

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
Elevation LS (feet)	3,712.92	3,714.80	3,714.78	3,713.78
4-6'	<30	470	<30	<30
9-11'	<30	260	<30	<30
14-16'	<30	43	<30	<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.

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

	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

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 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.

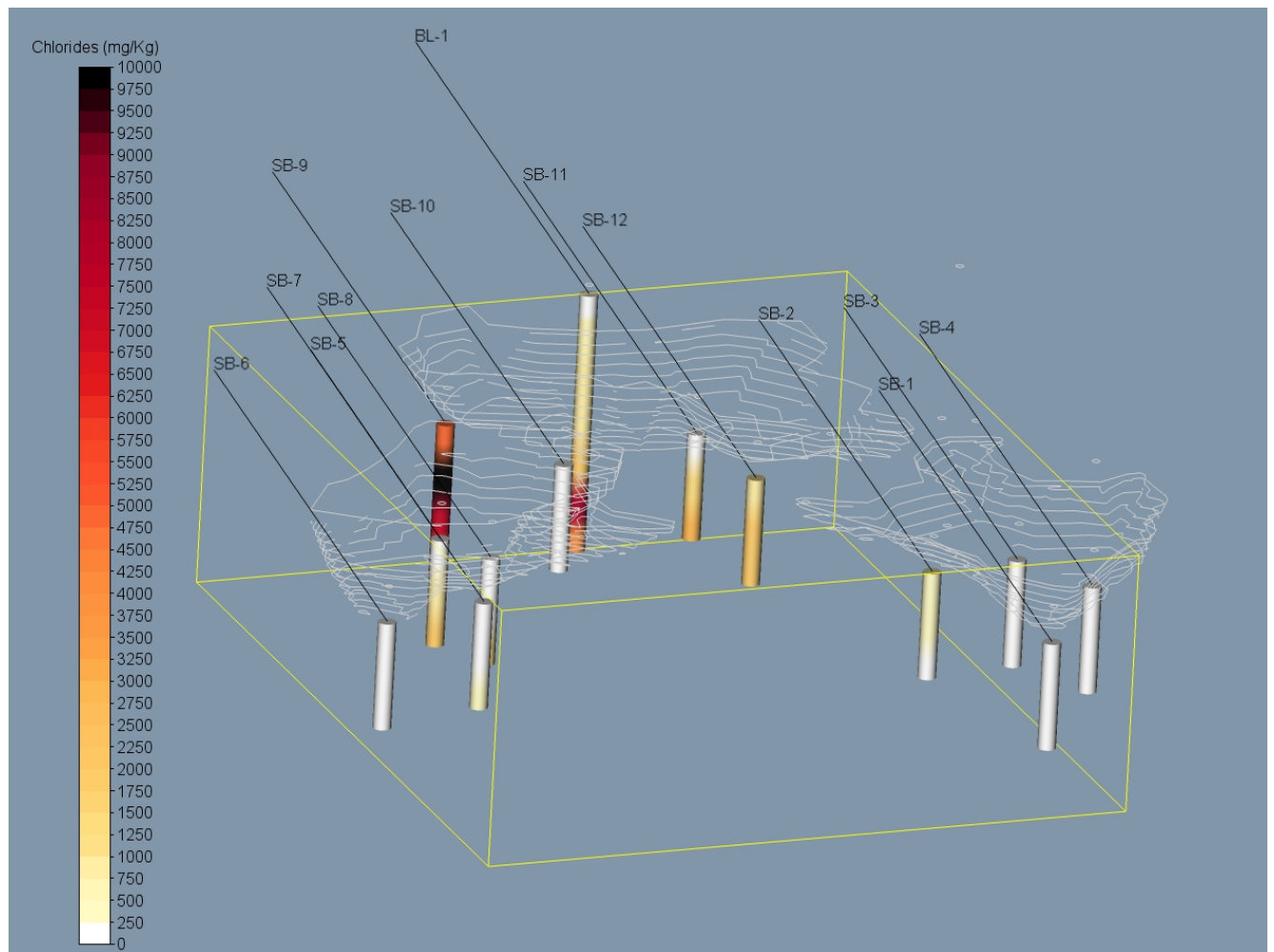


Figure 1: Site borings with chlorides (mg/Kg) and grade

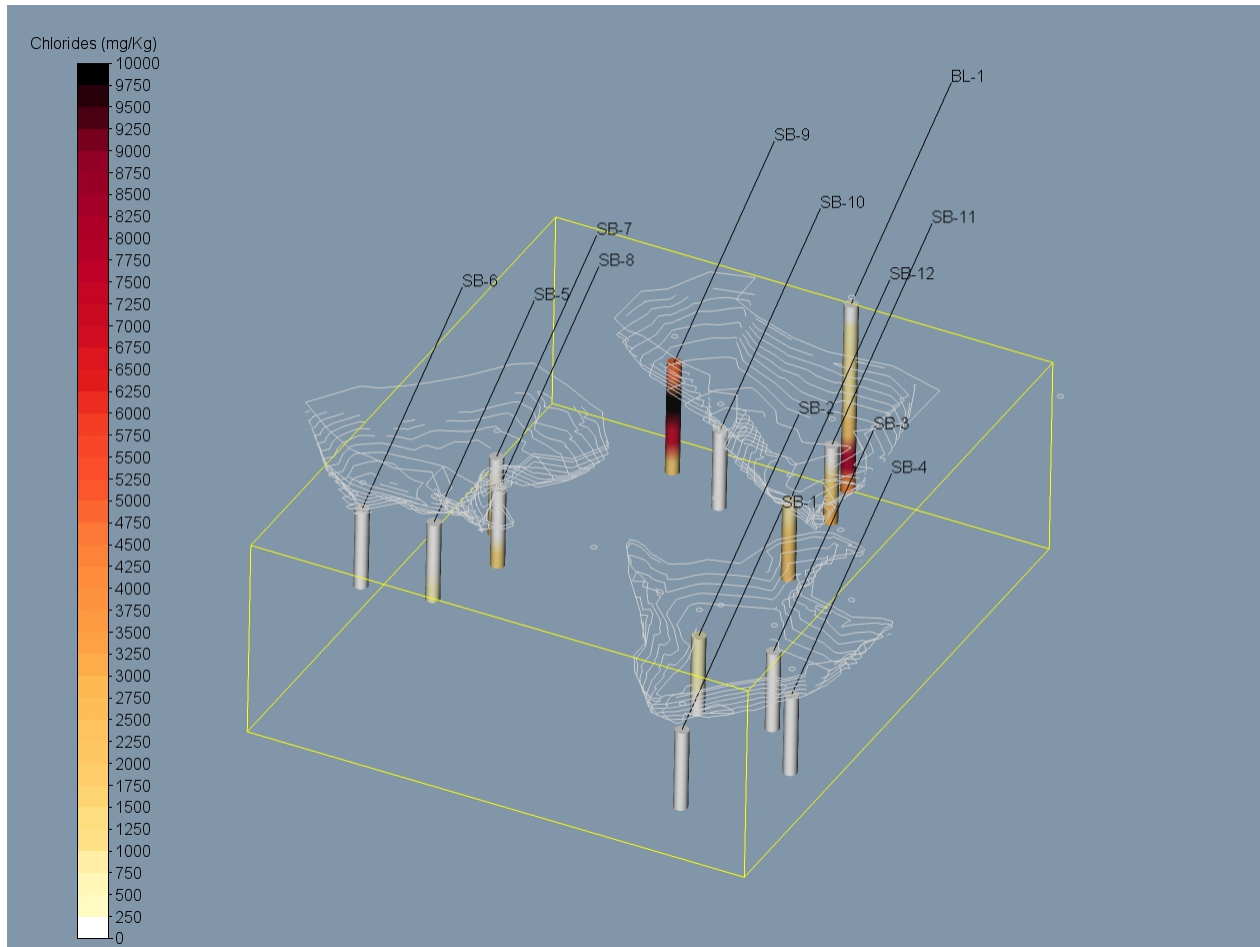


Figure 2: Site borings with chlorides (mg/Kg) and grade

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

