

3R-1046

**Enterprise
Lateral 6B-10 Release**

10-26-2016

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural
Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office
in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 6B-10	Facility Type: Natural Gas Gathering Pipeline
Surface Owner: Navajo/NAPI	Mineral Owner: Navajo
Serial Number: N/A	

LOCATION OF RELEASE

Unit Letter P	Section 27	Township 28N	Range 12W	Feet from the 20	North Line	South	Feet from the 664	East Line	West Line	County San Juan
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Latitude 36.625981 Longitude -108.092347

OIL CONS. DIV DIST. 3

MAR 16 2017

NATURE OF RELEASE

Type of Release: Natural Gas and Condensate	Volume of Release 1.8 MCF Gas; Estimated 25-30 Barrels of Condensate	Volume Recovered: None
Source of Release: Internal Corrosion	Date and Hour of Occurrence: 10/28/2016 @ 11:55 a.m.	Date and Hour of Discovery: 10/28/2016 @ 12:30 p.m.
Was Immediate Notice Given? Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not	If YES, To Whom? Vanessa Fields - NMOCD, Steve Austin - NNEPA, Mike Freeman - NAPI	
By Whom? Thomas Long	Date and Time October 28, 2016 @ 1:17 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action: On October 28, 2016, Enterprise technicians discovered a gas leak on the Lateral 6B-10 pipeline. An area of approximately 150 feet long by 30 feet wide was affected by fluids release to the ground surface. The pipeline was isolated, blown down, locked out and tagged out. Standing liquid and saturated soil were recovered from the ground surface and properly disposed. Soil remediation was completed on January 27, 2017.

Describe Area Affected and Cleanup Action: The remediation of this release is associated with Case #nVF1631254194. The contaminant mass was removed by mechanical excavation. The final excavations removed approximately 4, 303 cubic yards of hydrocarbon impacted soil. Excavated soil was transported to a New Mexico Oil Conservation approved land farm facility. Third party corrective action reports are included with this "Final Soils" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Jon E. Fields	Approved by Environmental Specialist:	
Title: Director, Environmental	Approval Date: 4/24/2017	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 3-13-17	Phone: (713)381-6684	NVF1631254194

* Attach Additional Sheets If Necessary

GW Case Refer to 32P-1046



OIL CONS. DIV DIST. 3

MAR 16 2017

CORRECTIVE ACTION REPORT

Property:

**Lateral 6B-10 Pipeline Release (October 2016)
SE 1/4, S27 T28N R12W
San Juan County, New Mexico**

February 22, 2017
Apex Project No. 725040112217

Prepared for:

**Enterprise Field Services LLC
614 Reilly Avenue
Farmington, NM 87401
Attn: Mr. Thomas Long**

Prepared by:


Chad D'Aponti
Project Scientist

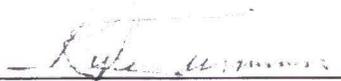

Kyle Summers, CPG
Branch Manager/Senior Project
Manager

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CORRECTIVE ACTION REPORT

Lateral 6B-10 Pipeline Release (October 2016)
SE 1/4, S27 T28N R12W
San Juan County, New Mexico

Apex Project No. 725040112217

1.0 INTRODUCTION

1.1 Site Description & Background

The 6B-10 pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of Section 27, Township 28 North, Range 12 West, in San Juan County, New Mexico (36.62598N, 108.09234W), referred to hereinafter as the "Site". The Site is located on Navajo Nation Trust Land. The Site is predominantly surrounded by agricultural land operated by Navajo Agriculture Products Industry (NAPI). Oil and gas production and gathering facilities and pipelines are also common in the area, including the Enterprise natural gas pipeline which traverses the area from northeast to southwest.

On October 28, 2016, Enterprise personnel identified a release on the Lateral 6B-10. The surface expression of the release was characterized by soil discoloration at the ground surface and evidence of a pipeline liquids flow path that traveled northeast from the point of release. Initial response activities included the removal of surface liquids and surficial soils from the flow path. On November 22, 2016, Enterprise initiated excavation activities to facilitate the repair of the pipeline and to remediate potential hydrocarbon impact to soils. The leak was subsequently repaired by replacing 84 feet of the pipeline.

A Topographic Map depicting the location of the Site is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

1.2 Project Objective

The primary objective of the environmental corrective actions was to reduce the concentration of constituents of concern (COCs) in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels* (RALs) using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

2.0 SITE RANKING

The Site is subject to regulatory oversight by the Navajo Nation Environmental Protection Agency (NNEPA) and the New Mexico OCD. In the absence of published/finalized NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) referenced the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities and information available from the New Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking Criteria			Ranking Score
Depth to Groundwater	<50 feet	20	20
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	0
	No	0	
Distance to Surface Water Body	<200 feet	20	20
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			40

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 40 this ranking is based on the following:

- No water wells were identified within a mile of the Site on the OSE website. There appear to be unregistered water wells (livestock wells) in the area, but none are within 1,000 feet of the Site. Apparent groundwater was encountered during corrective action activities at approximately 19 to 20 feet below grade surface (bgs), resulting in a ranking score of "20" for depth to groundwater.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking score of "0".
- The Site is located adjacent to and unnamed ephemeral wash, identified as a "blue line" on the United States Geological Survey topographic map. The wash appears to have been buried when the fields were created. This information supports a distance to surface water ranking score of "20".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On October 28, 2016, Enterprise personnel identified a release on the Lateral 6B-10. The surface expression of the release was characterized by soil discoloration at the ground surface and evidence of a pipeline liquids flow path that traveled northeast from the point of release. Initial response activities included the removal of surface liquids and surficial soils from the flow path. On November 22, 2016, Enterprise initiated excavation activities to facilitate the repair of the pipeline and to remediate potential hydrocarbon impact to soils. The leak was subsequently repaired by replacing 84 feet of the pipeline. During the corrective action activities, Foutz and Bursum Construction Co., Inc. provided heavy equipment and labor support, and Apex provided environmental support.

Enterprise performed remediation excavation activities intermittently between November 22, 2016 and January 27, 2017. Activities were occasionally delayed during that time period due to inclement weather, awaiting laboratory results, negotiations with Questar Pipeline, LLC (Questar) regarding activities near their pipeline, and the actual pipeline replacement activities, which

required additional engineering modifications of the pipeline system to allow evacuation of the pipeline gas and liquids prior to repair.

The first confirmation sample (S-1) was a grab sample collected from the bottom of the initial excavation at approximately 22 feet bgs. The following day, groundwater was observed at approximately 20 feet bgs in the excavation. The groundwater exhibited a hydrocarbon odor and an apparent sheen. Between November 28, 2016 and January 27, 2017, 38 composite soil samples (S-2 through S-39) were collected for laboratory analyses from the excavation sidewalls and benches to evaluate and delineate hydrocarbon impact to Site soils. Additionally, six (6) flow path soil samples (FP-1 through FP-6), were collected for laboratory analyses from the excavated path of the surface release. A New Mexico OCD representative was present during soil sampling activities.

The final excavation is irregular in shape and measured approximately 93 feet long by 72 feet wide at the maximum extents. The depth of the excavation averaged 20 feet bgs. The final flow path excavation measured approximately 140 feet long by 8 feet wide, with an average depth of two (2) feet bgs.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand, underlain by weathered to semi-weathered sandstone.

Two (2) composite stockpiled soil samples (SP-1 and SP-2) were collected from two (2) small stockpiles of overburden soils for laboratory analyses to determine the potential to reuse those soils as backfill. However, although the stockpiled soils exhibited COC concentrations below the OCD guidelines, these soils were ultimately transported to the Envirotech, Inc. (Envirotech) landfarm for disposal/remediation with the impacted soils from the Site. In all, a total of approximately 4,303 cubic yards of hydrocarbon-affected soils and overburden soils were transported to the Envirotech landfarm for disposal/remediation. The executed C-138 forms are provided in Appendix B. The excavation was backfilled with clean imported fill, and then contoured to surrounding grade.

Figure 3 is a Site Map with soil sample locations that depicts the approximate location of the excavated area in relation to the Site pipelines (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex screened head-space samples of the impacted soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to estimate excavation limits.

Apex's soil sampling program included the collection of 39 soil samples (S-1 through S-39) from the repair excavation, six (6) flow path soil samples (FP-1 through FP-6), and two (2) composite stockpile soil samples (SP-1 and SP-2) for laboratory analyses.

The soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied label, and placed on ice in a cooler, which was secured with a custody seal. The samples and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico for analysis.

3.3 Laboratory Analytical Methods

The soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO), diesel range organics (DRO), and motor oil/lube oil range organics (MRO) using EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-of-custody forms and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the NNEPA and the New Mexico OCD. In the absence of published/finalized NNEPA regulatory guidance, Apex referenced the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Release Notification*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or practical quantitation limits (PQLs) associated with the excavation soil samples remaining in place (S-1, S-10, S-11, and S-17 through S-39), and the flow path soil samples (FP-1 through FP-6) to the OCD RALs for sites having a total ranking score of "40". Soils associated with the remaining soil samples were removed from the Site and transported to the Envirotech landfarm near Hilltop, NM for disposal/treatment, and are not included in the following discussion.

- The laboratory analyses of the confirmation samples from soils remaining in place indicate benzene concentrations ranging from below the PQLs to 0.20 milligrams per kilogram (mg/kg) (S-11), which are below the OCD RAL of 10 mg/kg.
- The laboratory analyses of the confirmation samples from soils remaining in place indicate total BTEX concentrations ranging from below the PQLs to 0.40 mg/kg (S-11), which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of the confirmation samples from soils remaining in place indicate combined TPH GRO/DRO/MRO concentrations ranging from below PQLs to 44 mg/kg (FP-2), which are below the OCD RAL of 100 mg/kg.

Confirmation sample and stockpiled soil sample laboratory analytical results are provided in Table 1 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 6B-10 pipeline release Site is located within the Enterprise pipeline ROW in the SE $\frac{1}{4}$ of Section 27, Township 28 North, Range 12 West, in San Juan County, New Mexico. The Site is located on Navajo Nation Trust Land. The Site is predominantly surrounded by agricultural land operated by Navajo Agriculture Products Industry (NAPI). Oil and gas production and gathering

facilities and pipelines are also common in the area, including the Enterprise natural gas pipeline which traverses the area from northeast to southwest.

On October 28, 2016, Enterprise personnel identified a release on the Lateral 6B-10. The surface expression of the release was characterized by soil discoloration at the ground surface and evidence of a pipeline liquids flow path that traveled northeast from the point of release. Initial response activities included the removal of surface liquids and surficial soils from the flow path. On November 22, 2016, Enterprise initiated excavation activities to facilitate the repair of the pipeline and to remediate potential hydrocarbon impact to soils. The leak was subsequently repaired by replacing 84 feet of the pipeline.

- The primary objective of the environmental corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand, underlain by weathered to semi-weathered sandstone.
- The final excavation measured approximately 93 feet long by 72 feet wide at the maximum extents. The depth of the excavation averaged 20 feet bgs. The final flow path excavation measured approximately 140 feet long by 8 feet wide, with an average depth of two (2) feet bgs.
- Prior to backfilling, 39 excavation soil samples, six (6) flow path soil samples, and two (2) stockpiled soil composite samples were collected for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit BTEX or TPH GRO/DRO/MRO concentrations above the OCD RALs for a site ranking of "40".
- A total of approximately 4,303 cubic yards of soil were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and then contoured to the approximate surrounding grade.

Based on field observations and laboratory analytical results, no additional corrective action with respect to soil impact appears warranted at this time. However, further groundwater evaluation is warranted.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed or described herein. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators

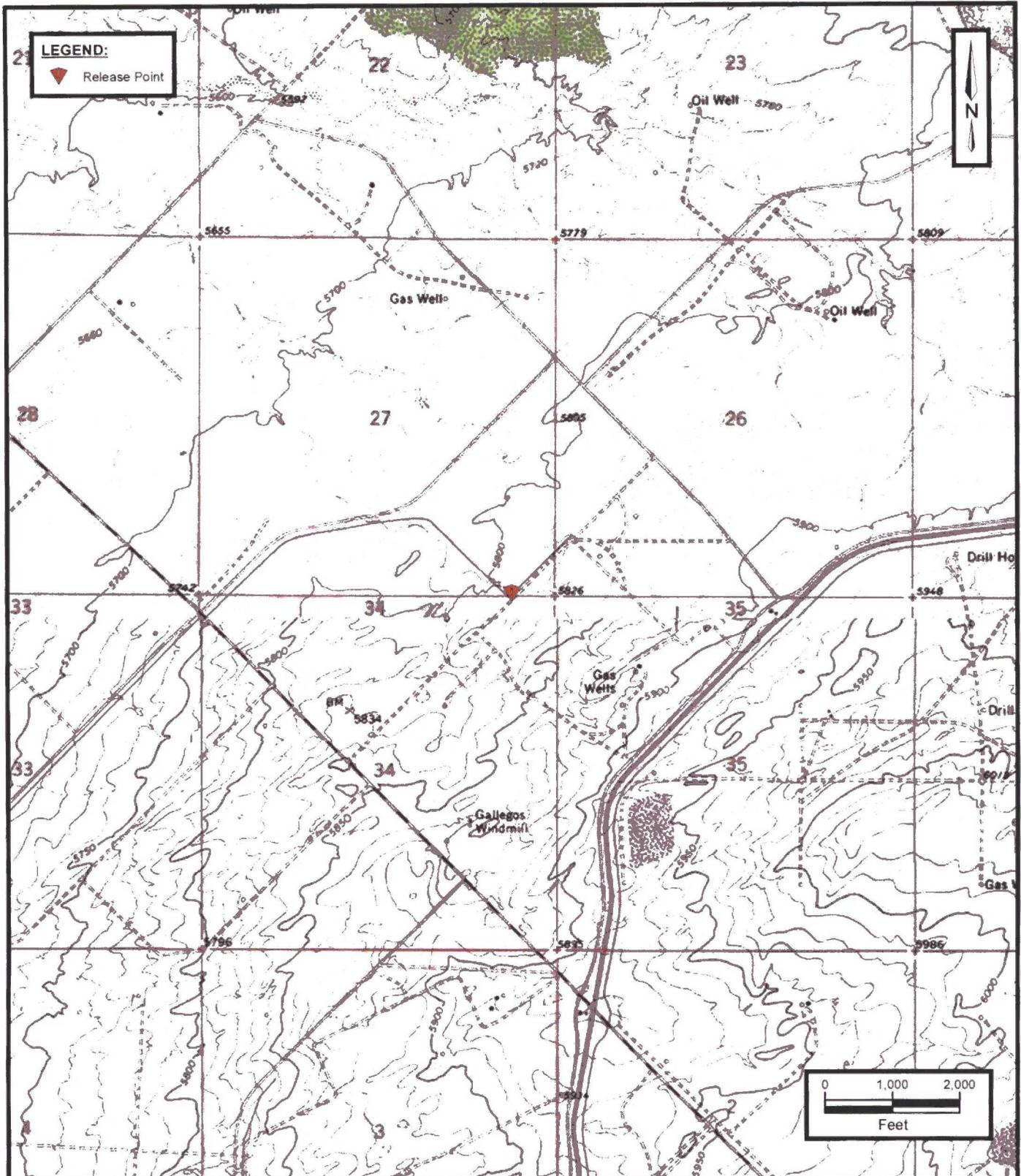


of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

APPENDIX A

Figures



Lateral 6B-10
 SE 1/4 T28N R12W S27
 San Juan County, New Mexico
 36.625981 N, 108.092347 W



