPD outside accepted recovery limits	RL	Reporting De
	S	% Recovery outside of range due to dilution or matrix	W	Sample conta

- ected in the associated Method Blank
- e quantitation range
- ected below quantitation limitsPage 37 of 50

- Not In Range
- etection Limit
- ainer temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-10 @ 14-16' BGS Collection Date: 11/30/2016 12:15:00 PM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-038	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	MRA		
Chloride	76	30	mg/Kg	20	12/7/2016 5:16:24 PM	29065		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	: ТОМ		
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	12/7/2016 4:38:13 PM	29025		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/7/2016 4:38:13 PM	29025		
Surr: DNOP	75.0	70-130	%Rec	1	12/7/2016 4:38:13 PM	29025		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/7/2016 10:26:01 PM	SG3922		
Surr: BFB	88.6	68.3-144	%Rec	1	12/7/2016 10:26:01 PM	SG3922		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.018	mg/Kg	1	12/7/2016 10:26:01 PM	R39221		
Toluene	ND	0.036	mg/Kg	1	12/7/2016 10:26:01 PM	R39221		
Ethylbenzene	ND	0.036	mg/Kg	1	12/7/2016 10:26:01 PM	R39221		
Xylenes, Total	ND	0.073	mg/Kg	1	12/7/2016 10:26:01 PM	R39221		
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	12/7/2016 10:26:01 PM	R39221		

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

Refer to the QC building report and sample rogin encounst for magged QC data and preservation in

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Oualifiers:

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 38 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis	s Labora	tory, Inc.		Lab Order 1612153 Date Reported: 12/13/2016
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-11 @ 4-6' BGS
Project: Lea DS State No 001			Collection	Date: 11/30/2016 1:35:00 PM
Lab ID: 1612153-039	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS				Analyst: MRA
Chloride	170	30	mg/Kg	20 12/7/2016 5:28:48 PM 29065

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in
	D	Sample Diluted Due to Matrix	Е	Value above quant
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected be
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In
	R	RPD outside accepted recovery limits	RL	Reporting Detectio
	S	% Recovery outside of range due to dilution or matrix	W	Sample container to

- in the associated Method Blank
- ntitation range
- below quantitation limits Page 39 of 50

- Range
- ion Limit
- temperature is out of limit as specified ıţ

Hall Environmental Analys	all Environmental Analysis Laboratory, Inc.						
CLIENT: Atkins Engineering Associate	es	Client Sample ID: SB-11 @ 9-11' BGS					
Project: Lea DS State No 001			Collection	Date: 11/30/2016 2:10:	00 PM		
Lab ID: 1612153-040	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:0	0 AM		
Analyses	Result	PQL Qı	al Units	DF Date Analyze	ed Batch		
EPA METHOD 300.0: ANIONS					Analyst: LGT		
Chloride	1400	75	mg/Kg	50 12/8/2016 5:36	6:24 PM 29065		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte
	D	Sample Diluted Due to Matrix	Е	Value at
	Н	Holding times for preparation or analysis exceeded	J	Analyte
	ND	Not Detected at the Reporting Limit	Р	Sample
	R	RPD outside accepted recovery limits	RL	Reportin
	S	% Recovery outside of range due to dilution or matrix	W	Sample

- e detected in the associated Method Blank
- above quantitation range
- e detected below quantitation limits Page 40 of 50

- pH Not In Range
- ing Detection Limit
- container temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-11 @ 14-16' BGS Collection Date: 11/30/2016 2:35:00 PM Previved Data: 12/2/2016 0.15.00 AM

