

3R - 451

SOIL REPORT

08 / 20 / 2015



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

August 19, 2015

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Lateral K-7 (2012)

OrderNo.: 1508821

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/18/2015 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', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-7

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:30:00 PM

Lab ID: 1508821-001

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/18/2015 1:04:16 PM	20853
Surr: DNOP	95.6	57.9-140		%REC	1	8/18/2015 1:04:16 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	8/18/2015 2:42:29 PM	20847
Surr: BFB	83.2	75.4-113		%REC	1	8/18/2015 2:42:29 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.038		mg/Kg	1	8/18/2015 11:47:06 AM	20847
Toluene	ND	0.038		mg/Kg	1	8/18/2015 11:47:06 AM	20847
Ethylbenzene	ND	0.038		mg/Kg	1	8/18/2015 11:47:06 AM	20847
Xylenes, Total	ND	0.077		mg/Kg	1	8/18/2015 11:47:06 AM	20847
Surr: 4-Bromofluorobenzene	82.4	80-120		%REC	1	8/18/2015 11:47:06 AM	20847

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-8

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:35:00 PM

Lab ID: 1508821-002

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/18/2015 1:31:15 PM	20853
Surr: DNOP	101	57.9-140		%REC	1	8/18/2015 1:31:15 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	8/18/2015 12:11:55 PM	20847
Surr: BFB	78.6	75.4-113		%REC	1	8/18/2015 12:11:55 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.036		mg/Kg	1	8/18/2015 12:11:55 PM	20847
Toluene	0.043	0.036		mg/Kg	1	8/18/2015 12:11:55 PM	20847
Ethylbenzene	ND	0.036		mg/Kg	1	8/18/2015 12:11:55 PM	20847
Xylenes, Total	ND	0.072		mg/Kg	1	8/18/2015 12:11:55 PM	20847
Surr: 4-Bromofluorobenzene	90.2	80-120		%REC	1	8/18/2015 12:11:55 PM	20847

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-9

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:40:00 PM

Lab ID: 1508821-003

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	8/18/2015 1:58:36 PM	20853
Surr: DNOP	100	57.9-140		%REC	1	8/18/2015 1:58:36 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/18/2015 12:36:51 PM	20847
Surr: BFB	79.0	75.4-113		%REC	1	8/18/2015 12:36:51 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.041		mg/Kg	1	8/18/2015 12:36:51 PM	20847
Toluene	ND	0.041		mg/Kg	1	8/18/2015 12:36:51 PM	20847
Ethylbenzene	ND	0.041		mg/Kg	1	8/18/2015 12:36:51 PM	20847
Xylenes, Total	ND	0.081		mg/Kg	1	8/18/2015 12:36:51 PM	20847
Surr: 4-Bromofluorobenzene	90.3	80-120		%REC	1	8/18/2015 12:36:51 PM	20847

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-10

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:45:00 PM

Lab ID: 1508821-004

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/18/2015 2:25:39 PM	20853
Surr: DNOP	94.9	57.9-140		%REC	1	8/18/2015 2:25:39 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/18/2015 1:01:41 PM	20847
Surr: BFB	81.7	75.4-113		%REC	1	8/18/2015 1:01:41 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.043		mg/Kg	1	8/18/2015 1:01:41 PM	20847
Toluene	ND	0.043		mg/Kg	1	8/18/2015 1:01:41 PM	20847
Ethylbenzene	ND	0.043		mg/Kg	1	8/18/2015 1:01:41 PM	20847
Xylenes, Total	ND	0.086		mg/Kg	1	8/18/2015 1:01:41 PM	20847
Surr: 4-Bromofluorobenzene	92.2	80-120		%REC	1	8/18/2015 1:01:41 PM	20847

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	Page 4 of 9
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-11