Apex TITAN, Inc.
 606 South Rio Grande, Suite A
 Aztec, New Mexico 87410
 Phone: (505) 334-5200
 www.apexcos.com
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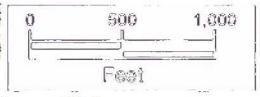
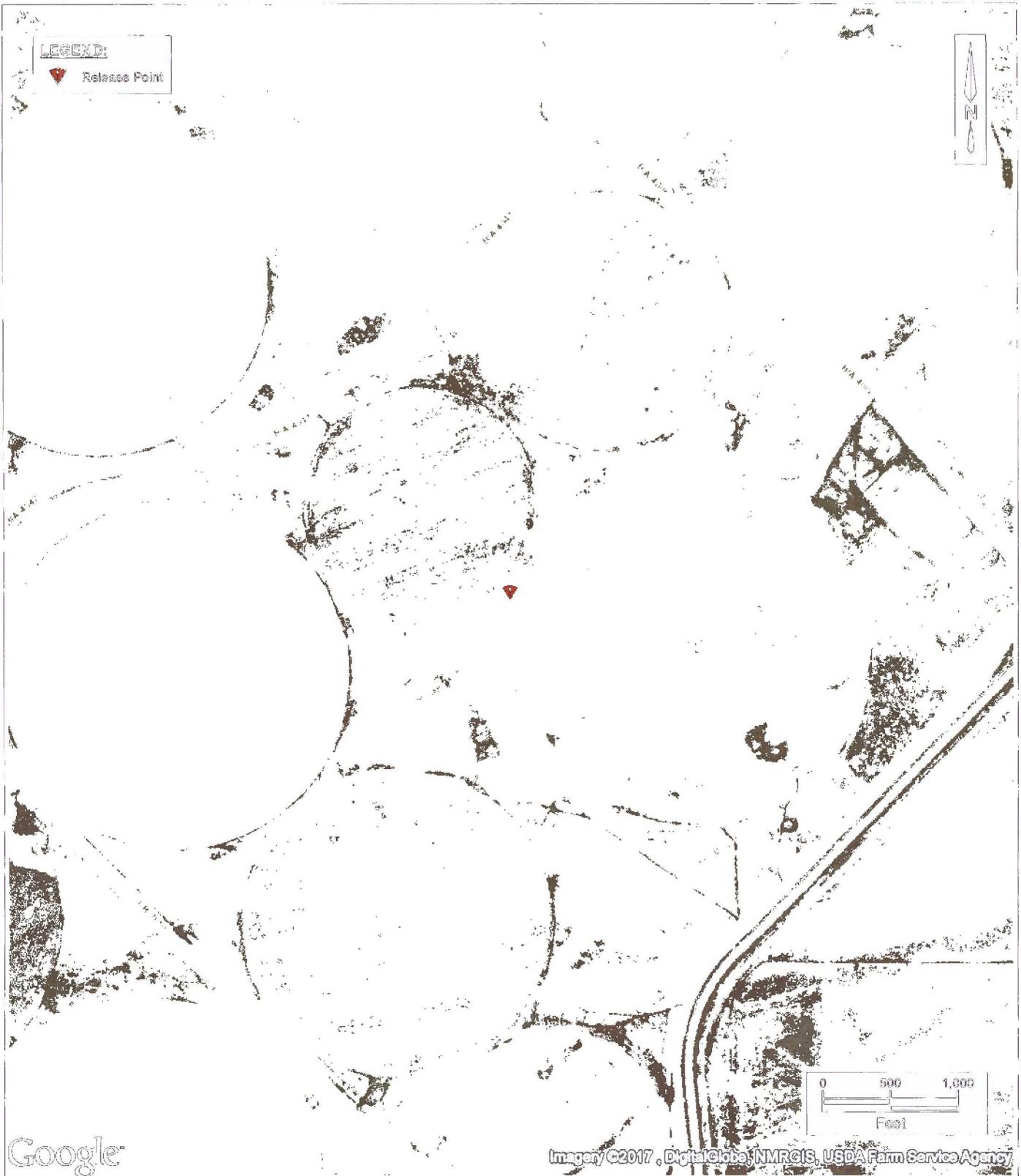
FIGURE 1
Topographic Map

Service Layer Credits:
 Copyright © 2013 National Geographic Society, i-cubed, Horn
 Canyon and Gallegos Trading Post New Mexico 7.5-Minute
 Quadrangles 1978

Project No. 725040112217

LEGEND:

▼ Release Point



Google

Imagery ©2017, DigitalGlobe, NMRGIS, USDA Farm Service Agency

Lateral GB-10
SE 1/4 T28N R12W S27
San Juan County, New Mexico
38.625981 N, 108.082347 W

Project No. 725040112217



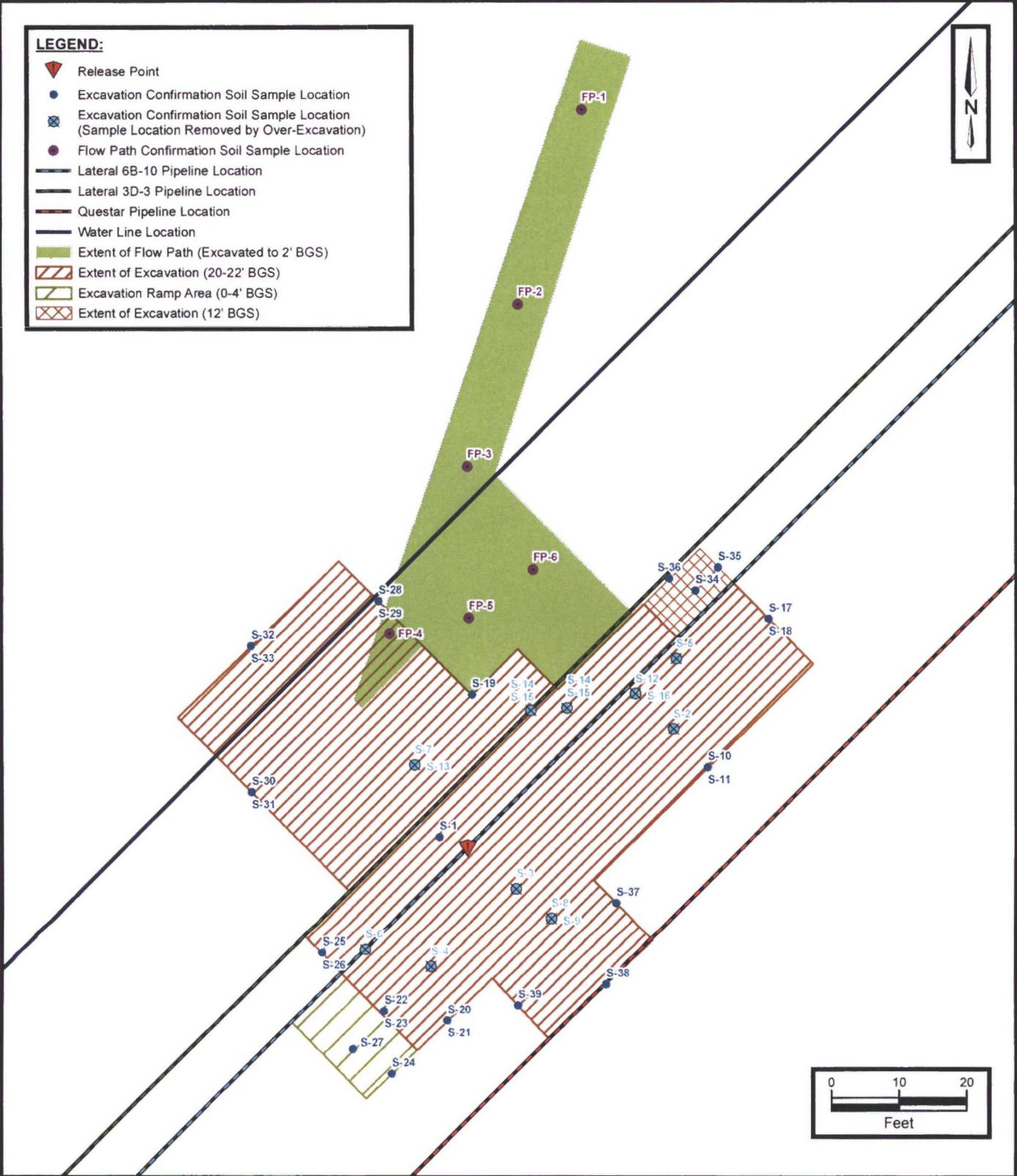
Apex TITAN, Inc.
606 South Rio Grande, Suite A
Aztec, New Mexico 87410
Phone: (505) 334-3200
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 2
Site Vicinity Map

Service Layer Credits:
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Aerial Photograph March 2015

LEGEND:

-  Release Point
-  Excavation Confirmation Soil Sample Location
-  Excavation Confirmation Soil Sample Location (Sample Location Removed by Over-Excavation)
-  Flow Path Confirmation Soil Sample Location
-  Lateral 6B-10 Pipeline Location
-  Lateral 3D-3 Pipeline Location
-  Questar Pipeline Location
-  Water Line Location
-  Extent of Flow Path (Excavated to 2' BGS)
-  Extent of Excavation (20-22' BGS)
-  Excavation Ramp Area (0-4' BGS)
-  Extent of Excavation (12' BGS)



Lateral 6B-10
 SE 1/4 T28N R12W S27
 San Juan County, New Mexico
 36.625981 N, 108.092347 W

Project No. 725040112217



Apex TITAN, Inc.
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 Aztec, New Mexico 87410
 Phone: (505) 334-5200
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FIGURE 3
 Site Map

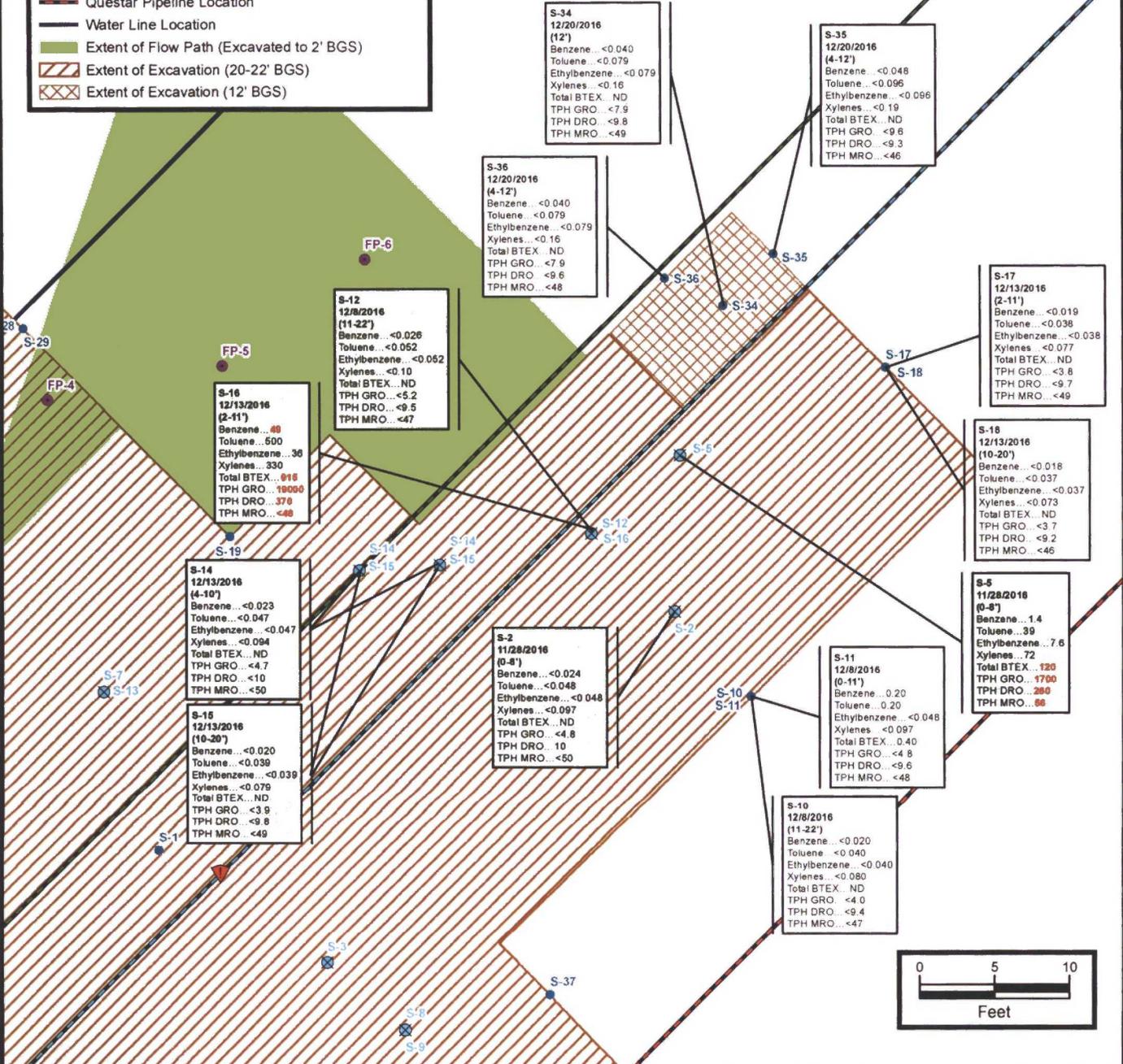
LEGEND:

- Release Point
- Excavation Confirmation Soil Sample Location
- Excavation Confirmation Soil Sample Location (Sample Location Removed by Over-Excavation)
- Flow Path Confirmation Soil Sample Location
- Lateral 6B-10 Pipeline Location
- Lateral 3D-3 Pipeline Location
- Questar Pipeline Location
- Water Line Location
- Extent of Flow Path (Excavated to 2' BGS)
- Extent of Excavation (20-22' BGS)
- Extent of Excavation (12' BGS)

NOTE:

All Concentrations are Listed in mg/Kg.
 All Depths are Listed in Feet BGS.
 Concentrations in **Red** Exceed Applicable Remediation Action Level.
 Gray COC Callout Denotes Sample Location Was Removed by Over-Excavation.