Lab ID: 1612153-041	Matrix:	SOIL	Received 1	Received Date: 12/2/2016 9:15:00 AM				
Analyses	Result	PQL Qu	al Units	DF Date Analyzed Batch				
EPA METHOD 300.0: ANIONS				Analyst: LGT				
Chloride	2800	150	mg/Kg	100 12/8/2016 5:48:48 PM 29065				
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S		Analyst: TOM				
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1 12/7/2016 4:59:53 PM 29025				
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1 12/7/2016 4:59:53 PM 29025				
Surr: DNOP	79.6	70-130	%Rec	1 12/7/2016 4:59:53 PM 29025				
EPA METHOD 8015D: GASOLINE RAI	NGE			Analyst: NSB				
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1 12/7/2016 10:50:17 PM SG392				
Surr: BFB	87.4	68.3-144	%Rec	1 12/7/2016 10:50:17 PM SG392				
EPA METHOD 8021B: VOLATILES				Analyst: NSB				
Benzene	ND	0.022	mg/Kg	1 12/7/2016 10:50:17 PM R3922 ²				
Toluene	ND	0.044	mg/Kg	1 12/7/2016 10:50:17 PM R3922 ²				
Ethylbenzene	ND	0.044	mg/Kg	1 12/7/2016 10:50:17 PM R3922				
Xylenes, Total	ND	0.088	mg/Kg	1 12/7/2016 10:50:17 PM R3922				
Surr: 4-Bromofluorobenzene	99.6	80-120	%Rec	1 12/7/2016 10:50:17 PM R3922				

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits
	S	% Recovery outside of range due to dilution or matrix

- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 41 of 50 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

Hall Environmental Analysis	Iall Environmental Analysis Laboratory, Inc.					
CLIENT: Atkins Engineering Associates			Client Samp	le ID: SB-12 @ 4-6' BGS		
Project: Lea DS State No 001			Collection	Date: 11/30/2016 3:30:00 PM		
Lab ID: 1612153-042	Matrix:	SOIL	Received	Date: 12/2/2016 9:15:00 AM		
Analyses	Result	PQL Qual	Units	DF Date Analyzed Batch		
EPA METHOD 300.0: ANIONS				Analyst: MRA		
Chloride	770	30	mg/Kg	20 12/7/2016 6:30:51 PM 29065		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte de
	D	Sample Diluted Due to Matrix	Е	Value abo
	Н	Holding times for preparation or analysis exceeded	J	Analyte de
	ND	Not Detected at the Reporting Limit	Р	Sample pH
	R	RPD outside accepted recovery limits	RL	Reporting
	S	% Recovery outside of range due to dilution or matrix	W	Sample co

- detected in the associated Method Blank
- ove quantitation range
- detected below quantitation limit Page 42 of 50

- H Not In Range
- g Detection Limit
- container temperature is out of limit as specified

Hall Environmental Analysis		Lab Order 1612153 Date Reported: 12/13 /	2016		
CLIENT: Atkins Engineering Associates		(Client Sampl	e ID: SB-12 @ 9-11' BGS	
Project: Lea DS State No 001			Collection I	Date: 11/30/2016 3:45:00 PM	
Lab ID: 1612153-043	Matrix:	SOIL	Received I	Date: 12/2/2016 9:15:00 AM	
Analyses	Result	PQL Qua	l Units	DF Date Analyzed	Batch
EPA METHOD 300.0: ANIONS				Analys	st: LGT
Chloride	1800	300	mg/Kg	200 12/8/2016 6:26:02 PM	29065

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte o
	D	Sample Diluted Due to Matrix	Е	Value ab
	Н	Holding times for preparation or analysis exceeded	J	Analyte o
	ND	Not Detected at the Reporting Limit	Р	Sample p
	R	RPD outside accepted recovery limits	RL	Reportin
	S	% Recovery outside of range due to dilution or matrix	W	Sample c

- detected in the associated Method Blank
- bove quantitation range
- e detected below quantitation limits Page 43 of 50

- pH Not In Range
- ng Detection Limit
- container temperature is out of limit as specified

Analytical Report Lab Order 1612153 Date Reported: 12/13/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Atkins Engineering Associates

Project: Lea DS State No 001

Client Sample ID: SB-12 @ 14-16' BGS Collection Date: 11/30/2016 4:15:00 PM Received Date: 12/2/2016 9:15:00 AM