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:50:00 PM

Lab ID: 1508821-005

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/18/2015 2:52:57 PM	20853
Surr: DNOP	95.0	57.9-140		%REC	1	8/18/2015 2:52:57 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/18/2015 1:27:40 PM	20847
Surr: BFB	81.4	75.4-113		%REC	1	8/18/2015 1:27:40 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.045		mg/Kg	1	8/18/2015 1:27:40 PM	20847
Toluene	ND	0.045		mg/Kg	1	8/18/2015 1:27:40 PM	20847
Ethylbenzene	ND	0.045		mg/Kg	1	8/18/2015 1:27:40 PM	20847
Xylenes, Total	ND	0.090		mg/Kg	1	8/18/2015 1:27:40 PM	20847
Surr: 4-Bromofluorobenzene	93.1	80-120		%REC	1	8/18/2015 1:27:40 PM	20847

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

CLIENT: APEX TITAN

Client Sample ID: C-12

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 1:55:00 PM

Lab ID: 1508821-006

Matrix: SOIL

Received Date: 8/18/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/18/2015 3:20:16 PM	20853
Surr: DNOP	97.6	57.9-140		%REC	1	8/18/2015 3:20:16 PM	20853
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	8/18/2015 1:52:32 PM	20847
Surr: BFB	79.5	75.4-113		%REC	1	8/18/2015 1:52:32 PM	20847
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.044		mg/Kg	1	8/18/2015 1:52:32 PM	20847
Toluene	ND	0.044		mg/Kg	1	8/18/2015 1:52:32 PM	20847
Ethylbenzene	ND	0.044		mg/Kg	1	8/18/2015 1:52:32 PM	20847
Xylenes, Total	ND	0.088		mg/Kg	1	8/18/2015 1:52:32 PM	20847
Surr: 4-Bromofluorobenzene	91.4	80-120		%REC	1	8/18/2015 1:52:32 PM	20847

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

Client: APEX TITAN
Project: Lateral K-7 (2012)

Sample ID	MB-20853		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 20853		RunNo: 28280					
Prep Date:	8/18/2015		Analysis Date: 8/18/2015		SeqNo: 853972		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.7		10.00		97.4	57.9	140			

Sample ID	LCS-20853		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 20853		RunNo: 28280					
Prep Date:	8/18/2015		Analysis Date: 8/18/2015		SeqNo: 853973		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.1	57.4	139			
Surr: DNOP	5.0		5.000		99.2	57.9	140			

Sample ID	MB-20838		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 20838		RunNo: 28280					
Prep Date:	8/17/2015		Analysis Date: 8/18/2015		SeqNo: 854340		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		117	57.9	140			

Sample ID	LCS-20838		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 20838		RunNo: 28280					
Prep Date:	8/17/2015		Analysis Date: 8/18/2015		SeqNo: 854344		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.4		5.000		108	57.9	140			

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 | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

Client: APEX TITAN
Project: Lateral K-7 (2012)

Sample ID	MB-20847		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 20847		RunNo: 28291					
Prep Date:	8/17/2015		Analysis Date: 8/18/2015		SeqNo: 854187		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	800		1000		80.3	75.4	113			

Sample ID	LCS-20847		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 20847		RunNo: 28291					
Prep Date:	8/17/2015		Analysis Date: 8/18/2015		SeqNo: 854188		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	840		1000		83.9	75.4	113			

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

Client: APEX TITAN
Project: Lateral K-7 (2012)

Sample ID	MB-20847		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 20847		RunNo: 28291					
Prep Date:	8/17/2015		Analysis Date: 8/18/2015		SeqNo: 854208		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.93		1.000		93.0	80	120			

Sample ID	LCS-20847			SampType:	LCS			TestCode:	EPA Method 8021B: Volatiles		
Client ID:	LCSS			Batch ID:	20847			RunNo:	28291		
Prep Date:	8/17/2015			Analysis Date:	8/18/2015			SeqNo:	854209		
								Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.96	0.050	1.000	0	96.0	76.6	128				
Toluene	0.96	0.050	1.000	0	96.3	75	124				
Ethylbenzene	0.99	0.050	1.000	0	99.3	79.5	126				
Xylenes, Total	3.0	0.10	3.000	0	98.6	78.8	124				
Surr: 4-Bromofluorobenzene	1.0		1.000		99.6	80	120				