COC Callout Format:
 Sample ID
 Date
 Sample Depth
 COC Concentrations



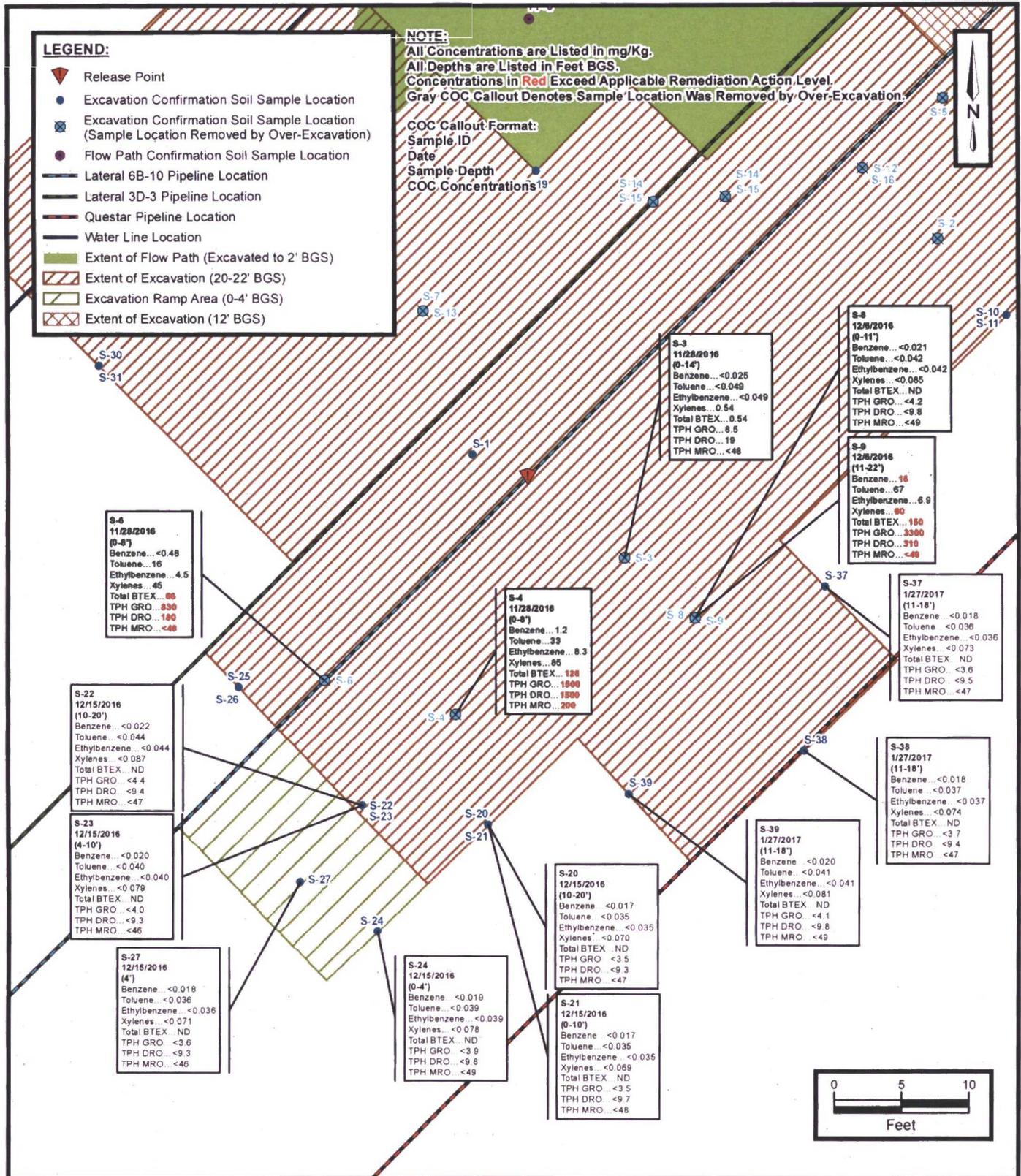
Lateral 6B-10
 SE 1/4 T28N R12W S27
 San Juan County, New Mexico
 36.625981 N, 108.092347 W

Project No. 725040112217



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FIGURE 3A
Site Map with Soil Analytical Results
Excavation Area A



Lateral 6B-10
 SE 1/4 T28N R12W S27
 San Juan County, New Mexico
 36.625981 N, 108.092347 W



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FIGURE 3C

**Site Map with Soil Analytical Results
 Excavation Area C**

Project No. 725040112217

LEGEND:

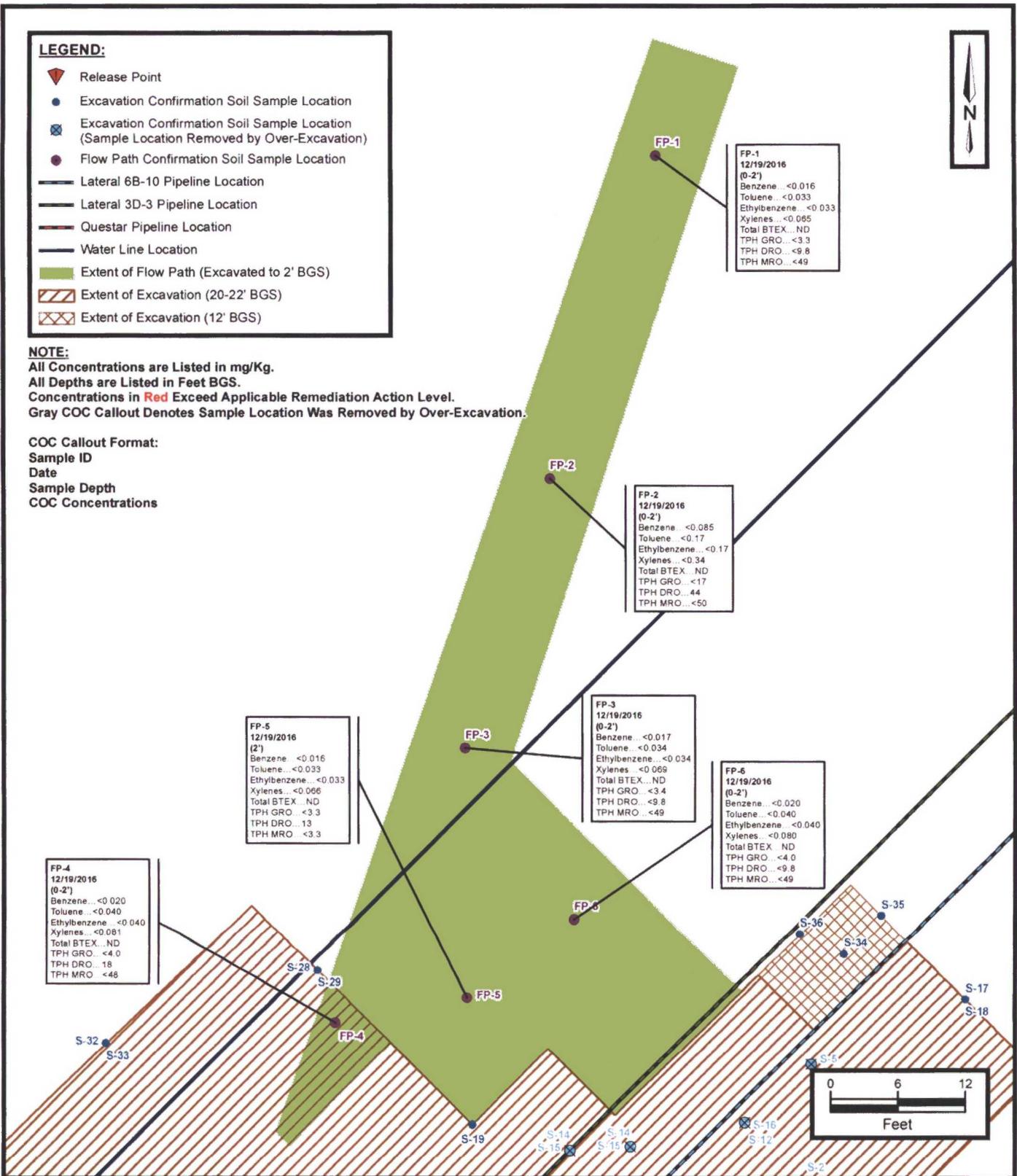
- Release Point
- Excavation Confirmation Soil Sample Location
- Excavation Confirmation Soil Sample Location (Sample Location Removed by Over-Excavation)
- Flow Path Confirmation Soil Sample Location
- Lateral 6B-10 Pipeline Location
- Lateral 3D-3 Pipeline Location
- Questar Pipeline Location
- Water Line Location
- Extent of Flow Path (Excavated to 2' BGS)
- Extent of Excavation (20-22' BGS)
- Extent of Excavation (12' BGS)

NOTE:

All Concentrations are Listed in mg/Kg.
 All Depths are Listed in Feet BGS.
 Concentrations in **Red** Exceed Applicable Remediation Action Level.
 Gray COC Callout Denotes Sample Location Was Removed by Over-Excavation.

COC Callout Format:

Sample ID
 Date
 Sample Depth
 COC Concentrations



Lateral 6B-10
 SE 1/4 T28N R12W S27
 San Juan County, New Mexico
 36.625981 N, 108.092347 W



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FIGURE 3D

**Site Map with Soil Analytical Results
 Flow Path Area**

Project No. 725040112217

APPENDIX B

Executed C-138 Solid Waste Acceptance Forms

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

9725 7-0809

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	
2. Originating Site: Lateral 6B-10 Pipeline	
3. Location of Material (Street Address, City, State or ULSTR): UL P Section 27 T28N 12W; 36.625981 -108.092347 <p style="text-align: right;">December 2016</p>	
4. Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume <u>50</u> yd ³ /bbls Known Volume (to be entered by the operator at the end of the haul) <u>2934</u> yd ³ bbls	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, Thomas Long ^{Thomas Long} , representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) <input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load <input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) <input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, Thomas Long ^{Thomas Long} 11-28-16, representative for Enterprise Products Operating authorize <u>Envirotech, Inc.</u> to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. I, ^[Signature] representative for <u>Envirotech, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
5. Transporter: TBD <u>Foutz + Bursum, Robert's Trucking</u>	

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011
Address of Facility: Hill Top, NM
Method of Treatment and/or Disposal:

Evaporation Injection Treating Plant Landfarm Landfill Other

Waste Acceptance Status:

APPROVED

DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree

TITLE: Environmental Manager DATE: 12/6/16

SIGNATURE: [Signature]
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 505-632-0615

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

97057-0809

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Lateral 6B-10 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): UL P Section 27 T28N 12W; 36.625981 -108.092347 <i>Oct/Nov 2016</i>
4. Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume <u>50</u> yd ³ /bbls Known Volume (to be entered by the operator at the end of the haul) <u>760/3</u> yd ³ /bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, Thomas Long <i>Thomas Long</i> , representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) <input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load <input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) <input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, Thomas Long <i>Thomas Long</i> 10-28-16, representative for Enterprise Products Operating authorize <u>Envirotech, Inc.</u> to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. I, <i>Greg Crabtree</i> , representative for <u>Envirotech, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: TBD <u>Foutz and Bursum, Terrace, Robert's Trucking</u>

OCD Permitted Surface Waste Management Facility

Name and Facility Permit#: Envirotech, Inc. Soil Remediation Facility * Permit#: NM01-0011

Address of Facility: Hill Top, NM

Method of Treatment and/or Disposal:

Evaporation Injection Treating Plant Landfarm Landfill Other

Waste Acceptance Status:

APPROVED

DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree

TITLE: Environmental Manager DATE: 10/31/16

SIGNATURE: *Greg Crabtree*
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 505-632-0615

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

9 7057-0809

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Lateral 6B-10 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): UL P Section 27 T28N 12W; 36.625981 -108.092347 <p style="text-align: right;">January 2017</p>
4. Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume <u>50</u> yd ³ bbls Known Volume (to be entered by the operator at the end of the haul) <u>669</u> yd ³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS I, Thomas Long <i>Thomas Long</i> , representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) <input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load <input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items) <input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS I, Thomas Long <i>Thomas Long</i> 1-25-17, representative for Enterprise Products Operating authorize <u>Envirotech, Inc.</u> to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. I, <i>Greg Crabtree</i> , representative for <u>Envirotech, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: TBD <u>Robert's Trucking, M-T-C, Foutz + Burgum</u>

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011

Address of Facility: Hill Top, NM

Method of Treatment and/or Disposal:

Evaporation Injection Treating Plant Landfarm Landfill Other

Waste Acceptance Status:

APPROVED

DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Greg Crabtree TITLE: Environmental Manager DATE: 1/26/17

SIGNATURE: *Greg Crabtree* TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

APPENDIX C
Photographic Documentation

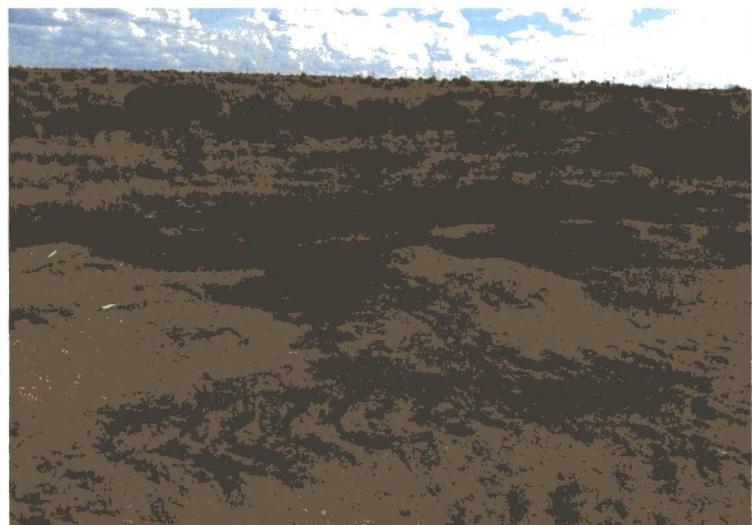
Photograph 1

View of flow path surface staining.



Photograph 2

View of surface release.



Photograph 3

Removal of subsurface staining from the flow path.



Photograph 4

Removal of subsurface staining from the point of release.



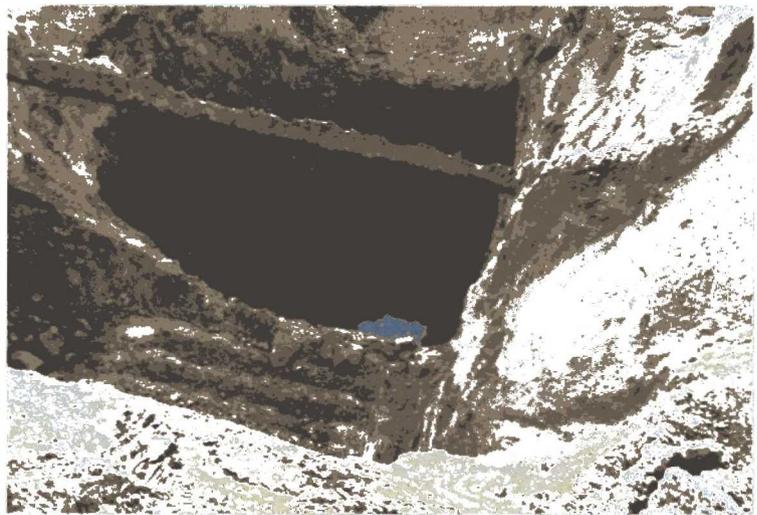
Photograph 5

Start of the excavation.