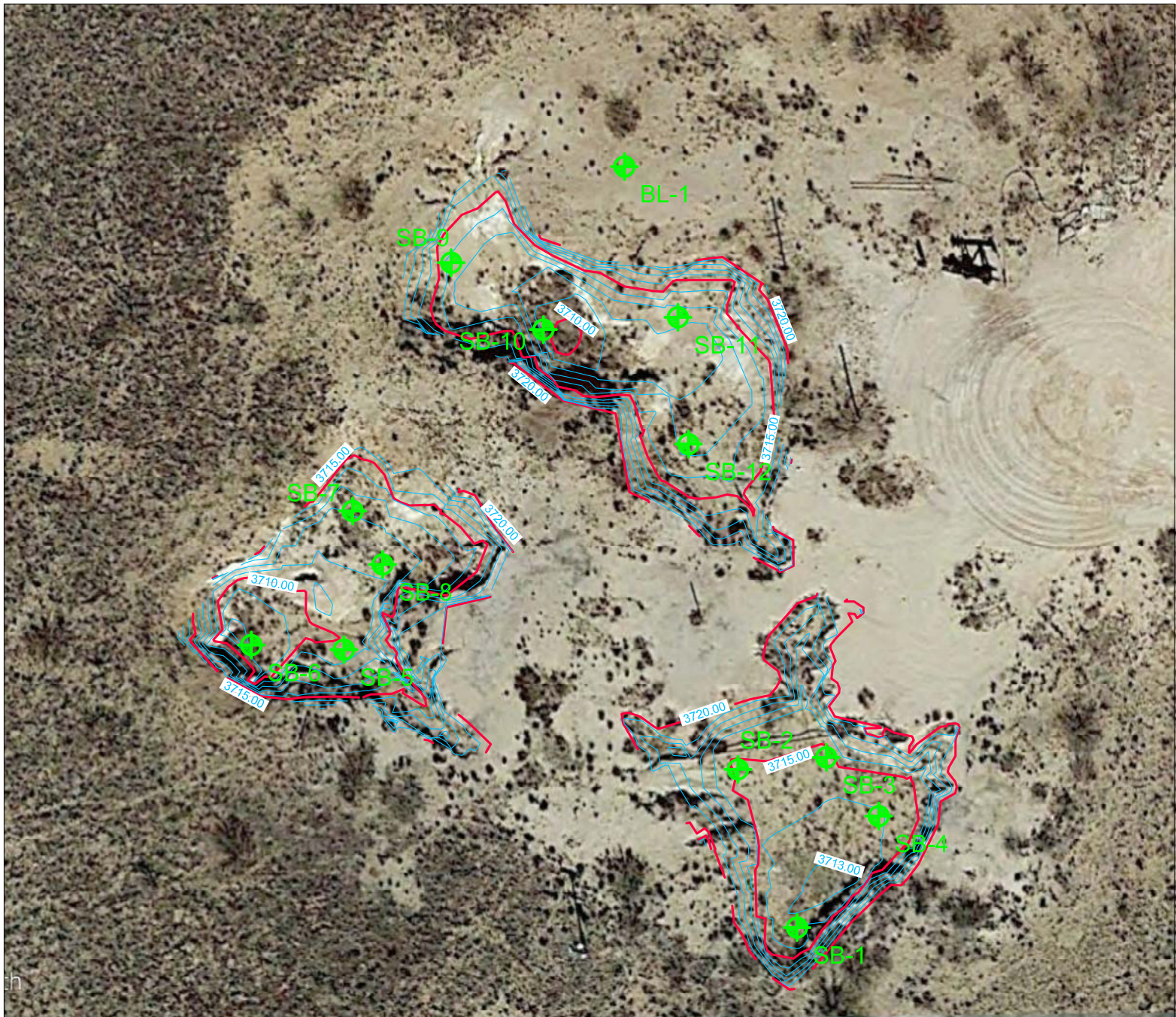
Sincerely,



Jim Coburn P.E.
Consulting Engineer

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

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



Source: Esri, DigitalGlobe, GeoEye, Earthstar, CNR, USDA, NGA, GEBCO, CNR, swisstopo, and the GIS User Community

Legend

- Contour Line
- + Soil Boring Location

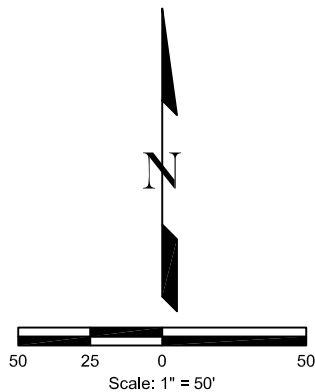


Figure 1.
Soil Boring Locations
Lea DS State No. 001

SCALE 1" = 50'	December 2016
JOB NO. TPLLEAD.ENV.16	



2904 W. 2nd St.
 Roswell, NM 88201
 voice: 575.624.2420
 fax: 575.624.2421

Client	Trainer Partners LTD	Completion Date	11-28-16	Latitude	32.61873243°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52060200°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3718.87
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	30
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0						
-5		SM	Silty sand, fine to medium grain sand, some subangular 5mm-10mm gravel, brown, dry	nd/nd nd 140	0.7	
-5			Silty sand, fine to medium grain sand, brown with dark brown mottling, dry	nd/nd nd 690	0.9	
-10			Silty sand, very fine to fine grain sand, some caliche streaks, light brown, dry	nd/nd nd 970	2.0	
-15		SM		nd/nd nd 950	1.4	
-20			Sandy clay, fine to medium grain sand, brown, dry	nd/nd nd 1900	50	
-25		CL		nd/nd nd 8000	4.0	
-30				nd/nd nd 4000	1.0	