Lab ID: 1612153-044	Matrix:	SOIL	Received	Received Date: 12/2/2016 9:15:00 AM			
Analyses	Result	Result PQL Qual U		DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analys	t: LGT	
Chloride	1800	75	mg/Kg	50	12/8/2016 7:03:15 PM	29065	
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	t: TOM	
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/12/2016 4:06:43 PM	1 29025	
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/12/2016 4:06:43 PM	1 29025	
Surr: DNOP	98.3	70-130	%Rec	1	12/12/2016 4:06:43 PM	1 29025	
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	t: NSB	
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	12/7/2016 11:14:36 PM	1 SG3922	
Surr: BFB	85.6	68.3-144	%Rec	1	12/7/2016 11:14:36 PM	1 SG3922	
EPA METHOD 8021B: VOLATILES					Analys	t: NSB	
Benzene	ND	0.020	mg/Kg	1	12/7/2016 11:14:36 PM	1 R39221	
Toluene	ND	0.040	mg/Kg	1	12/7/2016 11:14:36 PM	1 R39221	
Ethylbenzene	ND	0.040	mg/Kg	1	12/7/2016 11:14:36 PM	1 R39221	
Xylenes, Total	ND	0.079	mg/Kg	1	12/7/2016 11:14:36 PM	1 R39221	
Surr: 4-Bromofluorobenzene	97.0	80-120	%Rec	1	12/7/2016 11:14:36 PM	1 R39221	

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

Refer to the QC Summary report and sample login checklist for magged QC data and preservation miorin

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	D	Sample Diluted Due to Matrix
	Н	Holding times for preparation or analysis exceeded
	ND	Not Detected at the Reporting Limit
	R	RPD outside accepted recovery limits
	S	% Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 44 of 50
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Client: Project:		ns Engineering Associates DS State No 001					
Sample ID	MB-29019	SampType: MBLK	TestCode: EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID: 29019	RunNo: 39203				
Prep Date:	12/6/2016	Analysis Date: 12/6/2016	SeqNo: 1226607	Units: mg/Kg			
Analyte			SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Chloride		ND 1.5					
Sample ID	LCS-29019	SampType: LCS	TestCode: EPA Method	l 300.0: Anions			
Client ID:	LCSS	Batch ID: 29019	RunNo: 39203				
Prep Date:	12/6/2016	Analysis Date: 12/6/2016	SeqNo: 1226608	Units: mg/Kg			
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Chloride		14 1.5 15.00	0 93.1 90	110			
Sample ID MB-29033 SampType: MBLK TestCode: EPA Method 300.0: Anions							
Client ID:	PBS	Batch ID: 29033	RunNo: 39203				
Prep Date:	12/6/2016	Analysis Date: 12/6/2016	SeqNo: 1226648	Units: mg/Kg			
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Chloride		ND 1.5					
Sample ID	LCS-29033	SampType: LCS	TestCode: EPA Method	I 300.0: Anions			
Client ID:	LCSS	Batch ID: 29033	RunNo: 39203				
Prep Date:	12/6/2016	Analysis Date: 12/6/2016	SeqNo: 1226649	Units: mg/Kg			
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Chloride		21 1.5 15.00	0 137 90	110	S		
Sample ID	MB-29033	SampType: mblk	TestCode: EPA Method	I 300.0: Anions			
Client ID:	PBS	Batch ID: 29033	RunNo: 39236				
Prep Date:	12/6/2016	Analysis Date: 12/7/2016	SeqNo: 1227828	Units: mg/Kg			
Analyte		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Chloride		ND 1.5					
Sample ID	LCS-29033	SampType: Ics	TestCode: EPA Method	l 300.0: Anions			
Client ID:		Batch ID: 29033	RunNo: 39236				
Prep Date:	12/6/2016	Analysis Date: 12/7/2016	SeqNo: 1227829	Units: mg/Kg			
Analita		Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual		
Analyte							

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 45 of 50

Client: Project:		s Engineering S State No 00		ates							
Sample ID	MB-29065	SampT	ype: m l	blk	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	PBS	Batch	ID: 29	065	F	RunNo: 3	9236				
Prep Date:	12/7/2016	Analysis D	ate: 1	2/7/2016	S	SeqNo: 1	227836	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-29065	SampT	ype: Ic:	6	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	LCSS	Batch	ID: 29	065	F	RunNo: 3	9236				
Prep Date:	12/7/2016	Analysis D	ate: 1	2/7/2016	S	SeqNo: 1	227837	Units: mg/#	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	95.9	90	110			
Sample ID	MB-29050	SampT	ype: m l	blk	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	PBS	Batch	ID: 29	050	F	RunNo: 3	9240				