Photograph 6

Apparent water table at approximately 20 feet.



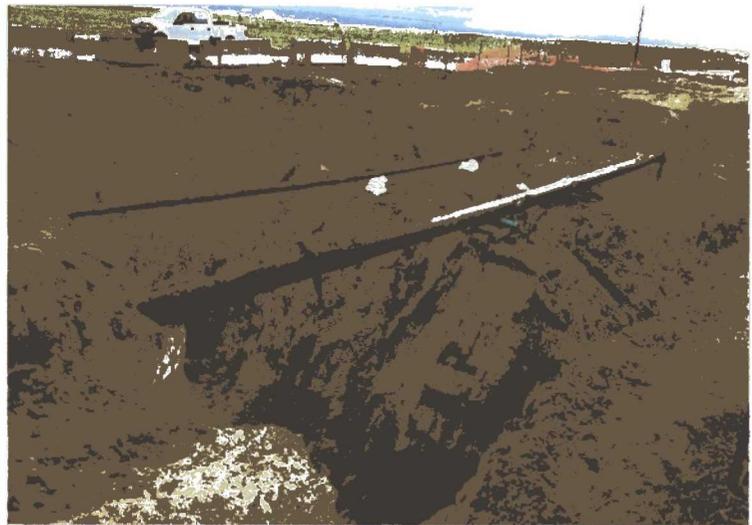
Photograph 7

View of excavation looking north.



Photograph 8

View of pipeline looking north.



Photograph 9

View of final part of excavation looking southeast.



APPENDIX D

Table



TABLE 1
Lateral 6B-10 Pipeline Release (October 2016)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100		
Stockpiled Soil Samples Removed and Transported to the Landfarm										
SP-1	12.20.16	Stockpile	<0.037	<0.075	<0.075	<0.15	ND	<7.5	<9.7	<49
SP-2	12.20.16	Stockpile	<0.089	<0.18	<0.18	0.88	0.88	<18	40	<49
Samples Removed by Excavation										
S-2	11.28.16	0 to 8	<0.024	<0.048	<0.048	<0.097	ND	<4.8	10	<50
S-3	11.28.16	0 to 14	<0.025	<0.049	<0.049	0.54	0.54	8.5	19	<48
S-4	11.28.16	0 to 8	1.2	33	8.3	85	128	1,500	1500	200
S-5	11.28.16	0 to 8	1.4	39	7.6	72	120	1,700	260	56
S-6	11.28.16	0 to 8	<0.48	16	4.5	45	66	830	180	<46
S-7	11.28.16	0 to 14	<0.025	<0.049	<0.049	<0.099	ND	<4.9	<9.4	<47
S-8	12.06.16	0 to 11	<0.021	<0.042	<0.042	<0.085	ND	<4.2	<9.8	<49
S-9	12.06.16	11 to 22	16	67	6.9	60	150	3,300	310	<49
S-12	12.08.16	11 to 22	<0.026	<0.052	<0.052	<0.10	ND	<5.2	<9.5	<47
S-13	12.13.16	14 to 20	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<9.7	<48
S-14	12.13.16	4 to 10	<0.023	<0.047	<0.047	<0.094	ND	<4.7	<10	<50
S-15	12.13.16	10 to 20	<0.020	<0.039	<0.039	<0.079	ND	<3.9	<9.8	<49
S-16	12.13.16	2 to 11	49	500	36	330	915	19,000	370	<48
Confirmation Flow Path Soil Samples										
FP-1	12.19.16	0 to 2	<0.016	<0.033	<0.033	<0.065	ND	<3.3	<9.8	<49
FP-2	12.19.16	0 to 2	<0.085	<0.17	<0.17	<0.34	ND	<17	44	<50
FP-3	12.19.16	0 to 2	<0.017	<0.034	<0.034	<0.069	ND	<3.4	<9.8	<49
FP-4	12.19.16	0 to 2	<0.020	<0.040	<0.040	<0.081	ND	<4.0	18	<48
FP-5	12.19.16	2	<0.016	<0.033	<0.033	<0.066	ND	<3.3	13	<47
FP-6	12.19.16	0 to 2	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.8	<49
Confirmation Excavation Soil Samples										
S-1	11.22.16	22	<0.081	0.17	<0.16	<0.32	0.17	<16	9.6	<48
S-10	12.08.16	11 to 22	<0.020	<0.040	<0.040	<0.080	ND	<4.0	<9.4	<47
S-11	12.08.16	0 to 11	0.20	0.20	<0.048	<0.097	0.40	<4.8	<9.6	<48
S-17	12.13.16	2 to 11	<0.019	<0.038	<0.038	<0.077	ND	<3.8	<9.7	<49
S-18	12.13.16	10 to 20	<0.018	<0.037	<0.037	<0.073	ND	<3.7	<9.2	<46
S-19	12.13.16	4 to 20	<0.021	<0.043	<0.043	<0.086	ND	<4.3	<9.3	<47
S-20	12.15.16	10 to 20	<0.017	<0.035	<0.035	<0.070	ND	<3.5	<9.3	<47
S-21	12.15.16	0 to 10	<0.017	<0.035	<0.035	<0.069	ND	<3.5	<9.7	<48



TABLE 1
Lateral 6B-10 Pipeline Release (October 2016)
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100		
S-22	12.15.16	10 to 20	<0.022	<0.044	<0.044	<0.087	ND	<4.4	<9.4	<47
S-23	12.15.16	4 to 10	<0.020	<0.040	<0.040	<0.079	ND	<4.0	<9.3	<46
S-24	12.15.16	0 to 4	<0.019	<0.039	<0.039	<0.078	ND	<3.9	<9.8	<49
S-25	12.15.16	10 to 20	<0.018	<0.036	<0.036	<0.072	ND	<3.6	<10	<51
S-26	12.15.16	0 to 10	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.2	<46
S-27	12.15.16	4	<0.018	<0.036	<0.036	<0.071	ND	<3.6	<9.3	<46
S-28	12.16.16	10 to 20	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.9	<50
S-29	12.16.16	4 to 10	<0.017	<0.035	<0.035	<0.069	ND	<3.5	<9.9	<50
S-30	12.16.16	10 to 20	<0.019	<0.037	<0.037	<0.074	ND	<3.7	<10	<50
S-31	12.16.16	2 to 10	<0.018	<0.035	<0.035	<0.071	ND	<3.5	<9.7	<49
S-32	12.20.16	10 to 20	<0.039	<0.079	<0.079	<0.16	ND	<7.9	<9.9	<49
S-33	12.20.16	2 to 10	<0.037	<0.074	<0.074	<0.15	ND	<7.4	<9.7	<49
S-34	12.20.16	12	<0.040	<0.079	<0.079	<0.16	ND	<7.9	<9.8	<49
S-35	12.20.16	4 to 12	<0.048	<0.096	<0.096	<0.19	ND	<9.6	<9.3	<46
S-36	12.20.16	4 to 12	<0.040	<0.079	<0.079	<0.16	ND	<7.9	<9.6	<48
S-37	1.27.17	11 to 18	<0.018	<0.036	<0.036	<0.073	ND	<3.6	<9.5	<47
S-38	1.27.17	11 to 18	<0.018	<0.037	<0.037	<0.074	ND	<3.7	<9.4	<47
S-39	1.27.17	11 to 18	<0.020	<0.041	<0.041	<0.081	ND	<4.1	<9.8	<49

Note: Concentrations in bold and yellow exceed the applicable OCD Remediation Action Level

ND = Not Detected above the Practical Quantitation Limits

NE = Not established

mg/kg = milligram per kilogram

Appendix E

Laboratory Analytical Reports
& Chain of Custody Documentation



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

December 22, 2016

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

RE: Lateral 6B-10

OrderNo.: 1612B29

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/21/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", 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 1612B29

Date Reported: 12/22/2016

CLIENT: APEX TITAN

Client Sample ID: S-32

Project: Lateral 6B-10

Collection Date: 12/20/2016 2:00:00 PM

Lab ID: 1612B29-001

Matrix: SOIL

Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	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	12/21/2016 10:50:22 AM	29323
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2016 10:50:22 AM	29323
Surr: DNOP	83.4	70-130		%Rec	1	12/21/2016 10:50:22 AM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	7.9		mg/Kg	2	12/21/2016 10:55:15 AM	G39562
Surr: BFB	90.1	68.3-144		%Rec	2	12/21/2016 10:55:15 AM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.039		mg/Kg	2	12/21/2016 10:55:15 AM	B39562
Toluene	ND	0.079		mg/Kg	2	12/21/2016 10:55:15 AM	B39562
Ethylbenzene	ND	0.079		mg/Kg	2	12/21/2016 10:55:15 AM	B39562
Xylenes, Total	ND	0.16		mg/Kg	2	12/21/2016 10:55:15 AM	B39562
Surr: 4-Bromofluorobenzene	97.9	80-120		%Rec	2	12/21/2016 10:55:15 AM	B39562

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-33

Project: Lateral 6B-10

Collection Date: 12/20/2016 2:05:00 PM

Lab ID: 1612B29-002

Matrix: SOIL

Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	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	12/21/2016 11:17:20 AM	29323
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2016 11:17:20 AM	29323
Surr: DNOP	85.3	70-130		%Rec	1	12/21/2016 11:17:20 AM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	7.4		mg/Kg	2	12/21/2016 11:19:49 AM	G39562
Surr: BFB	87.3	68.3-144		%Rec	2	12/21/2016 11:19:49 AM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.037		mg/Kg	2	12/21/2016 11:19:49 AM	B39562
Toluene	ND	0.074		mg/Kg	2	12/21/2016 11:19:49 AM	B39562
Ethylbenzene	ND	0.074		mg/Kg	2	12/21/2016 11:19:49 AM	B39562
Xylenes, Total	ND	0.15		mg/Kg	2	12/21/2016 11:19:49 AM	B39562
Surr: 4-Bromofluorobenzene	93.3	80-120		%Rec	2	12/21/2016 11:19:49 AM	B39562

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral 6B-10
Lab ID: 1612B29-003

Matrix: SOIL

Client Sample ID: S-34
Collection Date: 12/20/2016 2:10:00 PM
Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	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	12/21/2016 11:44:07 AM	29323
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2016 11:44:07 AM	29323
Surr: DNOP	83.3	70-130		%Rec	1	12/21/2016 11:44:07 AM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	7.9		mg/Kg	2	12/21/2016 11:44:18 AM	G39562
Surr: BFB	93.1	68.3-144		%Rec	2	12/21/2016 11:44:18 AM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	2	12/21/2016 11:44:18 AM	B39562
Toluene	ND	0.079		mg/Kg	2	12/21/2016 11:44:18 AM	B39562
Ethylbenzene	ND	0.079		mg/Kg	2	12/21/2016 11:44:18 AM	B39562
Xylenes, Total	ND	0.16		mg/Kg	2	12/21/2016 11:44:18 AM	B39562
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	2	12/21/2016 11:44:18 AM	B39562

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-35

Project: Lateral 6B-10

Collection Date: 12/20/2016 2:15:00 PM

Lab ID: 1612B29-004

Matrix: SOIL

Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/21/2016 12:11:19 PM	29323
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/21/2016 12:11:19 PM	29323
Surr: DNOP	86.4	70-130		%Rec	1	12/21/2016 12:11:19 PM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	9.6		mg/Kg	2	12/21/2016 12:08:53 PM	G39562
Surr: BFB	90.1	68.3-144		%Rec	2	12/21/2016 12:08:53 PM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	2	12/21/2016 12:08:53 PM	B39562
Toluene	ND	0.096		mg/Kg	2	12/21/2016 12:08:53 PM	B39562
Ethylbenzene	ND	0.096		mg/Kg	2	12/21/2016 12:08:53 PM	B39562
Xylenes, Total	ND	0.19		mg/Kg	2	12/21/2016 12:08:53 PM	B39562
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	2	12/21/2016 12:08:53 PM	B39562

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral 6B-10
Lab ID: 1612B29-005

Client Sample ID: S-36
Collection Date: 12/20/2016 2:20:00 PM
Received Date: 12/21/2016 8:00:00 AM

Matrix: SOIL

Analyses	Result	PQL	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	12/21/2016 12:38:37 PM	29323
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/21/2016 12:38:37 PM	29323
Surr: DNOP	87.0	70-130		%Rec	1	12/21/2016 12:38:37 PM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	7.9		mg/Kg	2	12/21/2016 12:33:27 PM	G39562
Surr: BFB	86.6	68.3-144		%Rec	2	12/21/2016 12:33:27 PM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	2	12/21/2016 12:33:27 PM	B39562
Toluene	ND	0.079		mg/Kg	2	12/21/2016 12:33:27 PM	B39562
Ethylbenzene	ND	0.079		mg/Kg	2	12/21/2016 12:33:27 PM	B39562
Xylenes, Total	ND	0.16		mg/Kg	2	12/21/2016 12:33:27 PM	B39562
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	2	12/21/2016 12:33:27 PM	B39562

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B29
 22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID LCS-29323	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238761		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.8	63.8	116			
Surr: DNOP	4.2		5.000		83.8	70	130			

Sample ID MB-29323	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238762		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.8	70	130			

Sample ID 1612B29-001AMS	SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: S-32	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238921		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	9.4	46.90	0	96.0	51.6	130			
Surr: DNOP	4.0		4.690		84.8	70	130			

Sample ID 1612B29-001AMSD	SampType: MSD		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: S-32	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238948		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.9	49.31	0	94.9	51.6	130	3.80	20	
Surr: DNOP	4.2		4.931		85.9	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B29
22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239331			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	900		1000		90.4	68.3	144			

Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239332			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	74.6	123			
Surr: BFB	930		1000		93.0	68.3	144			

Sample ID 1612B29-001AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-32	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239333			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	41	7.9	39.31	0	104	61.3	150			
Surr: BFB	1500		1572		92.2	68.3	144			

Sample ID 1612B29-001AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-32	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239334			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	46	7.9	39.31	0	117	61.3	150	11.9	20	
Surr: BFB	1500		1572		95.4	68.3	144	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B29

22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239369		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239370		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	75.2	115			
Toluene	1.1	0.050	1.000	0	106	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	105	78.9	117			
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

Sample ID 1612B29-002AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: S-33	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239371		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.6	0.037	1.481	0	108	61.5	138			
Toluene	1.6	0.074	1.481	0	106	71.4	127			
Ethylbenzene	1.6	0.074	1.481	0	105	70.9	132			
Xylenes, Total	4.5	0.15	4.444	0	102	76.2	123			
Surr: 4-Bromofluorobenzene	1.5		1.481		101	80	120			