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	

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1508821

RcptNo: 1

Received by/date:

Logged By: Anne Thorne

8/18/2015 7:00:00 AM

Completed By: **Anne Thorne**

8/18/2015

Reviewed By:

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? Courier

Log In

- | | | | |
|---|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 10. VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA Vials <input checked="" type="checkbox"/> |
| 11. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <div style="border: 1px solid black; padding: 5px;"> # of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____

 Checked by: _____ </div> |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

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	1.2	Not Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Artec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: _____		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; transform: rotate(-15deg); display: inline-block;"> 201 BTRY 8/15 TPH C-PO/POED </div>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>1/2</u> 1 2 3 4 5 Page <u>1</u> of <u>1</u>	
		Project Manager <u>K. Summers</u> Sampler's Name <u>Ranee Deechilly</u> Sampler's Signature <u>Ranee Deechilly</u>		Project Name <u>Lateral K-7 (2012)</u>		No/Type of Containers	

Matrix	Date	Time	Identifying Marks of Sample(s)			No/Type of Containers				Lab Sample ID (Lab Use Only)							
			C o m p	G r a b	Start	Depth	End	Depth	VOA		A/G	250 ml	Glass Jar	P/O			
S	8/17/15	1330															1508821-001
S		1335															-002
S		1340															-003
S		1345															-004
S		1350															-005
S		1355															-006
NFS																	

Turn around time	Normal	25% Rush	50% Rush	100% Rush	2 Day Results by 8/19		NOTES:
					Received by: (Signature)	Date: Time	
Relinquished by (Signature)					<u>Ranee Deechilly</u>	8/17/15 1930	Bill to Tom Long AFE # A15106 2 day rush 8/19/15
Relinquished by (Signature)					<u>Whitney Webb</u>	8/17/15 0700	
Relinquished by (Signature)					<u>Whitney Webb</u>	8/18/15	
Relinquished by (Signature)							

Matrix Container	WW - Wastewater VOA - 40 ml vial	W - Water A/G - Amber / Or Glass 1 Liter	S - Soil SD - Solid	L - Liquid 250 ml - Glass wide mouth	A - Air Bag P/O - Plastic or other	C - Charcoal tube	SL - sludge	O - Oil
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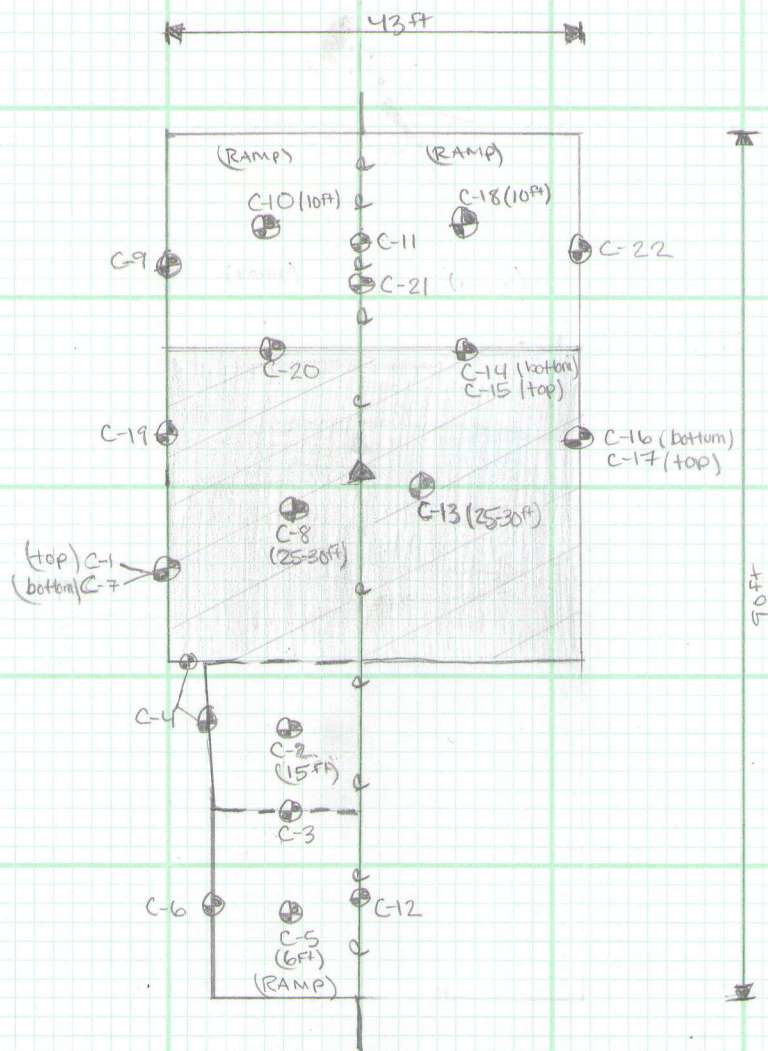