Client	Trainer Partners LTD	Completion Date	11-28-16	Latitude	32.61800702°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52041450°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3712.92
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0						
		SM	Silty sand, medium to coarse grain sand, some subangular 5mm-10mm gravel, light brown, dry			
-5		SP	Sand, medium to coarse grain sand, some 5mm-10mm gravel, light brown, dry	nd/nd nd <30	3.4	
-10		CL	Sandy clay, fine to medium grain sand, some 5mm-10mm subangular gravel, some caliche streaks, brown, dry	nd/nd nd <30	0.5	
-15		SM	Silty sand, very fine to fine grain sand, some 5mm-10mm gravel, brown, dry	<9.6/<48 <3.6 <30	0.7	

Client	Trainer Partners LTD	Completion Date	11-28-16	Latitude	32.61815795°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52047960°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3714.80
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0						
		SM	Silty sand, fine to medium grain sand, brown, dry			
			Sandy clay, medium to coarse grain sand, brown, damp			
-5		CL		nd/nd nd 470	0.5	
-10			Silty sand, very fine to fine grain sand, brown, damp	nd/nd nd 260	0.9	
		SM				
-15			Sandy clay, very fine to fine grain sand, brown, dry	nd/nd nd 43	1.1	
		CL				

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-29-16	Latitude	32.61816876°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52038010°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3714.78
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0			Silty sand, very fine to fine grain sand, brown, soft, dry			
	SM					
-5			Sandy clay, very fine to fine grain sand, some caliche streaks, light brown, damp @ 5.75' BGS some 5mm-10mm gravel	nd/nd nd <30	1.9	
	CL					
-10			Sand, fine to medium grain sand, brown, dry	nd/nd nd <30	1.4	
	SP					
-15			Sand with caliche, fine to medium grain sand, mixed caliche, brown, damp	<9.6/<48 <2.8 <30	2.2	
	SP					

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-29-16	Latitude	32.61811252°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52032170°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3713.78
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0			Silty sand, fine to medium grain sand, brown, dry			Native Fill
	SM					
-5			Sand with gravel, very fine to coarse grain sand, 15mm-20mm gravel, some caliche, light brown, dry	nd/nd nd <30	1.0	Bentonite Seal
	SP					
-10			Sand with caliche, very fine to fine grain sand, mixed caliche, tan, hard, dry	nd/nd nd <30	2.4	
	SP					
-15			Caliche, tan dry	<10/<51 <3.8 <30	0.5	Native Fill
	OL					

Bottom of Boring (ft) = 14.5 BGS

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-29-16	Latitude	32.61827977°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52102590°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3708.69
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0			Silty sand, fine to coarse gain sand, brown, damp			Native Fill
-5	SP			nd/nd nd <30	2.9	
-10	CL		Sandy clay with caliche, fine to medium grain sand, mixed caliche, brown, dry	nd/nd nd <30	1.9	Bentonite Seal
-15			Sandy clay, very fine to fine grain sand, brown, hard, dry	<9.7/<48 <3.9 <30	1.0	Native Fill

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-29-16	Latitude	32.61840659°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52091070°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3711.41
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0			Silty sand, fine to coarse grain sand, brown, damp			Native Fill
	SM					
-5			Sandy clay with fine roots, very fine to fine grain sand, brown with red and black mottling, hard, dry	nd/nd nd 99	1.1	Bentonite Seal
	CL					
-10			Sandy clay, very fine to fine grain sand, with caliche streaks, light brown, hard, dry, @ 9.75' BGS thin layer of siltstone	nd/nd nd 980	0.9	
						Native Fill
-15			Sandy clay and mixed sand, very fine to fine grain sand, brown, hard, dry	<9.5/<48 <4.4 1900	0.9	

Bottom of Boring (ft) = 14.5 BGS

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-30-16	Latitude	32.61864221°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52079780°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3712.97
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	19.5
		Well Screen	N/A		