Prep Date: 12/7/2016	Analysis Date: 12/7/2	016	SeqNo: 1228016	Units: mg/Kg	
Analyte	Result PQL SP	K value SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5				
Sample ID LCS-29050	SampType: Ics	Те	stCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 29050		RunNo: 39240		
Prep Date: 12/7/2016	Analysis Date: 12/7/2	016	SeqNo: 1228017	Units: mg/Kg	
Analyte	Result PQL SP	K value SPK Ref Val	%REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	14 1.5	15.00 0	94.9 90	110	

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- W Sample container temperature is out of limit as specified

Page 46 of 50

	Engineering Associates	
Project: Lea DS	State No 001	
Sample ID LCS-29025	SampType: LCS Test	Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 29025 R	unNo: 39208
Prep Date: 12/6/2016	Analysis Date: 12/7/2016 S	eqNo: 1227017 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	50 10 50.00 0	99.4 62.6 124
Surr: DNOP	4.3 5.000	86.7 70 130
Sample ID MB-29025	SampType: MBLK Test	Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 29025 R	unNo: 39208
Prep Date: 12/6/2016	Analysis Date: 12/7/2016 S	eqNo: 1227018 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Motor Oil Range Organics (MRO) Surr: DNOP	ND 50 10 10.00	102 70 130
Sample ID LCS-29117		Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	-	unNo: 39305
Prep Date: 12/12/2016	Analysis Date: 12/12/2016 S	eqNo: 1230437 Units: %Rec
Analyte	Result PQL SPK value SPK Ref Val	5
Surr: DNOP	3.9 5.000	77.4 70 130
Sample ID MB-29117	SampType: MBLK Test	Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 29117 R	unNo: 39305
Prep Date: 12/12/2016	Analysis Date: 12/12/2016 S	eqNo: 1230438 Units: %Rec
Analyte	Result PQL SPK value SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	8.0 10.00	80.4 70 130
Sample ID MB-29055	SampType: MBLK Test	Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 29055 R	unNo: 39306
Prep Date: 12/7/2016	Analysis Date: 12/12/2016 S	eqNo: 1230594 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual
Diesel Range Organics (DRO)	ND 10	
Motor Oil Range Organics (MRO)	ND 50	404 70 400
Surr: DNOP	10 10.00	104 70 130
Sample ID LCS-29055	SampType: LCS Test	Code: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 29055 R	unNo: 39306
Prep Date: 12/7/2016	Analysis Date: 12/12/2016 S	eqNo: 1230702 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val	%REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 47 of 50

	s Engineering OS State No 00		ates							
Sample ID LCS-29055	SampT	ype: LC	s	Tes	Code: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 29	055	R	unNo: 3	9306				
Prep Date: 12/7/2016	Analysis D	ate: 12	2/12/2016	S	eqNo: 1	230702	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.4	62.6	124			
Surr: DNOP	4.5		5.000		89.3	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 48 of 50

Client:	Atkins E	ngineering	Associ	ates							
Project:	Lea DS S	State No 00	1								
Sample ID	RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	PBS	Batch	1D: SG	39221	F	RunNo: 3	9221				
Prep Date:		Analysis D	ate: 12	2/7/2016	S	SeqNo: 1	227450	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	ND	5.0								
Surr: BFB		870		1000		87.3	68.3	144			
Sample ID	2.5UG GRO LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch	ID: SG	639221	F	RunNo: 3	9221				
Prep Date:		Analysis D	ate: 12	2/7/2016	S	SeqNo: 1	227451	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	25	5.0	25.00	0	99.7	74.6	123			
Surr: BFB		920		1000		92.3	68.3	144			
Sample ID	1612153-010AMS	SampT	ype: M \$	3	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SB-1 @ 14-16' BG	S Batch	ID: SG	39221	F	RunNo: 3	9221				
Prep Date:		Analysis D	ate: 12	2/7/2016	5	SeqNo: 1	227458	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	18	3.6	18.13	0	98.7	61.3	150			
Surr: BFB		650		725.2		89.3	68.3	144			
Sample ID	1612153-010AMS	D SampT	уре: М	SD	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SB-1 @ 14-16' BG	Batch	ID: SO	39221	F	RunNo: 3	9221				
Prep Date:		Analysis D	ate: 12	2/7/2016	S	SeqNo: 1	227459	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	17	3.6	18.13	0	91.5	61.3	150	7.57	20	
Surr: BFB		630		725.2		87.2	68.3	144	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 49 of 50