606 SOUTH RIO GRANDE, SUITE A
AZTEC, NEW MEXICO 87410

Project Name Lateral K-7 (2012)

Project No. _____ By _____ Checked _____

Date _____ Sheet _____ of _____



Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-13

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:00:00 PM

Lab ID: 1508971-001

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/20/2015 11:18:53 AM	20893
Surr: DNOP	78.7	57.9-140		%REC	1	8/20/2015 11:18:53 AM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	4.6	3.4		mg/Kg	1	8/20/2015 10:07:34 AM	R28350
Surr: BFB	89.8	75.4-113		%REC	1	8/20/2015 10:07:34 AM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.034		mg/Kg	1	8/20/2015 10:07:34 AM	R28350
Toluene	0.13	0.034		mg/Kg	1	8/20/2015 10:07:34 AM	R28350
Ethylbenzene	ND	0.034		mg/Kg	1	8/20/2015 10:07:34 AM	R28350
Xylenes, Total	0.29	0.067		mg/Kg	1	8/20/2015 10:07:34 AM	R28350
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/20/2015 10:07:34 AM	R28350

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-14

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:05:00 PM

Lab ID: 1508971-002

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/20/2015 11:40:00 AM	20893
Surr: DNOP	80.7	57.9-140		%REC	1	8/20/2015 11:40:00 AM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/20/2015 10:32:22 AM	R28350
Surr: BFB	84.4	75.4-113		%REC	1	8/20/2015 10:32:22 AM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.043		mg/Kg	1	8/20/2015 10:32:22 AM	R28350
Toluene	ND	0.043		mg/Kg	1	8/20/2015 10:32:22 AM	R28350
Ethylbenzene	ND	0.043		mg/Kg	1	8/20/2015 10:32:22 AM	R28350
Xylenes, Total	ND	0.086		mg/Kg	1	8/20/2015 10:32:22 AM	R28350
Surr: 4-Bromofluorobenzene	98.9	80-120		%REC	1	8/20/2015 10:32:22 AM	R28350

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	Page 2 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-15

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:10:00 PM

Lab ID: 1508971-003

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2015 12:01:18 PM	20893
Surr: DNOP	83.0	57.9-140		%REC	1	8/20/2015 12:01:18 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	8/20/2015 10:57:16 AM	R28350
Surr: BFB	86.1	75.4-113		%REC	1	8/20/2015 10:57:16 AM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	8/20/2015 10:57:16 AM	R28350
Toluene	ND	0.047		mg/Kg	1	8/20/2015 10:57:16 AM	R28350
Ethylbenzene	ND	0.047		mg/Kg	1	8/20/2015 10:57:16 AM	R28350
Xylenes, Total	ND	0.095		mg/Kg	1	8/20/2015 10:57:16 AM	R28350
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/20/2015 10:57:16 AM	R28350

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	Page 3 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-16