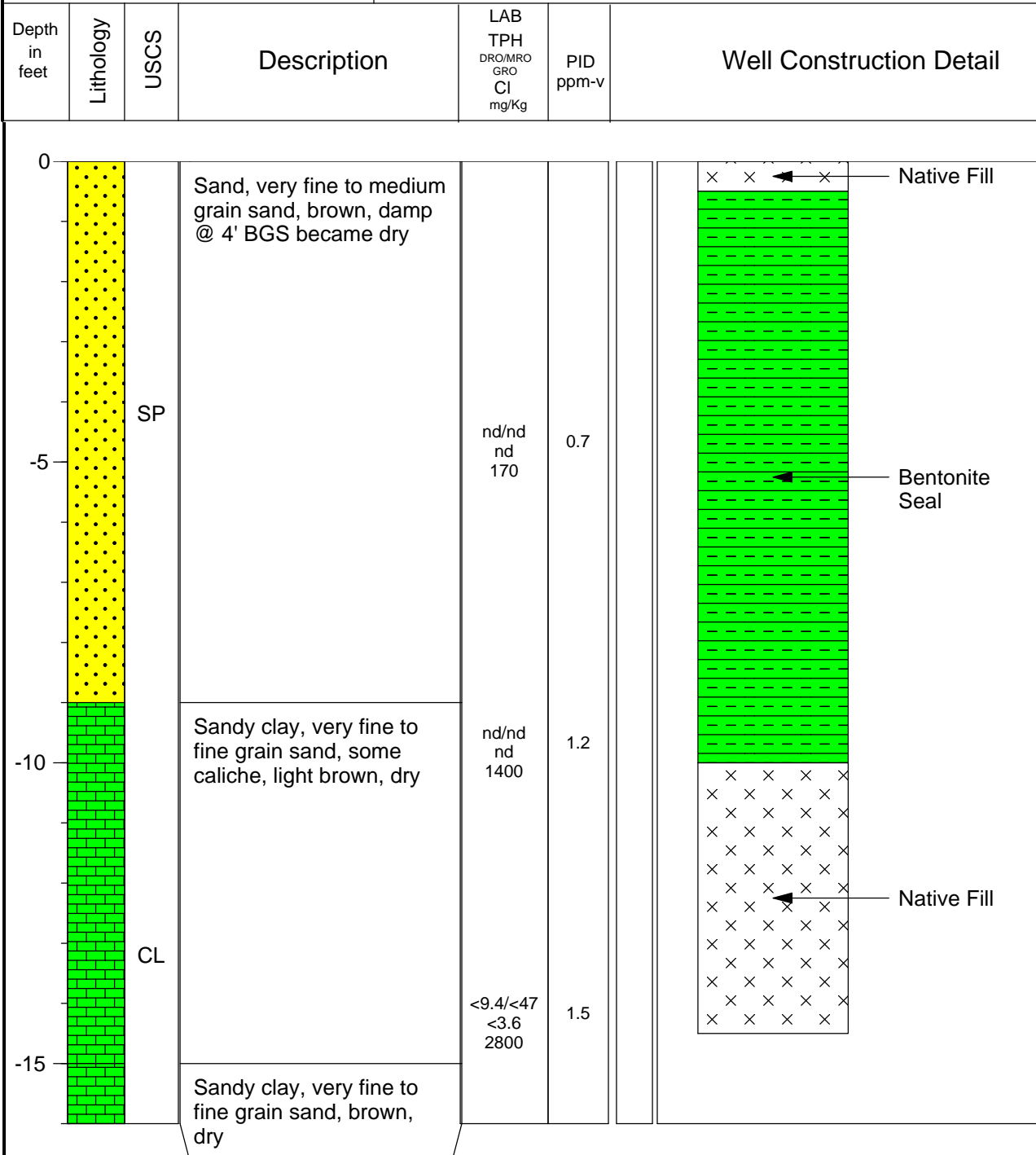
Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0						
	SP		Sand, fine to coarse grain sand, brown, dry			Native Fill
			Sand and mixed caliche, very fine to fine grain sand, brown, dry			
-5	SP			nd/nd nd 4900	1.2	Bentonite Seal
-10	CL		Sandy clay with mixed caliche, very fine to fine grain sand, brown, dry	nd/nd nd 11000	1.2	
-15	SP		Sand and mixed caliche, fine to medium grain sand, brown, damp	nd/nd nd 7300	1.0	Native Fill
-20	CL		Sandy clay, medium to coarse grain sand, some caliche, brown, damp	<9.4/<47 <3.9 1700	0.9	

Client	Trainer Partners LTD	Completion Date	11-30-16	Latitude	32.61857783°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52069470°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3710.28
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0			Silty sand, very fine to fine grain sand, brown and red, damp			Native Fill
-5	SM			nd/nd nd 170	0.9	Bentonite Seal
-10	CL		Sandy clay with mixed caliche, very fine to fine grain sand, light brown, dry @ 9' BGS thin layer of siltstone	nd/nd nd 38	0.8	
-15	CL		Lean clay with mixed caliche, light brown, dry	<9.4/<47 <3.6 76	1.2	Native Fill

Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-30-16	Latitude	32.61858854°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52054320°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3711.98
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		



Bottom of Boring (ft) = 14.5 BGS

Client	Trainer Partners LTD	Completion Date	11-30-16	Latitude	32.61846790°
Location	Lea DS State No. 001 near Hobbs, NM	Drilling Contractor	Atkins Engineering Assoc. Inc.	Longitude	-103.52053240°
Purpose	Soil Sampling	Drilling Method	Hollow-stem auger	Surface Elevation (ft)	3712.12
Project	TPLEAD.ENV.16	Boring Diameter	8.675"	TOC Elevation (ft)	N/A
		Well Diameter	N/A	Total Depth (ft)	14.5
		Well Screen	N/A		