Sample ID 1612B29-002AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: S-33	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239372		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.6	0.037	1.481	0	107	61.5	138	1.20	20	
Toluene	1.5	0.074	1.481	0	98.8	71.4	127	7.50	20	
Ethylbenzene	1.4	0.074	1.481	0	95.9	70.9	132	9.48	20	
Xylenes, Total	4.2	0.15	4.444	0	93.5	76.2	123	9.04	20	
Surr: 4-Bromofluorobenzene	1.4		1.481		92.3	80	120	0	0	

Qualifiers:

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



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612B29

RcptNo: 1

Received by/date: AJ 12/21/16

Logged By: Anne Thorne 12/21/2016 8:00:00 AM *Anne Thorne*

Completed By: Anne Thorne 12/21/2016 8:26:21 AM *Anne Thorne*

Reviewed By: *[Signature]* 12/21/16

Chain of Custody

- Custody seals intact on sample bottles? Yes No Not Present
- Is Chain of Custody complete? Yes No Not Present
- How was the sample delivered? Courier

Log In

- Was an attempt made to cool the samples? Yes No NA
- Were all samples received at a temperature of >0° C to 6.0°C? Yes No NA
- Sample(s) in proper container(s)? Yes No
- Sufficient sample volume for indicated test(s)? Yes No
- Are samples (except VOA and ONG) properly preserved? Yes No
- Was preservative added to bottles? Yes No NA
- VOA vials have zero headspace? Yes No No VOA Vials
- Were any sample containers received broken? Yes No
- Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
- Are matrices correctly identified on Chain of Custody? Yes No
- Is it clear what analyses were requested? Yes No
- 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)

- Was client notified of all discrepancies with this order? Yes No NA

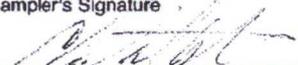
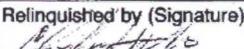
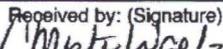
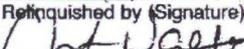
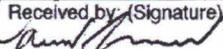
Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec N.M.</u>		Laboratory: <u>Hall Env</u> Address: <u>AB& NM</u>		ANALYSIS REQUESTED <i>BTX 5001 TTH 600/DR/MPD 5005</i>										Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>1.0</u>				
		Contact: <u>A. Fireman</u> Phone: _____ PO/SO #: _____												Page <u>1</u> of <u>1</u>				
Project Manager <u>R Summers</u>				Sampler's Name <u>Chad D Apont.</u>		Sampler's Signature 												
Proj. No. <u>72504010217</u>		Project Name <u>Lateral GB-10</u>				No/Type of Containers												
Matrix	Date	Time	Code	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)					
S	12/20/16	14:00			S-32								1612B29-01					
		14:05			S-33								02					
		14:10			S-34								03					
		14:15			S-35								04					
		14:20			S-36								05					
													06					
													Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush					
Relinquished by (Signature) 			Date: <u>12/20/16</u> Time: <u>1540</u>		Received by (Signature) 			Date: <u>12/20/16</u> Time: <u>1540</u>		NOTES: <u>Bill to Tom Long</u> <u>AFE # N26819</u> <u>Send Day</u>								
Relinquished by (Signature) 			Date: <u>12/20/16</u> Time: <u>1824</u>		Received by (Signature) 			Date: <u>12/21/16</u> Time: <u>0900</u>										
Relinquished by (Signature)			Date: _____ Time: _____		Received by (Signature)			Date: _____ Time: _____										
Relinquished by (Signature)			Date: _____ Time: _____		Received by (Signature)			Date: _____ Time: _____										

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



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

December 22, 2016

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

RE: Lateral 6B-10

OrderNo.: 1612A46

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 12/20/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN
Project: Lateral 6B-10
Lab ID: 1612A46-001

Client Sample ID: FP-1
Collection Date: 12/19/2016 11:30:00 AM
Matrix: MEOH (SOIL) **Received Date:** 12/20/2016 8:10:00 AM

Analyses	Result	PQL	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	12/20/2016 12:09:45 PM	29291
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/20/2016 12:09:45 PM	29291
Surr: DNOP	73.4	70-130		%Rec	1	12/20/2016 12:09:45 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/20/2016 10:02:37 AM	G39532
Surr: BFB	87.6	68.3-144		%Rec	1	12/20/2016 10:02:37 AM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	12/20/2016 10:02:37 AM	B39532
Toluene	ND	0.033		mg/Kg	1	12/20/2016 10:02:37 AM	B39532
Ethylbenzene	ND	0.033		mg/Kg	1	12/20/2016 10:02:37 AM	B39532
Xylenes, Total	ND	0.065		mg/Kg	1	12/20/2016 10:02:37 AM	B39532
Surr: 4-Bromofluorobenzene	94.9	80-120		%Rec	1	12/20/2016 10:02:37 AM	B39532

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-2

Project: Lateral 6B-10

Collection Date: 12/19/2016 11:35:00 AM

Lab ID: 1612A46-002

Matrix: MEOH (SOIL)

Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	44	10		mg/Kg	1	12/20/2016 12:31:09 PM	29291
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/20/2016 12:31:09 PM	29291
Surr: DNOP	95.4	70-130		%Rec	1	12/20/2016 12:31:09 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	17		mg/Kg	5	12/20/2016 10:26:57 AM	G39532
Surr: BFB	107	68.3-144		%Rec	5	12/20/2016 10:26:57 AM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.085		mg/Kg	5	12/20/2016 10:26:57 AM	B39532
Toluene	ND	0.17		mg/Kg	5	12/20/2016 10:26:57 AM	B39532
Ethylbenzene	ND	0.17		mg/Kg	5	12/20/2016 10:26:57 AM	B39532
Xylenes, Total	ND	0.34		mg/Kg	5	12/20/2016 10:26:57 AM	B39532
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	5	12/20/2016 10:26:57 AM	B39532

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612A46

Date Reported: 12/22/2016

CLIENT: APEX TITAN

Client Sample ID: FP-3

Project: Lateral 6B-10

Collection Date: 12/19/2016 11:40:00 AM

Lab ID: 1612A46-003

Matrix: MEOH (SOIL)

Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	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	12/20/2016 12:52:43 PM	29291
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/20/2016 12:52:43 PM	29291
Surr: DNOP	93.3	70-130		%Rec	1	12/20/2016 12:52:43 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	12/20/2016 10:51:19 AM	G39532
Surr: BFB	92.3	68.3-144		%Rec	1	12/20/2016 10:51:19 AM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	12/20/2016 10:51:19 AM	B39532
Toluene	ND	0.034		mg/Kg	1	12/20/2016 10:51:19 AM	B39532
Ethylbenzene	ND	0.034		mg/Kg	1	12/20/2016 10:51:19 AM	B39532
Xylenes, Total	ND	0.069		mg/Kg	1	12/20/2016 10:51:19 AM	B39532
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	12/20/2016 10:51:19 AM	B39532

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	RI Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-4

Project: Lateral 6B-10

Collection Date: 12/19/2016 11:45:00 AM

Lab ID: 1612A46-004

Matrix: MEOH (SOIL)

Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	18	9.7		mg/Kg	1	12/20/2016 1:14:07 PM	29291
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/20/2016 1:14:07 PM	29291
Surr: DNOP	90.7	70-130		%Rec	1	12/20/2016 1:14:07 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/20/2016 11:15:52 AM	G39532
Surr: BFB	105	68.3-144		%Rec	1	12/20/2016 11:15:52 AM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/20/2016 11:15:52 AM	B39532
Toluene	ND	0.040		mg/Kg	1	12/20/2016 11:15:52 AM	B39532
Ethylbenzene	ND	0.040		mg/Kg	1	12/20/2016 11:15:52 AM	B39532
Xylenes, Total	ND	0.081		mg/Kg	1	12/20/2016 11:15:52 AM	B39532
Surr: 4-Bromofluorobenzene	101	80-120		%Rec	1	12/20/2016 11:15:52 AM	B39532

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612A46

Date Reported: 12/22/2016

CLIENT: APEX TITAN

Client Sample ID: FP-5

Project: Lateral 6B-10

Collection Date: 12/19/2016 11:50:00 AM

Lab ID: 1612A46-005

Matrix: MEOH (SOIL)

Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	13	9.5		mg/Kg	1	12/20/2016 1:35:44 PM	29291
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/20/2016 1:35:44 PM	29291
Surr: DNOP	94.7	70-130		%Rec	1	12/20/2016 1:35:44 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	12/20/2016 11:40:20 AM	G39532
Surr: BFB	93.0	68.3-144		%Rec	1	12/20/2016 11:40:20 AM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	12/20/2016 11:40:20 AM	B39532
Toluene	ND	0.033		mg/Kg	1	12/20/2016 11:40:20 AM	B39532
Ethylbenzene	ND	0.033		mg/Kg	1	12/20/2016 11:40:20 AM	B39532
Xylenes, Total	ND	0.066		mg/Kg	1	12/20/2016 11:40:20 AM	B39532
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/20/2016 11:40:20 AM	B39532

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-6

Project: Lateral 6B-10

Collection Date: 12/19/2016 11:55:00 AM

Lab ID: 1612A46-006

Matrix: MEOH (SOIL)

Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	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	12/20/2016 1:57:13 PM	29291
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/20/2016 1:57:13 PM	29291
Surr: DNOP	93.4	70-130		%Rec	1	12/20/2016 1:57:13 PM	29291
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/20/2016 12:04:47 PM	G39532
Surr: BFB	93.8	68.3-144		%Rec	1	12/20/2016 12:04:47 PM	G39532
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/20/2016 12:04:47 PM	B39532
Toluene	ND	0.040		mg/Kg	1	12/20/2016 12:04:47 PM	B39532
Ethylbenzene	ND	0.040		mg/Kg	1	12/20/2016 12:04:47 PM	B39532
Xylenes, Total	ND	0.080		mg/Kg	1	12/20/2016 12:04:47 PM	B39532
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	1	12/20/2016 12:04:47 PM	B39532

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612A46
 22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID LCS-29291	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 29291	RunNo: 39526								
Prep Date: 12/20/2016	Analysis Date: 12/20/2016	SeqNo: 1237875	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.0	63.8	116			
Surr: DNOP	4.5		5.000		90.9	70	130			

Sample ID MB-29291	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 29291	RunNo: 39526								
Prep Date: 12/20/2016	Analysis Date: 12/20/2016	SeqNo: 1237877	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		91.9	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612A46

22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBS	Batch ID: G39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238355		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	830		1000		83.3	68.3	144			

Sample ID 2.5UG GRO LCS	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSS	Batch ID: G39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238356		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	113	74.6	123			
Surr: BFB	940		1000		94.4	68.3	144			

Sample ID 1612A46-001AMS	SampType: MS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: FP-1	Batch ID: G39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238357		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.3	16.35	0	95.5	61.3	150			
Surr: BFB	600		654.0		92.0	68.3	144			

Sample ID 1612A46-001AMSD	SampType: MSD		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: FP-1	Batch ID: G39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238358		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	3.3	16.35	0	132	61.3	150	32.3	20	R
Surr: BFB	620		654.0		94.4	68.3	144	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612A46
22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238384		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		88.6	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B39532		RunNo: 39532							
Prep Date:	Analysis Date: 12/20/2016		SeqNo: 1238385		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	75.2	115			
Toluene	0.98	0.050	1.000	0	98.2	80.7	112			
Ethylbenzene	0.94	0.050	1.000	0	93.8	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	92.5	79.2	115			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

Sample ID 1612A46-003AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: FP-3	Batch ID: B39532		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239367		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.017	0.6897	0	109	61.5	138			
Toluene	0.73	0.034	0.6897	0	106	71.4	127			
Ethylbenzene	0.71	0.034	0.6897	0.003380	103	70.9	132			
Xylenes, Total	2.0	0.069	2.069	0.01910	98.0	76.2	123			
Surr: 4-Bromofluorobenzene	0.64		0.6897		92.6	80	120			

Sample ID 1612A46-003AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: FP-3	Batch ID: B39532		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239368		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.017	0.6897	0	110	61.5	138	0.639	20	
Toluene	0.73	0.034	0.6897	0	107	71.4	127	0.593	20	
Ethylbenzene	0.71	0.034	0.6897	0.003380	103	70.9	132	0.213	20	
Xylenes, Total	2.0	0.069	2.069	0.01910	97.1	76.2	123	0.978	20	
Surr: 4-Bromofluorobenzene	0.65		0.6897		93.8	80	120	0	0	

Qualifiers:

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



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612A46

RcptNo: 1

Received by/date:

AG

12/20/16

Logged By:

Ashley Gallegos

12/20/2016 8:10:00 AM

AG

Completed By:

Ashley Gallegos

12/20/2016 8:20:45 AM

AG

Reviewed By:

AS

12/20/16

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

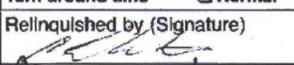
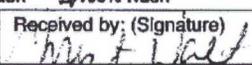
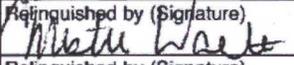
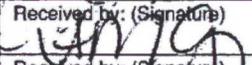
Person Notified:	_____	Date	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	_____		
Client Instructions:	_____		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec N.M.</u>		Laboratory: <u>A Hall Env</u> Address: <u>ABC N.M.</u>		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> STEX 2021 TPH GAO/DRO/PARe SOILS </div>										Lab use only Due Date: _____	
		Contact: <u>A. Freeman</u> Phone: _____												Temp. of coolers when received (C°): <u>10</u>	
Project Manager <u>K. Summers</u>		PO/SO #: _____		Page <u>1</u> of <u>1</u>											
Sampler's Name <u>Chad D. Apent</u>		Sampler's Signature 													
Proj. No. <u>72504010017</u>		Project Name <u>Lateral GB-10</u>				No/Type of Containers									
Matrix	Date	Time	COED	Garb	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)		
S	12/19/16	11:30			FP-1								✓	✓	1612A46-001
		11:35			FP-2								✓	✓	-002
		11:40			FP-3								✓	✓	-003
		11:45			FP-4								✓	✓	-004
		11:50			FP-5								✓	✓	-005
		11:55			FP-6								✓	✓	-006
_____														N/A	
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush															
Relinquished by (Signature) 		Date: <u>12-19-16</u> Time: <u>1546</u>		Received by (Signature) 		Date: <u>12/19/16</u> Time: <u>1546</u>		NOTES: Bill to TOM Long FOR AFE # N26819 Same Day							
Relinquished by (Signature) 		Date: <u>12/19/16</u> Time: <u>1931</u>		Received by (Signature) 		Date: <u>12/30/16</u> Time: <u>0810</u>									
Relinquished by (Signature)		Date: _____ Time: _____		Received by (Signature)		Date: _____ Time: _____									
Relinquished by (Signature)		Date: _____ Time: _____		Received by (Signature)		Date: _____ Time: _____									

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



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

January 31, 2017

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

RE: 6B-10

OrderNo.: 1701B78

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/28/2017 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.