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:15:00 PM

Lab ID: 1508971-004

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2015 12:22:29 PM	20893
Surr: DNOP	81.3	57.9-140		%REC	1	8/20/2015 12:22:29 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	8/20/2015 11:22:08 AM	R28350
Surr: BFB	82.9	75.4-113		%REC	1	8/20/2015 11:22:08 AM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	1	8/20/2015 11:22:08 AM	R28350
Toluene	ND	0.040		mg/Kg	1	8/20/2015 11:22:08 AM	R28350
Ethylbenzene	ND	0.040		mg/Kg	1	8/20/2015 11:22:08 AM	R28350
Xylenes, Total	ND	0.079		mg/Kg	1	8/20/2015 11:22:08 AM	R28350
Surr: 4-Bromofluorobenzene	96.5	80-120		%REC	1	8/20/2015 11:22:08 AM	R28350

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	Page 4 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-17

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:20:00 PM

Lab ID: 1508971-005

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2015 12:43:54 PM	20893
Surr: DNOP	84.5	57.9-140		%REC	1	8/20/2015 12:43:54 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	8/20/2015 11:47:09 AM	R28350
Surr: BFB	87.1	75.4-113		%REC	1	8/20/2015 11:47:09 AM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.041		mg/Kg	1	8/20/2015 11:47:09 AM	R28350
Toluene	0.046	0.041		mg/Kg	1	8/20/2015 11:47:09 AM	R28350
Ethylbenzene	ND	0.041		mg/Kg	1	8/20/2015 11:47:09 AM	R28350
Xylenes, Total	0.25	0.083		mg/Kg	1	8/20/2015 11:47:09 AM	R28350
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	8/20/2015 11:47:09 AM	R28350

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	Page 5 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-18

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:25:00 PM

Lab ID: 1508971-006

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	8/20/2015 11:26:05 AM	20893
Surr: DNOP	100	57.9-140		%REC	1	8/20/2015 11:26:05 AM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/20/2015 12:11:57 PM	R28350
Surr: BFB	85.3	75.4-113		%REC	1	8/20/2015 12:11:57 PM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	8/20/2015 12:11:57 PM	R28350
Toluene	ND	0.046		mg/Kg	1	8/20/2015 12:11:57 PM	R28350
Ethylbenzene	ND	0.046		mg/Kg	1	8/20/2015 12:11:57 PM	R28350
Xylenes, Total	ND	0.093		mg/Kg	1	8/20/2015 12:11:57 PM	R28350
Surr: 4-Bromofluorobenzene	98.7	80-120		%REC	1	8/20/2015 12:11:57 PM	R28350

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	Page 6 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-19

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:30:00 PM

Lab ID: 1508971-007

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/20/2015 11:52:36 AM	20893
Surr: DNOP	102	57.9-140		%REC	1	8/20/2015 11:52:36 AM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	8/20/2015 12:36:47 PM	R28350
Surr: BFB	83.9	75.4-113		%REC	1	8/20/2015 12:36:47 PM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.052		mg/Kg	1	8/20/2015 12:36:47 PM	R28350
Toluene	ND	0.052		mg/Kg	1	8/20/2015 12:36:47 PM	R28350
Ethylbenzene	ND	0.052		mg/Kg	1	8/20/2015 12:36:47 PM	R28350
Xylenes, Total	ND	0.10		mg/Kg	1	8/20/2015 12:36:47 PM	R28350
Surr: 4-Bromofluorobenzene	96.7	80-120		%REC	1	8/20/2015 12:36:47 PM	R28350

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	Page 7 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-20

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:35:00 PM

Lab ID: 1508971-008

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2015 12:19:26 PM	20893
Surr: DNOP	101	57.9-140		%REC	1	8/20/2015 12:19:26 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	8/20/2015 1:01:39 PM	R28350
Surr: BFB	82.7	75.4-113		%REC	1	8/20/2015 1:01:39 PM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	8/20/2015 1:01:39 PM	R28350
Toluene	ND	0.048		mg/Kg	1	8/20/2015 1:01:39 PM	R28350
Ethylbenzene	ND	0.048		mg/Kg	1	8/20/2015 1:01:39 PM	R28350
Xylenes, Total	ND	0.096		mg/Kg	1	8/20/2015 1:01:39 PM	R28350
Surr: 4-Bromofluorobenzene	95.2	80-120		%REC	1	8/20/2015 1:01:39 PM	R28350

