

**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](http://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](http://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 in a cursive style.

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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank	Page 2 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-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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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 <b>MB-20853</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>20853</b>		RunNo: <b>28280</b>							
Prep Date: <b>8/18/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>853972</b>		Units: <b>mg/Kg</b>					
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 <b>LCS-20853</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>20853</b>		RunNo: <b>28280</b>							
Prep Date: <b>8/18/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>853973</b>		Units: <b>mg/Kg</b>					
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 <b>MB-20838</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>PBS</b>	Batch ID: <b>20838</b>		RunNo: <b>28280</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854340</b>		Units: <b>%REC</b>					
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 <b>LCS-20838</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015M/D: Diesel Range Organics</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>20838</b>		RunNo: <b>28280</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854344</b>		Units: <b>%REC</b>					
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.
- 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 <b>MB-20847</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>20847</b>		RunNo: <b>28291</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854187</b>		Units: <b>mg/Kg</b>					
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 <b>LCS-20847</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>20847</b>		RunNo: <b>28291</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854188</b>		Units: <b>mg/Kg</b>					
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 <b>MB-20847</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>PBS</b>	Batch ID: <b>20847</b>		RunNo: <b>28291</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854208</b>		Units: <b>mg/Kg</b>					
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 <b>LCS-20847</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8021B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>20847</b>		RunNo: <b>28291</b>							
Prep Date: <b>8/17/2015</b>	Analysis Date: <b>8/18/2015</b>		SeqNo: <b>854209</b>		Units: <b>mg/Kg</b>					
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.
- 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

Client Name: APEX AZTEC

Work Order Number: 1508821

RcptNo: 1

Received by/date: AT 08/18/15

Logged By: Anne Thorne 8/18/2015 7:00:00 AM *Anne Thorne*

Completed By: Anne Thorne 8/18/2015 *Anne Thorne*

Reviewed By: *mg* 08/18/15

**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  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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

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

**Laboratory:** Hall Environmental  
**Address:** Albuquerque, NM  
**Contact:** Andy Freeman  
**Phone:**  
**PO/SO #:**

**Office Location:** Aztec, NM

**Project Manager:** K. Summers  
**Sampler's Name:** Rane Deechilly  
**Sampler's Signature:** *Rane Deechilly*

Proj. No.	Matrix	Date	Time	Project Name		No/Type of Containers						Lab Sample ID (Lab Use Only)			
				Comp	Label	Identifying Marks of Sample(s)	Start	Depth	End	Depth	VOA		250 ml	1 L	250 ml Glass Jar
	S	8/17/15	1330			Lateral K-7 (2012)									1508821-001
	S		1335			C-7									-002
	S		1340			C-8									-003
	S		1345			C-9									-004
	S		1350			C-10									-005
	S		1355			C-11									-006
	S					C-12									-

Turn around time	Normal	25% Rush	50% Rush	100% Rush	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Rane Deechilly</i>	8/17/15	1930	<i>Tom Long</i>	8/17/15	1930
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Walter Webb</i>	8/17/15	2010	<i>Tom Long</i>	8/18/15	0700
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Walter Webb</i>	8/17/15				
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

**ANALYSIS REQUESTED:** *021 BTEX, 8/15 TPH, G-PRO/PCD*

**Lab use only Due Date:** \_\_\_\_\_

**Temp. of coolers when received (C°):** *1/2*

Page *1* of *1*

**NOTES:**  
*Bill to Tom Long*  
*AFE # A15106*  
*2 day rush 8/19/15*

**Relinquished by (Signature):** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

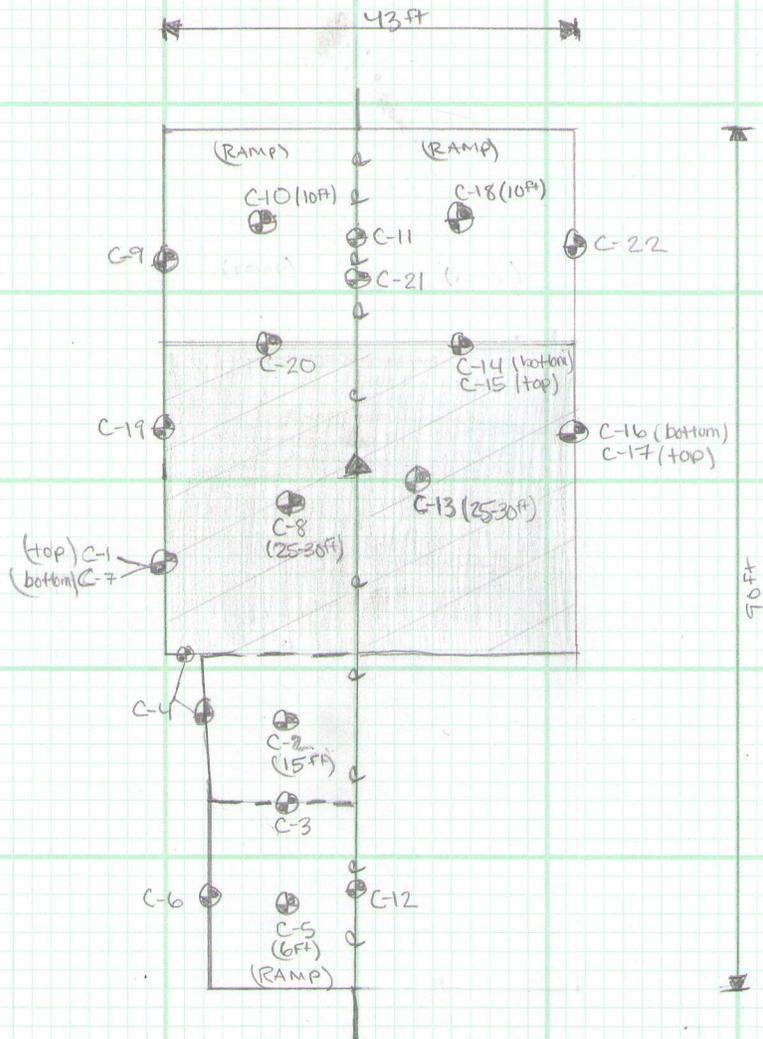


606 SOUTH RIO GRANDE, SUITE A  
AZTEC, NEW MEXICO 87410

Project Name Lateral K-7 (2002)

Project No. \_\_\_\_\_ By \_\_\_\_\_ Checked \_\_\_\_\_

Date \_\_\_\_\_ Sheet \_\_\_\_\_ of \_\_\_\_\_



1 inch = 20 FT

**Hall Environmental Analysis Laboratory, Inc.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							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
<b>EPA METHOD 8021B: VOLATILES</b>							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
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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-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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							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
<b>EPA METHOD 8021B: VOLATILES</b>							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
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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.**

**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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	* 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.****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
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
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
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
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
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
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.

<b>Qualifiers:</b>	*	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		