CLIENT: APEX TITAN
 Project: 6B-10
 Lab ID: 1701B78-001

Matrix: SOIL

Client Sample ID: S-37
 Collection Date: 1/27/2017 9:30:00 AM
 Received Date: 1/28/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	1/30/2017 9:54:21 AM	R40362
Surr: BFB	104	70-130		%Rec	1	1/30/2017 9:54:21 AM	R40362
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/30/2017 10:23:09 AM	29938
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/30/2017 10:23:09 AM	29938
Surr: DNOP	118	70-130		%Rec	1	1/30/2017 10:23:09 AM	29938
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.018		mg/Kg	1	1/30/2017 9:54:21 AM	A40362
Toluene	ND	0.036		mg/Kg	1	1/30/2017 9:54:21 AM	A40362
Ethylbenzene	ND	0.036		mg/Kg	1	1/30/2017 9:54:21 AM	A40362
Xylenes, Total	ND	0.073		mg/Kg	1	1/30/2017 9:54:21 AM	A40362
Surr: 1,2-Dichloroethane-d4	90.7	70-130		%Rec	1	1/30/2017 9:54:21 AM	A40362
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	1/30/2017 9:54:21 AM	A40362
Surr: Dibromofluoromethane	114	70-130		%Rec	1	1/30/2017 9:54:21 AM	A40362
Surr: Toluene-d8	94.3	70-130		%Rec	1	1/30/2017 9:54:21 AM	A40362

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1701B78
 Date Reported: 1/31/2017

CLIENT: APEX TITAN

Client Sample ID: S-38

Project: 6B-10

Collection Date: 1/27/2017 9:35:00 AM

Lab ID: 1701B78-002

Matrix: SOIL

Received Date: 1/28/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	1/30/2017 10:23:11 AM	R40362
Surr: BFB	104	70-130		%Rec	1	1/30/2017 10:23:11 AM	R40362
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	1/30/2017 10:44:40 AM	29938
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/30/2017 10:44:40 AM	29938
Surr: DNOP	118	70-130		%Rec	1	1/30/2017 10:44:40 AM	29938
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.018		mg/Kg	1	1/30/2017 10:23:11 AM	A40362
Toluene	ND	0.037		mg/Kg	1	1/30/2017 10:23:11 AM	A40362
Ethylbenzene	ND	0.037		mg/Kg	1	1/30/2017 10:23:11 AM	A40362
Xylenes, Total	ND	0.074		mg/Kg	1	1/30/2017 10:23:11 AM	A40362
Surr: 1,2-Dichloroethane-d4	86.5	70-130		%Rec	1	1/30/2017 10:23:11 AM	A40362
Surr: 4-Bromofluorobenzene	89.8	70-130		%Rec	1	1/30/2017 10:23:11 AM	A40362
Surr: Dibromofluoromethane	121	70-130		%Rec	1	1/30/2017 10:23:11 AM	A40362
Surr: Toluene-d8	96.5	70-130		%Rec	1	1/30/2017 10:23:11 AM	A40362

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-39

Project: 6B-10

Collection Date: 1/27/2017 9:40:00 AM

Lab ID: 1701B78-003

Matrix: SOIL

Received Date: 1/28/2017 9:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	1/30/2017 10:51:57 AM	R40362
Surr: BFB	104	70-130		%Rec	1	1/30/2017 10:51:57 AM	R40362
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/30/2017 11:06:19 AM	29938
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/30/2017 11:06:19 AM	29938
Surr: DNOP	117	70-130		%Rec	1	1/30/2017 11:06:19 AM	29938
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.020		mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Toluene	ND	0.041		mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Ethylbenzene	ND	0.041		mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Xylenes, Total	ND	0.081		mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Surr: 1,2-Dichloroethane-d4	82.6	70-130		%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: 4-Bromofluorobenzene	89.3	70-130		%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: Dibromofluoromethane	112	70-130		%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: Toluene-d8	96.6	70-130		%Rec	1	1/30/2017 10:51:57 AM	A40362

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701B78

31-Jan-17

Client: APEX TITAN

Project: 6B-10

Sample ID	LCS-29938		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	29938		RunNo:	40363				
Prep Date:	1/30/2017		Analysis Date:	1/30/2017		SeqNo:	1265214		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	44	10	50.00	0	88.7	63.8	116				
Surr: DNOP	5.1		5.000		101	70	130				

Sample ID	MB-29938		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	29938		RunNo:	40363				
Prep Date:	1/30/2017		Analysis Date:	1/30/2017		SeqNo:	1265215		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11		10.00		113	70	130				

Sample ID	1701B78-001AMS		SampType:	MS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	S-37		Batch ID:	29938		RunNo:	40363				
Prep Date:	1/30/2017		Analysis Date:	1/30/2017		SeqNo:	1265236		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	44	9.3	46.69	3.017	88.6	51.6	130				
Surr: DNOP	5.1		4.669		109	70	130				

Sample ID	1701B78-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	S-37		Batch ID:	29938		RunNo:	40363				
Prep Date:	1/30/2017		Analysis Date:	1/30/2017		SeqNo:	1265237		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	47	9.7	48.73	3.017	90.1	51.6	130	5.54	20		
Surr: DNOP	5.3		4.873		108	70	130	0	0		

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701B78

31-Jan-17

Client: APEX TITAN
Project: 6B-10

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	PBS	Batch ID:	A40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265201	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.9	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.8	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	LCSS	Batch ID:	A40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265823	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	110	70	130			
Toluene	0.98	0.050	1.000	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.8	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.49		0.5000		98.2	70	130			

Sample ID	1701b78-001ams	SampType:	MS	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	S-37	Batch ID:	A40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265872	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	61.9	146			
Toluene	0.93	0.050	1.000	0.01132	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		93.0	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.8	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		117	70	130			
Surr: Toluene-d8	0.48		0.5000		95.6	70	130			

Sample ID	1701b78-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	S-37	Batch ID:	A40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265873	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.5	61.9	146	10.6	20	
Toluene	0.89	0.050	1.000	0.01132	88.3	70	130	3.70	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1701B78
 31-Jan-17

Client: APEX TITAN
Project: 6B-10

Sample ID	1701b78-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: Volatiles Short List					
Client ID:	S-37	Batch ID:	A40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265873	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.40		0.5000		80.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.2	70	130	0	0	
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130	0	0	
Surr: Toluene-d8	0.47		0.5000		94.2	70	130	0	0	

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 | RI Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1701B78

31-Jan-17

Client: APEX TITAN
Project: 6B-10

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	R40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265206	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	500		500.0		99.7	70	130			

Sample ID	1701b78-001ams	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	S-37	Batch ID:	R40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265788	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	18.20	0.6623	95.0	52.3	132			
Surr: BFB	360		363.9		100	70	130			

Sample ID	1701b78-001amsd	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	S-37	Batch ID:	R40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265789	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.6	18.20	0.6623	85.6	52.3	132	9.96	20	
Surr: BFB	370		363.9		101	70	130	0	0	

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	R40362	RunNo:	40362					
Prep Date:		Analysis Date:	1/30/2017	SeqNo:	1265794	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	104	62.9	123			
Surr: BFB	500		500.0		100	70	130			

Qualifiers:

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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1701B78

RcptNo: 1

Received by/date: LM 01/25/17

Logged By: Anne Thorne 1/28/2017 9:00:00 AM

Anne Thorne

Completed By: Anne Thorne 1/30/2017 7:34:59 AM

Anne Thorne

Reviewed By: AT 1/30/17

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: _____ 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	2.1	Good	Yes			

CHAIN OF CUSTODY RECORD



APEX
Office Location Aztec NM

Laboratory: Hall Eng
Address: APE NM
Contact: A Freeman
Phone: _____
PO/SO #: _____

ANALYSIS REQUESTED

BTE x Seal
TPH GPO / DR / MPD 80.5

Project Manager: K Sommer Sampler's Name: Quad D'Port Sampler's Signature: [Signature]

Proj. No.: 25040112217 Project Name: GB-10 No. Type of Containers: _____

Matrix	Date	Time	Coop	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	1/27/17	930			S-37								1701 BT8-cc1
S	1/27/17	935			S-38								702
S	1/27/17	940			S-39								703

Turn around time Normal 25% Rush 50% Rush 100% Rush Same Day

Relinquished by (Signature): <u>[Signature]</u>	Date: <u>1-27-17</u>	Time: <u>1155</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>1/27/17</u>	Time: <u>1155</u>	NOTES: Bill to Tom Long APE # N 26819 Same Day
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>1/27/17</u>	Time: <u>1830</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>1/25/17</u>	Time: <u>0700</u>	
Relinquished by (Signature): _____	Date: _____	Time: _____	Received by (Signature): _____	Date: _____	Time: _____	
Relinquished by (Signature): _____	Date: _____	Time: _____	Received by (Signature): _____	Date: _____	Time: _____	

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



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

November 28, 2016

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

RE: Lateral 6B-10

OrderNo.: 1611C32

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/23/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1611C32

Date Reported: 11/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-1

Project: Lateral 6B-10

Collection Date: 11/22/2016 2:30:00 PM

Lab ID: 1611C32-001

Matrix: MEOH (SOIL)

Received Date: 11/23/2016 7:40:00 AM

Analyses	Result	PQL	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	11/23/2016 12:04:40 PM	28837
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/23/2016 12:04:40 PM	28837
Surr: DNOP	88.8	70-130		%Rec	1	11/23/2016 12:04:40 PM	28837
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	16		mg/Kg	5	11/23/2016 10:59:11 AM	28824
Surr: BFB	90.5	68.3-144		%Rec	5	11/23/2016 10:59:11 AM	28824
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.081		mg/Kg	5	11/23/2016 10:59:11 AM	28824
Toluene	0.17	0.16		mg/Kg	5	11/23/2016 10:59:11 AM	28824
Ethylbenzene	ND	0.16		mg/Kg	5	11/23/2016 10:59:11 AM	28824
Xylenes, Total	ND	0.32		mg/Kg	5	11/23/2016 10:59:11 AM	28824
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	5	11/23/2016 10:59:11 AM	28824

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C32
28-Nov-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID	LCS-28807	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28807	RunNo:	38942					
Prep Date:	11/22/2016	Analysis Date:	11/23/2016	SeqNo:	1217667	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		88.8	70	130			

Sample ID	MB-28807	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28807	RunNo:	38942					
Prep Date:	11/22/2016	Analysis Date:	11/23/2016	SeqNo:	1217668	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		96.4	70	130			

Sample ID	LCS-28816	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28816	RunNo:	38942					
Prep Date:	11/22/2016	Analysis Date:	11/23/2016	SeqNo:	1217831	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.4	70	130			

Sample ID	MB-28837	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28837	RunNo:	38942					
Prep Date:	11/23/2016	Analysis Date:	11/23/2016	SeqNo:	1217836	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		107	70	130			

Sample ID	LCS-28837	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28837	RunNo:	38942					
Prep Date:	11/23/2016	Analysis Date:	11/23/2016	SeqNo:	1217847	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.9	62.6	124			
Surr: DNOP	4.3		5.000		86.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C32

28-Nov-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID MB-28824	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 28824	RunNo: 38948								
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1218275	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	840		1000		83.5	68.3	144			

Sample ID LCS-28824	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 28824	RunNo: 38948								
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1218276	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.8	74.6	123			
Surr: BFB	890		1000		89.3	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1611C32
 28-Nov-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID MB-28824	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 28824	RunNo: 38948								
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1218290	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID LCS-28824	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 28824	RunNo: 38948								
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1218291	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	75.2	115			
Toluene	0.88	0.050	1.000	0	88.4	80.7	112			
Ethylbenzene	0.86	0.050	1.000	0	85.8	78.9	117			
Xylenes, Total	2.6	0.10	3.000	0	86.0	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: **APEX AZTEC**

Work Order Number: **1611C32**

Rept No: **1**

Received by/date:

[Signature]

11/23/16

Logged By: **Lindsay Mangin**

11/23/2016 7:40:00 AM

[Signature]

Completed By: **Lindsay Mangin**

11/23/2016 7:55:05 AM

[Signature]

Reviewed By:

[Signature]

11/23/16

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: _____ 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	14	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX
Office Location Aztec, NM

Laboratory: Hall Environmental
Address: ABQ, NM
Contact: A. Freeman
Phone: _____
PO/SO #: _____

Project Manager K Summers

AnalYSIS REQUESTED: SO2, BTEX, SULF, TPH, CPO, DRO, MRO

Lab use only
Due Date: _____
Temp. of coolers when received (C°): 14
Page 1 of 1

Sampler's Name: Chad Upton
Sampler's Signature: [Signature]

Proj. No. _____ Project Name: Lateral 6B-10 No/Type of Containers: _____

Matrix	Date	Time	CO P	Gr a b	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
<u>S</u>	<u>11-22-16</u>	<u>15:30</u>			<u>S-1</u>						<u>1</u>	<u>1</u>	<u>1611C32-001</u>

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature): [Signature] Date: 11/22/16 Time: 15:30
 Received by (Signature): [Signature] Date: 11/23/16 Time: 07:40

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

Relinquished by (Signature): _____ Date: _____ Time: _____
 Received by (Signature): _____ Date: _____ Time: _____

NOTES:
Bill to Tom Long (EPRD)
Non-AFE N 26819
SAME DAY

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



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

December 02, 2016

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

RE: 6B-10

OrderNo.: 1611D40

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 11/29/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', 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 1611D40
 Date Reported: 12/2/2016

CLIENT: APEX TITAN

Client Sample ID: S-2

Project: 6B-10

Collection Date: 11/28/2016 10:30:00 AM

Lab ID: 1611D40-001

Matrix: SOIL

Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	10	10		mg/Kg	1	12/1/2016 10:16:34 AM	28923
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/1/2016 10:16:34 AM	28923
Surr: DNOP	98.5	70-130		%Rec	1	12/1/2016 10:16:34 AM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/30/2016 10:24:15 AM	28895
Surr: BFB	106	68.3-144		%Rec	1	11/30/2016 10:24:15 AM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	11/30/2016 10:24:15 AM	28895
Toluene	ND	0.048		mg/Kg	1	11/30/2016 10:24:15 AM	28895
Ethylbenzene	ND	0.048		mg/Kg	1	11/30/2016 10:24:15 AM	28895
Xylenes, Total	ND	0.097		mg/Kg	1	11/30/2016 10:24:15 AM	28895
Surr: 4-Bromofluorobenzene	110	80-120		%Rec	1	11/30/2016 10:24:15 AM	28895

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1611D40
 Date Reported: 12/2/2016