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
	Batch	ID: R3	9221	F	RunNo: 3	9221				
	Analysis D	ate: 12	2/7/2016	S	SeqNo: 1	227481	Units: mg/k	٢g		
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	ND	0.025								
	ND	0.050								
	ND	0.050								
	ND	0.10								
enzene	1.0		1.000		99.7	80	120			
BTEX LCS	SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
	Batch	ID: R3	9221	F	RunNo: 3	9221				
	Analysis D	ata: 41	17/0040	c		227402	Units: ma/k	(a		

Prep Date:	Analysis [Date: 12	2/7/2016	S	SeqNo: 1	227482	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	108	75.2	115			
Toluene	1.0	0.050	1.000	0	105	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	101	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	97.7	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			
Sample ID 1612153-013AMS	Samp	Гуре: МS	3	Tes	tCode: El	PA Method	8021B: Vola	tiles		

	e eamp.	, por								
Client ID: SB-2 @ 14-16' B	BGS Batch	h ID: R3	9221	F	RunNo: 3	9221				
Prep Date:	Analysis D	Date: 12	2/7/2016	5	SeqNo: 1	227485	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.018	0.7273	0	110	61.5	138			
Toluene	0.75	0.036	0.7273	0	103	71.4	127			
Ethylbenzene	0.77	0.036	0.7273	0	106	70.9	132			
Xylenes, Total	2.2	0.073	2.182	0.01076	101	76.2	123			
Surr: 4-Bromofluorobenzene	0.70		0.7273		96.6	80	120			

Sample ID 1612153-013AM	SD Samp1	туре: МS	SD .	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: SB-2 @ 14-16' E	BGS Batcl	h ID: R3	9221	R	RunNo: 3	9221				
Prep Date:	Analysis D	Date: 12	2/7/2016	S	SeqNo: 1	227486	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.018	0.7273	0	100	61.5	138	9.07	20	
Toluene	0.67	0.036	0.7273	0	92.7	71.4	127	10.8	20	
Ethylbenzene	0.66	0.036	0.7273	0	91.1	70.9	132	15.1	20	
Xylenes, Total	1.9	0.073	2.182	0.01076	88.9	76.2	123	12.4	20	
Surr: 4-Bromofluorobenzene	0.68		0.7273		93.4	80	120	0	0	

Qualifiers:

Client:

Project:

Sample ID RB

PBS

Surr: 4-Bromofluorobenzene

Client ID: LCSS

Sample ID 100NG BTEX LCS

Client ID:

Prep Date:

Analyte

Benzene

Toluene

Ethylbenzene

Xylenes, Total

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 50 of 50

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: ATK Work Order Numb	er: 1612153		RcptNo: 1	
Received by/date: (M 12/62//6				
Logged By: Anne Thorne 12/2/2016 9:15:00 A	М	anne Am	-	
Completed By: Anne Thorne 12/5/2016 2:06:40 P	M	Anne Ham		
Reviewed By:		and france		
Chain of Custody	φ			
1. Custody seals intact on sample bottles?	Yes 🗹	No 🗌	Not Present	
2. Is Chain of Custody complete?	Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?	<u>UPS</u>			
Log In				
4. Was an attempt made to cool the samples?	Yes 🔽	No 🗌	NA 🗍	
5. Were all samples received at a temperature of $>0^{\circ}$ C to 6.0°C	Yes 🔽	No 🗌		
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?	Yes 🗌	No	No VOA Vials 🔽	
11. Were any sample containers received broken?	Yes	No 🔽	# of preserved	
12. Does paperwork match bottle labels?	Yes 🗹	No	bottles checked for pH:	-
(Note discrepancies on chain of custody)		No 🗌	(<2 or >12 unles: Adjusted?	s noted
13. Are matrices correctly identified on Chain of Custody?14. Is it clear what analyses were requested?	Yes ⊻ Yes ⊻		·	
15. Were all holding times able to be met?	Yes 🗹		Checked by:	
(If no, notify customer for authorization.)				
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes 🗌	No 🗔	NA 🔽	
Person Notified: Date				
By Whom: Via:	¢	Phone 🗍 Fax	In Person	