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	Page 8 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-21

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:40:00 PM

Lab ID: 1508971-009

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/20/2015 12:46:22 PM	20893
Surr: DNOP	103	57.9-140		%REC	1	8/20/2015 12:46:22 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/20/2015 1:26:33 PM	R28350
Surr: BFB	87.8	75.4-113		%REC	1	8/20/2015 1:26:33 PM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	8/20/2015 1:26:33 PM	R28350
Toluene	ND	0.049		mg/Kg	1	8/20/2015 1:26:33 PM	R28350
Ethylbenzene	ND	0.049		mg/Kg	1	8/20/2015 1:26:33 PM	R28350
Xylenes, Total	ND	0.099		mg/Kg	1	8/20/2015 1:26:33 PM	R28350
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	8/20/2015 1:26:33 PM	R28350

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	Page 9 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508971**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-22

Project: Lateral K-7 (2012)

Collection Date: 8/19/2015 1:45:00 PM

Lab ID: 1508971-010

Matrix: SOIL

Received Date: 8/20/2015 7:15:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/20/2015 1:13:21 PM	20893
Surr: DNOP	104	57.9-140		%REC	1	8/20/2015 1:13:21 PM	20893
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	8/20/2015 1:51:25 PM	R28350
Surr: BFB	80.3	75.4-113		%REC	1	8/20/2015 1:51:25 PM	R28350
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.037		mg/Kg	1	8/20/2015 1:51:25 PM	R28350
Toluene	ND	0.037		mg/Kg	1	8/20/2015 1:51:25 PM	R28350
Ethylbenzene	ND	0.037		mg/Kg	1	8/20/2015 1:51:25 PM	R28350
Xylenes, Total	ND	0.075		mg/Kg	1	8/20/2015 1:51:25 PM	R28350
Surr: 4-Bromofluorobenzene	92.1	80-120		%REC	1	8/20/2015 1:51:25 PM	R28350

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-1

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:00:00 PM

Lab ID: 1508736-001

Matrix: SOIL

Received Date: 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/17/2015 10:39:08 AM	20837
Surr: DNOP	86.2	57.9-140		%REC	1	8/17/2015 10:39:08 AM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	8/17/2015 11:24:38 AM	R28260
Surr: BFB	80.5	75.4-113		%REC	1	8/17/2015 11:24:38 AM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	8/17/2015 11:24:38 AM	R28260
Toluene	ND	0.050		mg/Kg	1	8/17/2015 11:24:38 AM	R28260
Ethylbenzene	ND	0.050		mg/Kg	1	8/17/2015 11:24:38 AM	R28260
Xylenes, Total	ND	0.10		mg/Kg	1	8/17/2015 11:24:38 AM	R28260
Surr: 4-Bromofluorobenzene	92.4	80-120		%REC	1	8/17/2015 11:24:38 AM	R28260

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	Page 1 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN**Client Sample ID:** C-2**Project:** Lateral K-7 (2012)**Collection Date:** 8/14/2015 2:05:00 PM**Lab ID:** 1508736-002**Matrix:** SOIL**Received Date:** 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/17/2015 11:00:34 AM	20837
Surr: DNOP	83.0	57.9-140		%REC	1	8/17/2015 11:00:34 AM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	8/17/2015 1:54:04 PM	R28260
Surr: BFB	80.6	75.4-113		%REC	1	8/17/2015 1:54:04 PM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.045		mg/Kg	1	8/17/2015 1:54:04 PM	R28260
Toluene	ND	0.045		mg/Kg	1	8/17/2015 1:54:04 PM	R28260
Ethylbenzene	ND	0.045		mg/Kg	1	8/17/2015 1:54:04 PM	R28260
Xylenes, Total	ND	0.090		mg/Kg	1	8/17/2015 1:54:04 PM	R28260
Surr: 4-Bromofluorobenzene	92.0	80-120		%REC	1	8/17/2015 1:54:04 PM	R28260