CLIENT: APEX TITAN

Client Sample ID: S-3

Project: 6B-10

Collection Date: 11/28/2016 10:35:00 AM

Lab ID: 1611D40-002

Matrix: SOIL

Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	19	9.5		mg/Kg	1	12/1/2016 10:38:01 AM	28923
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/1/2016 10:38:01 AM	28923
Surr: DNOP	97.4	70-130		%Rec	1	12/1/2016 10:38:01 AM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	8.5	4.9		mg/Kg	1	11/30/2016 1:15:37 PM	28895
Surr: BFB	154	68.3-144	S	%Rec	1	11/30/2016 1:15:37 PM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	11/30/2016 1:15:37 PM	28895
Toluene	ND	0.049		mg/Kg	1	11/30/2016 1:15:37 PM	28895
Ethylbenzene	ND	0.049		mg/Kg	1	11/30/2016 1:15:37 PM	28895
Xylenes, Total	0.54	0.099		mg/Kg	1	11/30/2016 1:15:37 PM	28895
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	11/30/2016 1:15:37 PM	28895

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611D40

Date Reported: 12/2/2016

CLIENT: APEX TITAN

Client Sample ID: S-4

Project: 6B-10

Collection Date: 11/28/2016 10:40:00 AM

Lab ID: 1611D40-003

Matrix: SOIL

Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	1500	19		mg/Kg	2	12/1/2016 12:47:19 PM	28923
Motor Oil Range Organics (MRO)	200	96		mg/Kg	2	12/1/2016 12:47:19 PM	28923
Surr: DNOP	96.8	70-130		%Rec	2	12/1/2016 12:47:19 PM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1500	250		mg/Kg	50	11/30/2016 11:37:40 AM	28895
Surr: BFB	213	68.3-144	S	%Rec	50	11/30/2016 11:37:40 AM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	1.2	0.99		mg/Kg	50	11/30/2016 11:37:40 AM	28895
Toluene	33	2.5		mg/Kg	50	11/30/2016 11:37:40 AM	28895
Ethylbenzene	8.3	2.5		mg/Kg	50	11/30/2016 11:37:40 AM	28895
Xylenes, Total	85	4.9		mg/Kg	50	11/30/2016 11:37:40 AM	28895
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	50	11/30/2016 11:37:40 AM	28895

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611D40

Date Reported: 12/2/2016

CLIENT: APEX TITAN

Client Sample ID: S-5

Project: 6B-10

Collection Date: 11/28/2016 10:45:00 AM

Lab ID: 1611D40-004

Matrix: SOIL

Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	260	9.9		mg/Kg	1	12/1/2016 11:42:43 AM	28923
Motor Oil Range Organics (MRO)	56	49		mg/Kg	1	12/1/2016 11:42:43 AM	28923
Surr: DNOP	83.0	70-130		%Rec	1	12/1/2016 11:42:43 AM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1700	240		mg/Kg	50	11/30/2016 12:02:08 PM	28895
Surr: BFB	159	68.3-144	S	%Rec	50	11/30/2016 12:02:08 PM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	1.4	1.2		mg/Kg	50	11/30/2016 12:02:08 PM	28895
Toluene	39	2.4		mg/Kg	50	11/30/2016 12:02:08 PM	28895
Ethylbenzene	7.6	2.4		mg/Kg	50	11/30/2016 12:02:08 PM	28895
Xylenes, Total	72	4.8		mg/Kg	50	11/30/2016 12:02:08 PM	28895
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	50	11/30/2016 12:02:08 PM	28895

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-6

Project: 6B-10

Collection Date: 11/28/2016 10:50:00 AM

Lab ID: 1611D40-005

Matrix: SOIL

Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	180	9.3		mg/Kg	1	12/1/2016 12:04:13 PM	28923
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/1/2016 12:04:13 PM	28923
Surr: DNOP	83.9	70-130		%Rec	1	12/1/2016 12:04:13 PM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	830	96		mg/Kg	20	11/30/2016 1:40:12 PM	28895
Surr: BFB	218	68.3-144	S	%Rec	20	11/30/2016 1:40:12 PM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.48		mg/Kg	20	11/30/2016 1:40:12 PM	28895
Toluene	16	0.96		mg/Kg	20	11/30/2016 1:40:12 PM	28895
Ethylbenzene	4.5	0.96		mg/Kg	20	11/30/2016 1:40:12 PM	28895
Xylenes, Total	45	1.9		mg/Kg	20	11/30/2016 1:40:12 PM	28895
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	20	11/30/2016 1:40:12 PM	28895

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1611D40
 Date Reported: 12/2/2016

CLIENT: APEX TITAN
Project: 6B-10
Lab ID: 1611D40-006

Matrix: SOIL

Client Sample ID: S-7
Collection Date: 11/28/2016 11:00:00 AM
Received Date: 11/29/2016 8:35:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/1/2016 12:25:43 PM	28923
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/1/2016 12:25:43 PM	28923
Surr: DNOP	82.7	70-130		%Rec	1	12/1/2016 12:25:43 PM	28923
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/30/2016 12:51:12 PM	28895
Surr: BFB	98.7	68.3-144		%Rec	1	11/30/2016 12:51:12 PM	28895
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.025		mg/Kg	1	11/30/2016 12:51:12 PM	28895
Toluene	ND	0.049		mg/Kg	1	11/30/2016 12:51:12 PM	28895
Ethylbenzene	ND	0.049		mg/Kg	1	11/30/2016 12:51:12 PM	28895
Xylenes, Total	ND	0.099		mg/Kg	1	11/30/2016 12:51:12 PM	28895
Surr: 4-Bromofluorobenzene	105	80-120		%Rec	1	11/30/2016 12:51:12 PM	28895

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1611D40
 02-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID	LCS-28923	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28923	RunNo:	39081					
Prep Date:	11/30/2016	Analysis Date:	12/1/2016	SeqNo:	1222603	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	96.8	62.6	124			
Surr: DNOP	4.8		5.000		95.5	70	130			

Sample ID	MB-28923	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28923	RunNo:	39081					
Prep Date:	11/30/2016	Analysis Date:	12/1/2016	SeqNo:	1222604	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		99.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1611D40
 02-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID MB-28895	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 28895	RunNo: 39050								
Prep Date: 11/29/2016	Analysis Date: 11/30/2016	SeqNo: 1221833	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	970		1000		97.5	68.3	144			

Sample ID LCS-28895	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 28895	RunNo: 39050								
Prep Date: 11/29/2016	Analysis Date: 11/30/2016	SeqNo: 1221834	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	110	74.6	123			
Surr: BFB	1000		1000		101	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611D40
02-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID	MB-28895	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	28895	RunNo:	39050					
Prep Date:	11/29/2016	Analysis Date:	11/30/2016	SeqNo:	1221863	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-28895	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	28895	RunNo:	39050					
Prep Date:	11/29/2016	Analysis Date:	11/30/2016	SeqNo:	1221864	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.5	75.2	115			
Toluene	0.94	0.050	1.000	0	94.3	80.7	112			
Ethylbenzene	0.89	0.050	1.000	0	89.4	78.9	117			
Xylenes, Total	2.7	0.10	3.000	0	88.6	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	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 | W Sample container temperature is out of limit as specified |

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1611D40

RcptNo: 1

Received by/date: AJ 11/29/16

Logged By: Anne Thorne 11/29/2016 8:35:00 AM

Anne Thorne

Completed By: Anne Thorne 11/29/2016

Anne Thorne

Reviewed By: JO 11/29/16

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? Yes No # of preserved bottles checked for pH: _____
(Note discrepancies on chain of custody) (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted? _____
- 14. Is it clear what analyses were requested? Yes No
- 15. Were all holding times able to be met? Yes No Checked by: _____
(If no, notify customer for authorization.)

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
 By Whom: _____ Via: 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	1.7	Good	Yes			

CHAIN OF CUSTODY RECORD



Office Location: Aztec NM

Laboratory: H&E Env
Address: ABA NM

ANALYSIS REQUESTED

Lab use only
Due Date:

Project Manager: K Summers
Sampler's Name: Chris Abbott

Contact: A. Freeman
Phone:

Temp. of coolers when received (C): 17.7

Pro. No.: 20500012017 Project Name: GB-10 No/Type of Containers:

PO/SO#:
Sampler's Signature: [Signature]

Page 1 of 1

STEX ^{10/11/16} TPH DRAG/600 MRO

Matrix	Date	Time	Outfall	Start	End	Identifying Marks of Sample(s)	Start Depth	End Depth	VOL	AG	250 ml	Glass Jar	P/O	Lab Sample ID	Lab Use Only
S	10/16/16	10:30				S-2								2011D46-001	
S		10:35				S-3								002	
S		10:40				S-4								003	
S		10:45				S-5								004	
S		10:50				S-6								005	
S		1:00				S-7								006	
														007	

NFS

Turn around time	Normal	25% Rush	50% Rush	100% Rush
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>11/28/16</u>	Time: <u>1:10</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>11/28/16</u> Time: <u>1:52</u>
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>11/28/16</u>	Time: <u>1:55</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>11/28/16</u> Time: <u>09:35</u>
Relinquished by (Signature): <u> </u>	Date: <u> </u>	Time: <u> </u>	Received by (Signature): <u> </u>	Date: <u> </u> Time: <u> </u>
Relinquished by (Signature): <u> </u>	Date: <u> </u>	Time: <u> </u>	Received by (Signature): <u> </u>	Date: <u> </u> Time: <u> </u>

NOTES:
20 hrs
Bill to Tom Long
AFE # N26819
A have ready on Thursday 12-1-16

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



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

December 08, 2016

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

RE: Lateral 6B-10

OrderNo.: 1612296

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/7/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', 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 1612296
 Date Reported: 12/8/2016

CLIENT: APEX TITAN
Project: Lateral 6B-10
Lab ID: 1612296-001

Client Sample ID: S-8
Collection Date: 12/6/2016 2:00:00 PM
Received Date: 12/7/2016 8:25:00 AM

Matrix: MEOH (SOIL)

Analyses	Result	PQL	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	12/7/2016 10:20:32 AM	29043
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/7/2016 10:20:32 AM	29043
Surr: DNOP	88.9	70-130		%Rec	1	12/7/2016 10:20:32 AM	29043
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	12/7/2016 10:36:01 AM	29014
Surr: BFB	90.7	68.3-144		%Rec	1	12/7/2016 10:36:01 AM	29014
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.021		mg/Kg	1	12/7/2016 10:36:01 AM	29014
Toluene	ND	0.042		mg/Kg	1	12/7/2016 10:36:01 AM	29014
Ethylbenzene	ND	0.042		mg/Kg	1	12/7/2016 10:36:01 AM	29014
Xylenes, Total	ND	0.085		mg/Kg	1	12/7/2016 10:36:01 AM	29014
Surr: 4-Bromofluorobenzene	97.1	80-120		%Rec	1	12/7/2016 10:36:01 AM	29014

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612296
 Date Reported: 12/8/2016

CLIENT: APEX TITAN

Client Sample ID: S-9

Project: Lateral 6B-10

Collection Date: 12/6/2016 2:05:00 PM

Lab ID: 1612296-002

Matrix: MEOH (SOIL) **Received Date:** 12/7/2016 8:25:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	310	9.9		mg/Kg	1	12/7/2016 10:47:28 AM	29043
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/7/2016 10:47:28 AM	29043
Surr: DNOP	88.2	70-130		%Rec	1	12/7/2016 10:47:28 AM	29043
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3300	75		mg/Kg	20	12/7/2016 10:12:26 AM	29014
Surr: BFB	260	68.3-144	S	%Rec	20	12/7/2016 10:12:26 AM	29014
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	16	0.38		mg/Kg	20	12/7/2016 10:12:26 AM	29014
Toluene	67	0.75		mg/Kg	20	12/7/2016 10:12:26 AM	29014
Ethylbenzene	6.9	0.75		mg/Kg	20	12/7/2016 10:12:26 AM	29014
Xylenes, Total	60	1.5		mg/Kg	20	12/7/2016 10:12:26 AM	29014
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	20	12/7/2016 10:12:26 AM	29014

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612296
 08-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID LCS-29043	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 29043		RunNo: 39207							
Prep Date: 12/7/2016	Analysis Date: 12/7/2016		SeqNo: 1226819				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.0	62.6	124			
Surr: DNOP	3.8		5.000		76.4	70	130			

Sample ID MB-29043	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29043		RunNo: 39207							
Prep Date: 12/7/2016	Analysis Date: 12/7/2016		SeqNo: 1226821				Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.3	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612296
 08-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID MB-29014	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 29014	RunNo: 39220								
Prep Date: 12/6/2016	Analysis Date: 12/7/2016	SeqNo: 1227407	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	840		1000		83.6	68.3	144			

Sample ID LCS-29014	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 29014	RunNo: 39220								
Prep Date: 12/6/2016	Analysis Date: 12/7/2016	SeqNo: 1227408	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.7	74.6	123			
Surr: BFB	920		1000		92.3	68.3	144			

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
- RI Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612296
 08-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID MB-29014	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 29014		RunNo: 39220							
Prep Date: 12/6/2016	Analysis Date: 12/7/2016		SeqNo: 1227432		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	80	120			

Sample ID LCS-29014	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 29014		RunNo: 39220							
Prep Date: 12/6/2016	Analysis Date: 12/7/2016		SeqNo: 1227433		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	75.2	115			
Toluene	0.97	0.050	1.000	0	96.9	80.7	112			
Ethylbenzene	0.94	0.050	1.000	0	93.8	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	93.7	79.2	115			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	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
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612296

RcptNo: 1

Received by/date: *[Signature]* 12/07/16

Logged By: Lindsay Mangin 12/7/2016 8:25:00 AM *[Signature]*

Completed By: Lindsay Mangin 12/7/2016 8:49:03 AM *[Signature]*

Reviewed By: *[Signature]* 12/07/16

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? 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? Yes No

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

Special Handling (if applicable)

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

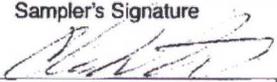
Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Not Present			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec NM</u>		Laboratory: <u>Hall Env</u> Address: <u>ABE NM</u>		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> SO2, BTEX, SVIS, TPH, DRO, PCB, PAHs </div>										Lab use only Due Date: _____	
		Contact: <u>A Freeman</u> Phone: _____ PO/SO #: _____												Temp. of coolers when received (C°): <u>3.3</u>	
Project Manager <u>K Summers</u>		Sampler's Name <u>Chad D. Apert</u>		Sampler's Signature 		Lab Sample ID (Lab Use Only)									
Proj. No. <u>D504012317</u>		Project Name <u>Lateral 6B-10</u>													
Matrix	Date	Time	CO P	G B	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)		
S	12/6/16	1400			S-8						1		1	1612296-001	
S	12/6/16	1405			S-9						1		1	-002	
N/A															
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same day</u>															
Relinquished by (Signature)			Date: <u>12/6/16</u> Time: <u>1600</u>		Received by (Signature)			Date: <u>12/6/16</u> Time: <u>1600</u>		NOTES: Bill to Tom Long AFE# N26819 Same Day					
Relinquished by (Signature)			Date: <u>12/6/16</u> Time: <u>1700</u>		Received by (Signature)			Date: <u>12/6/16</u> Time: <u>1700</u>							
Relinquished by (Signature)			Date: <u>12/6/16</u> Time: <u>1830</u>		Received by (Signature)			Date: <u>12/7/16</u> Time: <u>0825</u>							
Relinquished by (Signature)			Date: _____ Time: _____		Received by (Signature)			Date: _____ Time: _____							