Depth in feet	Lithology	USCS	Description	LAB TPH DRO/MRO GRO Cl mg/Kg	PID ppm-v	Well Construction Detail
0						
		SM	Silty sand, very fine to fine grain sand, some 5mm-10mm rounded gravel, tan, soft, dry			
-5				nd/nd nd 770	7.1	
		CL	Lean clay with caliche streaks, red, dry			
-10				nd/nd nd 1800	0.7	
		CL	Sandy clay with mixed caliche, very fine to fine grain sand, brown, dry			
-15				<9.9/<49 <4.0 1800	1.3	
		CL	Lean clay, some caliche, brown, dry			

Bottom of Boring (ft) = 14.5 BGS



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

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 www.hallenvironmental.com 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 qualifiers 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 1-3' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 7:00:00 AM

Lab ID: 1612153-001

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: LGT
Chloride	140	30		mg/Kg	20	12/6/2016 6:09:51 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 7:40:00 AM

Lab ID: 1612153-002

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: LGT
Chloride	690	30		mg/Kg	20	12/6/2016 6:47:03 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 8:00:00 AM

Lab ID: 1612153-003

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: LGT	
Chloride	970	30		mg/Kg	20	12/6/2016 6:59:28 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit		P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	950	30		mg/Kg	20	12/6/2016 7:11:52 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 19-21' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 9:15:00 AM

Lab ID: 1612153-005

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	1900	75		mg/Kg	50	12/7/2016 4:14:32 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 24-26' BGS

Project: Lea DS State No 001

Collection 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	8000	300		mg/Kg	200	12/7/2016 4:26:57 PM	29019

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: BL-1 @ 28-30' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 11:15:00 AM

Lab ID: 1612153-007

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	4000	150		mg/Kg	100	12/7/2016 4:39:21 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-1 @ 9-11' BGS

Project: Lea DS State No 001

Collection 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 9:53:13 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND		Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-1 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 1:30:00 PM

Lab ID: 1612153-010

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: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 10:05:37 PM	29033
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/12/2016 2:05:54 PM	29055
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/12/2016 2:05:54 PM	29055
Surr: DNOP	94.6	70-130		%Rec	1	12/12/2016 2:05:54 PM	29055
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/7/2016 3:30:56 PM	SG39221
Surr: BFB	87.5	68.3-144		%Rec	1	12/7/2016 3:30:56 PM	SG39221
EPA METHOD 8021B: VOLATILES							Analyst: 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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-2 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 2:50:00 PM

Lab ID: 1612153-011

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	470	30		mg/Kg	20	12/7/2016 1:45:25 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: MRA
Chloride	260	30		mg/Kg	20	12/7/2016 1:57:49 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-2 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/28/2016 3:50:00 PM

Lab ID: 1612153-013

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	43	30		mg/Kg	20	12/7/2016 2:10:14 PM	29033
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: 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 PM	29055
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/7/2016 4:44:21 PM	SG39221
Surr: BFB	86.7	68.3-144		%Rec	1	12/7/2016 4:44:21 PM	SG39221
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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 11:07:40 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-3 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 7:40:00 AM

Lab ID: 1612153-016

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: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 11:44:54 PM	29033
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	2.8		mg/Kg	1	12/7/2016 5:57:54 PM	SG39221
Surr: BFB	91.2	68.3-144		%Rec	1	12/7/2016 5:57:54 PM	SG39221
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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-4 @ 4-6' BGS

Project: Lea DS State No 001

Collection 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/7/2016 12:09:44 AM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-4 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 9:20:00 AM

Lab ID: 1612153-019

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: LGT
Chloride	ND	30		mg/Kg	20	12/7/2016 12:22:08 AM	29033
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: 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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	12/7/2016 6:22:25 PM	SG39221
Surr: BFB	85.3	68.3-144		%Rec	1	12/7/2016 6:22:25 PM	SG39221
EPA METHOD 8021B: VOLATILES							Analyst: 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.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-5 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 10:45:00 AM

Lab ID: 1612153-020

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	170	30		mg/Kg	20	12/7/2016 2:22:39 PM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-5 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 11:55:00 AM

Lab ID: 1612153-022

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	380	30		mg/Kg	20	12/7/2016 2:47:28 PM	29033
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/7/2016 6:46:57 PM	SG39221
Surr: BFB	87.1	68.3-144		%Rec	1	12/7/2016 6:46:57 PM	SG39221
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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-6 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 12:35:00 PM