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	Page 2 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-3

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:10:00 PM

Lab ID: 1508736-003

Matrix: SOIL

Received Date: 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	8/17/2015 11:27:47 AM	20837
Surr: DNOP	92.1	57.9-140		%REC	1	8/17/2015 11:27:47 AM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/17/2015 12:14:30 PM	R28260
Surr: BFB	84.7	75.4-113		%REC	1	8/17/2015 12:14:30 PM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.043		mg/Kg	1	8/17/2015 12:14:30 PM	R28260
Toluene	ND	0.043		mg/Kg	1	8/17/2015 12:14:30 PM	R28260
Ethylbenzene	ND	0.043		mg/Kg	1	8/17/2015 12:14:30 PM	R28260
Xylenes, Total	0.091	0.087		mg/Kg	1	8/17/2015 12:14:30 PM	R28260
Surr: 4-Bromofluorobenzene	96.8	80-120		%REC	1	8/17/2015 12:14:30 PM	R28260

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-4

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:15:00 PM

Lab ID: 1508736-004

Matrix: SOIL

Received Date: 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	8/17/2015 11:49:11 AM	20837
Surr: DNOP	91.5	57.9-140		%REC	1	8/17/2015 11:49:11 AM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	8/17/2015 12:39:25 PM	R28260
Surr: BFB	84.9	75.4-113		%REC	1	8/17/2015 12:39:25 PM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.043		mg/Kg	1	8/17/2015 12:39:25 PM	R28260
Toluene	0.053	0.043		mg/Kg	1	8/17/2015 12:39:25 PM	R28260
Ethylbenzene	ND	0.043		mg/Kg	1	8/17/2015 12:39:25 PM	R28260
Xylenes, Total	0.24	0.086		mg/Kg	1	8/17/2015 12:39:25 PM	R28260
Surr: 4-Bromofluorobenzene	97.3	80-120		%REC	1	8/17/2015 12:39:25 PM	R28260

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	Page 4 of 0
	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			

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-5

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:20:00 PM

Lab ID: 1508736-005

Matrix: SOIL

Received Date: 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	8/17/2015 12:10:34 PM	20837
Surr: DNOP	87.0	57.9-140		%REC	1	8/17/2015 12:10:34 PM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	8/17/2015 1:04:19 PM	R28260
Surr: BFB	79.7	75.4-113		%REC	1	8/17/2015 1:04:19 PM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	8/17/2015 1:04:19 PM	R28260
Toluene	ND	0.046		mg/Kg	1	8/17/2015 1:04:19 PM	R28260
Ethylbenzene	ND	0.046		mg/Kg	1	8/17/2015 1:04:19 PM	R28260
Xylenes, Total	ND	0.092		mg/Kg	1	8/17/2015 1:04:19 PM	R28260
Surr: 4-Bromofluorobenzene	91.1	80-120		%REC	1	8/17/2015 1:04:19 PM	R28260

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **1508736**

Date Reported:

CLIENT: APEX TITAN

Client Sample ID: C-6

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:25:00 PM

Lab ID: 1508736-006

Matrix: SOIL

Received Date: 8/15/2015 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	8/17/2015 12:32:11 PM	20837
Surr: DNOP	90.9	57.9-140		%REC	1	8/17/2015 12:32:11 PM	20837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	8/17/2015 1:29:13 PM	R28260
Surr: BFB	84.1	75.4-113		%REC	1	8/17/2015 1:29:13 PM	R28260
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.049		mg/Kg	1	8/17/2015 1:29:13 PM	R28260
Toluene	ND	0.049		mg/Kg	1	8/17/2015 1:29:13 PM	R28260
Ethylbenzene	ND	0.049		mg/Kg	1	8/17/2015 1:29:13 PM	R28260
Xylenes, Total	ND	0.099		mg/Kg	1	8/17/2015 1:29:13 PM	R28260
Surr: 4-Bromofluorobenzene	97.2	80-120		%REC	1	8/17/2015 1:29:13 PM	R28260

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	Page 6 of 0
	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			