17. Additional remarks:

Regarding:

Client Instructions:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.8	1	Yes			

	ENTAL ATOPY									от И			iddu (Partaus	that dute and	- 11- 11- C	cal report.
	AALL ENVIKONMENTAL ANALYSTS LABORATODY	www.haltenvironmental.com	Albuquerque, NM 87109	Fax 505-345-4107) PC	280	8 / 9	/O/ (' səp	AO' AO'	عمر (V) الحود (V) عرب (V) عرب	808 808	×	×	×			×	×		X 		\times		C C	5-Juturs for Relingestud	. tre, and	clearly notated on the analyti
			4901 Hawkins NE - Alb			(Yin	HM /	່ (CE	ч) ч) \ DE ЬН	+ T 25 .40 .42) ol q 2 (GL (GL	310 (110 (110 (110 (110)	+ X 1 + X 1 0 8 1 0 8 9 0 1 1 1 + X 1 0 8 1 + X	BTB FOF TPH													Remarks: B-11 to	the one fund some	Amended Copy	sibility. Any sub-contracted data will be
	🗆 Rush		the No. CON		ENV. 16			Lortez		°N D	<u>s</u> ,8		Preservative HEAL No. X	16/2153	-cot	46.2	32	-264	107	902-	100-	-2CV	р С	MUDH POLO X	112		12/02/16 / Date Time Re	Т		ccredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
I urn-Around Fime:		Project Name:	Lee DS State	Project #:	TPLLEAD. ENV. 16	Project Manager:			Sampler: Here	On loe: Pryes	Sample Temperature:		Container Prese		402 Sav								→	ALA MA	HOZ Sar	L m	Received by:	Received by:		ontracted to other accredited
Chain-of-Custody Record	.1		U. 2N. St.		4.2420	e the even los	•	Level 4 (Full Validation)					Sample Request ID		R1-1 @1-31 R65	BL-A & 4-6 B65	578, 11-6 @ 7-78	81-10 14-16 205	BL-1@ 19-21, 865	24-26242621-18	QL-1 @ 28-30 863	53-1 @ 4-6' B65				50-249 241 865	• }			if necessary, samples submitted to Hall Environmental may be subcontracted to other a
in-of-Cu	Alwo Ers.		4062 :ssa	NA 8820	575.624	#: Sampho @	ige:			D Other)e)		Time Matrix		15/20		0	30	S		2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		0		↓	Relinquished by:	: Relinquished by:		sary, samples subr
Cha	Client: A		Mailing Address:	Regult		email or Fax#:	QA/QC Package:	😿 Standard	Accreditation		🗆 EDD (Type)		Date Tin		1/25/10 0700	0200	0420	0230	0215	0950	1 1115	1215	2081	1330	1450	1 1210	Date: Time:	Date: Time:		If neces

			4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis	(២(()))	0 / WH (SMI (SMI	ту 10 ⁵⁵ 10 ⁵⁷ 11) 11) 11) 11)	() () () () () () () () () () () () () ((GF (GF (GF (GF (GF (GF (GF (GF (GF (GF	HTM + X TM + X A7 Metho A7 Metho A0t9M) H A0t9M A0t9 A0t9 A0t9 A0t9 A0t9 A0t9 A0t9 A0t9	вт <u>е</u> ТРН ТРН БDБ В08 826 826 826 826 826 826 826	×			×									Remarks:	Rill to Trainer Partners	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	🗷 Standard 🛛 Rush	Project Name:	Les DS State No. 000 w	Project #:	TPILEAD. EW.16	Project Manager:	Chris Contez	Sampler. ACM	On Ice: ZYes 🗆 No	Sample Temperature: S.8	ative		402 Sur Neott 013	HOZ SW 244		402 Your Ne OH 21/6	402 Jul 201		HOBY MEDH -019			60 402 Mr. 0H 222		hzp / (1	Received by: (') Date Time	Land hu Der Edis	racted to other accredited laboratories. This serves as notice of this
Chain-of-Custody Record			Mailing Address: 2004 W- 2nd St	ROSHING XIM 88201	575.624.2420	1.01-20	QA/QC Package: Standard D Level 4 (Full Validation)			EDD (Type) S	Date Time Matrix Sample Request ID		1/2d/10 1550 50121 53-2@ 14-10' B65 G	1635 1 53-3@ 4-6' BLS	"2 16 0700 53-30 9-11' 36 >	(<i>2</i> & S		< 78 11-6 8 4-85 0520	0320 53-4 @ 14-16' D65 2	1045 53-50 7-6' BL> U	53-5@ 9-11, 865		1235 53-6 6 4-6 365 4	1 1525 V 53-6 @ 3-11,1302	Relinquished by:	DJU W Imae Belinnishad hr	If necessary, samples submitted to Hall Environmental may be subcontr