Lab ID: 1612153-023

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: LGT
Chloride	ND	30		mg/Kg	20	12/7/2016 1:11:46 AM	29033

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-6 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 1:15:00 PM

Lab ID: 1612153-025

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	ND	30		mg/Kg	20	12/7/2016 1:45:38 PM	29050
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: 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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/7/2016 8:48:45 PM	SG39221
Surr: BFB	86.3	68.3-144		%Rec	1	12/7/2016 8:48:45 PM	SG39221
EPA METHOD 8021B: VOLATILES							Analyst: 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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-7 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 2:00:00 PM

Lab ID: 1612153-026

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	99	30		mg/Kg	20	12/7/2016 2:22:51 PM	29050

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-7 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 2:20:00 PM

Lab ID: 1612153-027

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	980	30		mg/Kg	20	12/7/2016 2:35:15 PM	29050

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-7 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 2:55:00 PM

Lab ID: 1612153-028

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: LGT
Chloride	1900	75		mg/Kg	50	12/8/2016 4:46:47 PM	29050
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	12/7/2016 9:13:06 PM	SG39221
Surr: BFB	88.8	68.3-144		%Rec	1	12/7/2016 9:13:06 PM	SG39221
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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-8 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 3:55:00 PM

Lab ID: 1612153-030

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	41	30		mg/Kg	20	12/7/2016 3:37:19 PM	29050

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-8 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/29/2016 4:30:00 PM

Lab ID: 1612153-031

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: LGT
Chloride	1300	75		mg/Kg	50	12/8/2016 4:59:12 PM	29050
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/7/2016 9:37:25 PM	SG39221
Surr: BFB	88.0	68.3-144		%Rec	1	12/7/2016 9:37:25 PM	SG39221
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.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-9 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 7:50:00 AM

Lab ID: 1612153-032

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: LGT
Chloride	4900	300		mg/Kg	200	12/8/2016 5:11:36 PM	29050

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-9 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 8:15:00 AM

Lab ID: 1612153-033

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: LGT
Chloride	11000	750		mg/Kg	500	12/8/2016 6:38:26 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-9 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 8:55:00 AM

Lab ID: 1612153-034

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: LGT
Chloride	7300	300		mg/Kg	200	12/8/2016 5:24:00 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-9 @ 19-21' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 10:15:00 AM

Lab ID: 1612153-035

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: LGT
Chloride	1700	75		mg/Kg	50	12/8/2016 6:50:50 PM	29065
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/7/2016 10:01:46 PM	SG39221
Surr: BFB	91.8	68.3-144		%Rec	1	12/7/2016 10:01:46 PM	SG39221
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.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-10 @ 4-6' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 11:40:00 AM

Lab ID: 1612153-036

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	170	30		mg/Kg	20	12/7/2016 4:51:35 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-10 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 11:50:00 AM

Lab ID: 1612153-037

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	38	30		mg/Kg	20	12/7/2016 5:03:59 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-10 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 12:15:00 PM

Lab ID: 1612153-038

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	76	30		mg/Kg	20	12/7/2016 5:16:24 PM	29065
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/7/2016 10:26:01 PM	SG39221
Surr: BFB	88.6	68.3-144		%Rec	1	12/7/2016 10:26:01 PM	SG39221
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.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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	Qual	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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

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 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	1400	75		mg/Kg	50	12/8/2016 5:36:24 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit		P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-11 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 2:35:00 PM

Lab ID: 1612153-041

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: LGT
Chloride	2800	150		mg/Kg	100	12/8/2016 5:48:48 PM	29065
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							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 RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	12/7/2016 10:50:17 PM	SG39221
Surr: BFB	87.4	68.3-144		%Rec	1	12/7/2016 10:50:17 PM	SG39221
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	12/7/2016 10:50:17 PM	R39221
Toluene	ND	0.044		mg/Kg	1	12/7/2016 10:50:17 PM	R39221
Ethylbenzene	ND	0.044		mg/Kg	1	12/7/2016 10:50:17 PM	R39221
Xylenes, Total	ND	0.088		mg/Kg	1	12/7/2016 10:50:17 PM	R39221
Surr: 4-Bromofluorobenzene	99.6	80-120		%Rec	1	12/7/2016 10:50:17 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.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample 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

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order **1612153**

Date Reported: **12/13/2016**

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-12 @ 9-11' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 3:45:00 PM

Lab ID: 1612153-043

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: LGT
Chloride	1800	300		mg/Kg	200	12/8/2016 6:26:02 PM	29065

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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 Laboratory, Inc.

Analytical Report

Lab Order 1612153

Date Reported: 12/13/2016

CLIENT: Atkins Engineering Associates

Client Sample ID: SB-12 @ 14-16' BGS

Project: Lea DS State No 001

Collection Date: 11/30/2016 4:15:00 PM

Lab ID: 1612153-044

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: LGT
Chloride	1800	75		mg/Kg	50	12/8/2016 7:03:15 PM	29065
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/12/2016 4:06:43 PM	29025
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/12/2016 4:06:43 PM	29025
Surr: DNOP	98.3	70-130		%Rec	1	12/12/2016 4:06:43 PM	29025
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/7/2016 11:14:36 PM	SG39221
Surr: BFB	85.6	68.3-144		%Rec	1	12/7/2016 11:14:36 PM	SG39221
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/7/2016 11:14:36 PM	R39221
Toluene	ND	0.040		mg/Kg	1	12/7/2016 11:14:36 PM	R39221
Ethylbenzene	ND	0.040		mg/Kg	1	12/7/2016 11:14:36 PM	R39221
Xylenes, Total	ND	0.079		mg/Kg	1	12/7/2016 11:14:36 PM	R39221
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	12/7/2016 11:14:36 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.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea 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	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29019		SampType: LCS		TestCode: EPA Method 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 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 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: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 29033		RunNo: 39236					
Prep Date:	12/6/2016		Analysis Date: 12/7/2016		SeqNo: 1227829		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P 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 |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea DS State No 001

Sample ID	MB-29065	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29065	RunNo:	39236					
Prep Date:	12/7/2016	Analysis Date:	12/7/2016	SeqNo:	1227836	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29065	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29065	RunNo:	39236					
Prep Date:	12/7/2016	Analysis Date:	12/7/2016	SeqNo:	1227837	Units:	mg/Kg			
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	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29050	RunNo:	39240					
Prep Date:	12/7/2016	Analysis Date:	12/7/2016	SeqNo:	1228016	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29050	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29050	RunNo:	39240					
Prep Date:	12/7/2016	Analysis Date:	12/7/2016	SeqNo:	1228017	Units:	mg/Kg			
Analyte	Result	PQL	SPK 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.

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea DS State No 001

Sample ID	LCS-29025		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 29025		RunNo: 39208					
Prep Date:	12/6/2016		Analysis Date: 12/7/2016		SeqNo: 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			TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID: 29025			RunNo: 39208					
Prep Date:	12/6/2016	Analysis Date: 12/7/2016			SeqNo: 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)	ND	50								
Surr: DNOP	10		10.00		102	70	130			

Sample ID	LCS-29117		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 29117		RunNo: 39305					
Prep Date:	12/12/2016		Analysis Date: 12/12/2016		SeqNo: 1230437		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	3.9		5.000		77.4	70	130			

Sample ID	MB-29117		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 29117		RunNo: 39305					
Prep Date:	12/12/2016		Analysis Date: 12/12/2016		SeqNo: 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		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 29055		RunNo: 39306					
Prep Date:	12/7/2016		Analysis Date: 12/12/2016		SeqNo: 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								
Surr: DNOP	10		10.00		104	70	130			

Sample ID	LCS-29055		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	29055		RunNo:	39306				
Prep Date:	12/7/2016		Analysis Date:	12/12/2016		SeqNo:	1230702		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea DS State No 001

Sample ID	LCS-29055		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 29055		RunNo: 39306					
Prep Date:	12/7/2016		Analysis Date: 12/12/2016		SeqNo: 1230702		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	4.5		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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea DS State No 001

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	SG39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227450	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		87.3	68.3	144			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	SG39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227451	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range 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	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SB-1 @ 14-16' BGS	Batch ID:	SG39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227458	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range 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	1612153-010AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	SB-1 @ 14-16' BGS	Batch ID:	SG39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227459	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range 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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612153

13-Dec-16

Client: Atkins Engineering Associates

Project: Lea DS State No 001

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227481	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.7	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227482	Units:	mg/Kg			
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	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SB-2 @ 14-16' BGS	Batch ID:	R39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227485	Units:	mg/Kg			
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	1612153-013AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	SB-2 @ 14-16' BGS	Batch ID:	R39221	RunNo:	39221					
Prep Date:		Analysis Date:	12/7/2016	SeqNo:	1227486	Units:	mg/Kg			
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:

* 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

Sample Log-In Check List

Client Name: ATK

Work Order Number: 1612153

RcptNo: 1

Received by/date: CM 12/02/16

Logged By: Anne Thorne 12/2/2016 9:15:00 AM

Completed By: Anne Thorne 12/5/2016 2:06:40 PM

Reviewed By: [Signature] 12/05/16

[Signature]

[Signature]

Chain of Custody

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? UPS

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
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 ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

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