			www.naiishvironinenial.com 4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis	(^þ (PO4,5C (Cass of PO4,5C	2808 3005 10 1) 1) 10 10 10	05 .40 .40 .40 .40 .40 .40 .40 .40 .40	A A A A A A A A A A A A A A	HH + X∃TB ITM + X∃TB B3F08 H9T B3F08 H9T TPH (Methoder) B1PB (Methoder) B2F08 H9T TPH (Methoder) B1PB (Methoder) B2F08 (Methoder) B1PB (Methoder) B1PB (Methoder) B2F08 (Methoder) B1PB (Methoder) B2F09 (VOP B1PB (Methoder) B2F09 (VOP B2F09 (VOP B1PB (Methoder) B2F09 (VOP B1PB (Methoder) B1PB (Method	×			×								Remarks:	1211 to Trainer Partners	Ameddel 12.	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	🏹 Standard 🛛 Rush	<u>.</u>	Lea DS State No. 001		TPLLEAD. ENV. 16	Project Manager:	Chris Contez	ALM	¢tres	Sample Temperature: 🤶 🔏	er Preservative 1# Type	5	ar 1226		toth wet were					102 The West was 100	235 NOH 035			an The BR	Kecewed by: Date Itme	Irracted to other accredited laboratories. This serves as notice of this p
Chain-of-Custody Record	Client Athras Emmuna Arrecates		Mailing Address: 2904 W. 2nd St	88201	Phone #: 575.624.2420	ping a atto es ion	QA/QC Package: Level 4 (Full Validation)	Lo		EDD (Type)	Date Time Matrix Sample Request ID	1/22/16 1315 Sold SB-6@ 14-16' 265 H	1 53-7 @ 4-6' 365	238, 11-6 @ - 25 02+1	1 SAD, 91-41 QL-25 SAI		V 1630 53-8@ 14-16' 365 2	1/2/10 0750 53-9/2 4-6 36 H	1 DRIS 53-9@9-11, 365	2 59E, 91-11 @ 6-ES 2520	19-21265	-10@ 4-4, 30>	Time: Relinquished by:	JN ~~ 0500 3		I I I I I I I I I I I I I I I I I I I

 HALL ENVIRONMENTAL HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Tel. 505-345-3975 Fax 505-345-4107 	sticides / 8082 PCB's -,CI,NO ₃ ,NO ₂ ,PO₄,SO₄)	BTEX + N BTEX + N BTEX + N BTEX + N BTEX + N BTEX + N BTPH 8015 B081 Pes B081 Pes B109 Pes B100 Pes B		X X X X	Remarks: Remarks: B:11 to Trainer Dather Analish Lepy of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Lustody	Phone #: 575.624.2420 Project Manager: email or Fax#: 5.4.24.242 Project Manager: 0A/QC Package:	Time	53-10@14-16'Bus 253-25 400 H 53-10@14-16'Bus 253-40-1 MLOH 53-11@4-6'Bus 402 Jan 23-11 @ 4-6'Bus 402 Jan	1410 20-11/0 14/6/ BCS 402 201 WE ALD H 241 1435 53-11/0 14/6/ BCS 402 201 WE D H 242 1545 40-120 9-11/865 402 201 0 H 243	Date: Time: Relinquished by: Date Time Inc. Relinquished by: Date Time Amodule Date: Time: Relinquished by: Date Time Inc. Relinquished by: Date Time Amodule Inc. Relinquished by: Amodule Amodule Amodule