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



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

December 12, 2016

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

RE: 6B-10

OrderNo.: 1612498

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 12/9/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', 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 1612498

Date Reported: 12/12/2016

CLIENT: APEX TITAN

Client Sample ID: S-10

Project: 6B-10

Collection Date: 12/8/2016 2:30:00 PM

Lab ID: 1612498-001

Matrix: MEOH (SOIL) Received Date: 12/9/2016 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/9/2016 10:36:50 AM	29095
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/9/2016 10:36:50 AM	29095
Surr: DNOP	101	70-130		%Rec	1	12/9/2016 10:36:50 AM	29095
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/9/2016 10:20:23 AM	29078
Surr: BFB	86.6	68.3-144		%Rec	1	12/9/2016 10:20:23 AM	29078
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/9/2016 10:20:23 AM	29078
Toluene	ND	0.040		mg/Kg	1	12/9/2016 10:20:23 AM	29078
Ethylbenzene	ND	0.040		mg/Kg	1	12/9/2016 10:20:23 AM	29078
Xylenes, Total	ND	0.080		mg/Kg	1	12/9/2016 10:20:23 AM	29078
Surr: 4-Bromofluorobenzene	94.0	80-120		%Rec	1	12/9/2016 10:20:23 AM	29078

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-11

Project: 6B-10

Collection Date: 12/8/2016 2:35:00 PM

Lab ID: 1612498-002

Matrix: MEOH (SOIL)

Received Date: 12/9/2016 8:20:00 AM

Analyses	Result	PQL	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	12/9/2016 10:58:18 AM	29095
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/9/2016 10:58:18 AM	29095
Surr: DNOP	97.7	70-130		%Rec	1	12/9/2016 10:58:18 AM	29095
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/9/2016 10:43:52 AM	29078
Surr: BFB	86.2	68.3-144		%Rec	1	12/9/2016 10:43:52 AM	29078
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.20	0.024		mg/Kg	1	12/9/2016 10:43:52 AM	29078
Toluene	0.20	0.048		mg/Kg	1	12/9/2016 10:43:52 AM	29078
Ethylbenzene	ND	0.048		mg/Kg	1	12/9/2016 10:43:52 AM	29078
Xylenes, Total	ND	0.097		mg/Kg	1	12/9/2016 10:43:52 AM	29078
Surr: 4-Bromofluorobenzene	95.7	80-120		%Rec	1	12/9/2016 10:43:52 AM	29078

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612498

Date Reported: 12/12/2016

CLIENT: APEX TITAN

Client Sample ID: S-12

Project: 6B-10

Collection Date: 12/8/2016 2:40:00 PM

Lab ID: 1612498-003

Matrix: MEOH (SOIL)

Received Date: 12/9/2016 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/9/2016 11:19:48 AM	29095
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/9/2016 11:19:48 AM	29095
Surr: DNOP	101	70-130		%Rec	1	12/9/2016 11:19:48 AM	29095
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.2		mg/Kg	1	12/9/2016 11:07:42 AM	29078
Surr: BFB	86.4	68.3-144		%Rec	1	12/9/2016 11:07:42 AM	29078
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.026		mg/Kg	1	12/9/2016 11:07:42 AM	29078
Toluene	ND	0.052		mg/Kg	1	12/9/2016 11:07:42 AM	29078
Ethylbenzene	ND	0.052		mg/Kg	1	12/9/2016 11:07:42 AM	29078
Xylenes, Total	ND	0.10		mg/Kg	1	12/9/2016 11:07:42 AM	29078
Surr: 4-Bromofluorobenzene	95.0	80-120		%Rec	1	12/9/2016 11:07:42 AM	29078

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612498
 12-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID LCS-29095	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 29095	RunNo: 39269								
Prep Date: 12/9/2016	Analysis Date: 12/9/2016	SeqNo: 1229305	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	97.1	62.6	124			
Surr: DNOP	4.8		5.000		95.9	70	130			

Sample ID MB-29095	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 29095	RunNo: 39269								
Prep Date: 12/9/2016	Analysis Date: 12/9/2016	SeqNo: 1229306	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		109	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612498
 12-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID MB-29078	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 29078	RunNo: 39283								
Prep Date: 12/8/2016	Analysis Date: 12/9/2016	SeqNo: 1229674	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	860		1000		85.7	68.3	144			

Sample ID LCS-29078	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 29078	RunNo: 39283								
Prep Date: 12/8/2016	Analysis Date: 12/9/2016	SeqNo: 1229675	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.9	74.6	123			
Surr: BFB	920		1000		92.3	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612498

12-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID MB-29078	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 29078	RunNo: 39283								
Prep Date: 12/8/2016	Analysis Date: 12/9/2016	SeqNo: 1229693	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.5	80	120			

Sample ID LCS-29078	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 29078	RunNo: 39283								
Prep Date: 12/8/2016	Analysis Date: 12/9/2016	SeqNo: 1229694	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	75.2	115			
Toluene	0.95	0.050	1.000	0	95.1	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	94.6	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	95.4	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.5	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
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612498

RcptNo: 1

Received by/date: *AG* 12/09/16

Logged By: Ashley Gallegos 12/9/2016 8:20:00 AM *AG*

Completed By: Ashley Gallegos 12/9/2016 8:29:49 AM *AG*

Reviewed By: *AG/Re* 12/09/16

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 # of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
- 13. Are matrices correctly identified on Chain of Custody? Yes No Adjusted?
- 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 Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD



Office Location

Aztec Min

Laboratory: Hill Env

Address: A-30 NW

Contact: A Freeman

Phone:

PO/SO #:

Project Manager: R Sommer

Sampler's Name

David L. Porter

Sampler's Signature

[Signature]

Proj No.

Project Name

No/Type of Containers

235040 113217

LB-10

ANALYSIS REQUESTED
 BTE X
 JES TPN
 GPO/Dr/Im/ko

Lab use only
 Due Date:

Temp of coolers
 when received (C):

10

Page 1 of 1

Matrix	Date	Time	Co. No.	Identifying Marks of Samples:	Start Depth	End Depth	VOA	A/G 1L	P/O 250 ml	Glass Jar	P/O
S	12/8/10	1130		S-10							
S	12/8/10	1135		S-11							
S	12/8/10	1140		S-12							

Lab Sample D: Lab Use Only
11124103-CC1
-CC2
-CC3

Turn around time Normal 25% Rush 50% Rush 100% Rush See tag

Relinquished by (Signature): <u>[Signature]</u>	Date: <u>12/8/10</u>	Time: <u>1630</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>12/8/10</u>	Time: <u>11030</u>
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>12/8/10</u>	Time: <u>1021</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>12/08/10</u>	Time: <u>0820</u>
Relinquished by (Signature):	Date:	Time:	Received by (Signature):	Date:	Time:
Relinquished by (Signature):	Date:	Time:	Received by (Signature):	Date:	Time:

NOTES:
Bill to Tom Long
Same Day
APE # 1120819

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



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

December 16, 2016

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

RE: 6B-10

OrderNo.: 1612745

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/14/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612745

Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-13

Project: 6B-10

Collection Date: 12/13/2016 11:10:00 AM

Lab ID: 1612745-001

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/14/2016 1:16:13 PM	G39384
Surr: BFB	86.9	70-130		%Rec	1	12/14/2016 1:16:13 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/14/2016 11:28:22 AM	29175
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/14/2016 11:28:22 AM	29175
Surr: DNOP	85.0	70-130		%Rec	1	12/14/2016 11:28:22 AM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.019		mg/Kg	1	12/14/2016 1:16:13 PM	A39384
Toluene	ND	0.039		mg/Kg	1	12/14/2016 1:16:13 PM	A39384
Ethylbenzene	ND	0.039		mg/Kg	1	12/14/2016 1:16:13 PM	A39384
Xylenes, Total	ND	0.078		mg/Kg	1	12/14/2016 1:16:13 PM	A39384
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/14/2016 1:16:13 PM	A39384
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	12/14/2016 1:16:13 PM	A39384
Surr: Dibromofluoromethane	112	70-130		%Rec	1	12/14/2016 1:16:13 PM	A39384
Surr: Toluene-d8	97.0	70-130		%Rec	1	12/14/2016 1:16:13 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612745

Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-14

Project: 6B-10

Collection Date: 12/13/2016 11:25:00 AM

Lab ID: 1612745-002

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/14/2016 1:44:53 PM	G39384
Surr: BFB	81.9	70-130		%Rec	1	12/14/2016 1:44:53 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/14/2016 11:50:04 AM	29175
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/14/2016 11:50:04 AM	29175
Surr: DNOP	84.6	70-130		%Rec	1	12/14/2016 11:50:04 AM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.023		mg/Kg	1	12/14/2016 1:44:53 PM	A39384
Toluene	ND	0.047		mg/Kg	1	12/14/2016 1:44:53 PM	A39384
Ethylbenzene	ND	0.047		mg/Kg	1	12/14/2016 1:44:53 PM	A39384
Xylenes, Total	ND	0.094		mg/Kg	1	12/14/2016 1:44:53 PM	A39384
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/14/2016 1:44:53 PM	A39384
Surr: 4-Bromofluorobenzene	88.0	70-130		%Rec	1	12/14/2016 1:44:53 PM	A39384
Surr: Dibromofluoromethane	112	70-130		%Rec	1	12/14/2016 1:44:53 PM	A39384
Surr: Toluene-d8	97.0	70-130		%Rec	1	12/14/2016 1:44:53 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612745
 Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-15

Project: 6B-10

Collection Date: 12/13/2016 11:30:00 AM

Lab ID: 1612745-003

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/14/2016 2:13:39 PM	G39384
Surr: BFB	82.8	70-130		%Rec	1	12/14/2016 2:13:39 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/14/2016 12:11:41 PM	29175
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/14/2016 12:11:41 PM	29175
Surr: DNOP	85.0	70-130		%Rec	1	12/14/2016 12:11:41 PM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.020		mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Toluene	ND	0.039		mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Ethylbenzene	ND	0.039		mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Xylenes, Total	ND	0.079		mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/14/2016 2:13:39 PM	A39384
Surr: 4-Bromofluorobenzene	90.4	70-130		%Rec	1	12/14/2016 2:13:39 PM	A39384
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/14/2016 2:13:39 PM	A39384
Surr: Toluene-d8	93.4	70-130		%Rec	1	12/14/2016 2:13:39 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612745
 Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-16

Project: 6B-10

Collection Date: 12/13/2016 11:50:00 AM

Lab ID: 1612745-004

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	19000	1000		mg/Kg	250	12/14/2016 12:47:18 PM	G39384
Surr: BFB	85.6	70-130		%Rec	250	12/14/2016 12:47:18 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	370	9.7		mg/Kg	1	12/14/2016 12:33:25 PM	29175
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/14/2016 12:33:25 PM	29175
Surr: DNOP	90.5	70-130		%Rec	1	12/14/2016 12:33:25 PM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	49	5.2		mg/Kg	250	12/14/2016 12:47:18 PM	A39384
Toluene	500	10		mg/Kg	250	12/14/2016 12:47:18 PM	A39384
Ethylbenzene	36	10		mg/Kg	250	12/14/2016 12:47:18 PM	A39384
Xylenes, Total	330	21		mg/Kg	250	12/14/2016 12:47:18 PM	A39384
Surr: 1,2-Dichloroethane-d4	90.1	70-130		%Rec	250	12/14/2016 12:47:18 PM	A39384
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	250	12/14/2016 12:47:18 PM	A39384
Surr: Dibromofluoromethane	89.7	70-130		%Rec	250	12/14/2016 12:47:18 PM	A39384
Surr: Toluene-d8	99.4	70-130		%Rec	250	12/14/2016 12:47:18 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612745

Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-17

Project: 6B-10

Collection Date: 12/13/2016 12:00:00 PM

Lab ID: 1612745-005

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	12/14/2016 2:42:31 PM	G39384
Surr: BFB	84.3	70-130		%Rec	1	12/14/2016 2:42:31 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/14/2016 12:55:01 PM	29175
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/14/2016 12:55:01 PM	29175
Surr: DNOP	80.2	70-130		%Rec	1	12/14/2016 12:55:01 PM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.019		mg/Kg	1	12/14/2016 2:42:31 PM	A39384
Toluene	ND	0.038		mg/Kg	1	12/14/2016 2:42:31 PM	A39384
Ethylbenzene	ND	0.038		mg/Kg	1	12/14/2016 2:42:31 PM	A39384
Xylenes, Total	ND	0.077		mg/Kg	1	12/14/2016 2:42:31 PM	A39384
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/14/2016 2:42:31 PM	A39384
Surr: 4-Bromofluorobenzene	89.4	70-130		%Rec	1	12/14/2016 2:42:31 PM	A39384
Surr: Dibromofluoromethane	112	70-130		%Rec	1	12/14/2016 2:42:31 PM	A39384
Surr: Toluene-d8	93.2	70-130		%Rec	1	12/14/2016 2:42:31 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612745
 Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-18

Project: 6B-10

Collection Date: 12/13/2016 12:30:00 PM

Lab ID: 1612745-006

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/14/2016 3:11:28 PM	G39384
Surr: BFB	87.8	70-130		%Rec	1	12/14/2016 3:11:28 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/14/2016 1:16:45 PM	29175
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/14/2016 1:16:45 PM	29175
Surr: DNOP	76.4	70-130		%Rec	1	12/14/2016 1:16:45 PM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.018		mg/Kg	1	12/14/2016 3:11:28 PM	A39384
Toluene	ND	0.037		mg/Kg	1	12/14/2016 3:11:28 PM	A39384
Ethylbenzene	ND	0.037		mg/Kg	1	12/14/2016 3:11:28 PM	A39384
Xylenes, Total	ND	0.073		mg/Kg	1	12/14/2016 3:11:28 PM	A39384
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/14/2016 3:11:28 PM	A39384
Surr: 4-Bromofluorobenzene	90.5	70-130		%Rec	1	12/14/2016 3:11:28 PM	A39384
Surr: Dibromofluoromethane	111	70-130		%Rec	1	12/14/2016 3:11:28 PM	A39384
Surr: Toluene-d8	97.0	70-130		%Rec	1	12/14/2016 3:11:28 PM	A39384

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612745
 Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-19

Project: 6B-10

Collection Date: 12/13/2016 12:45:00 PM

Lab ID: 1612745-007

Matrix: SOIL

Received Date: 12/14/2016 8:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: AG
Gasoline Range Organics (GRO)	ND	4.3		mg/Kg	1	12/14/2016 3:40:17 PM	G39384
Surr: BFB	84.3	70-130		%Rec	1	12/14/2016 3:40:17 PM	G39384
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/14/2016 1:38:06 PM	29175
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/14/2016 1:38:06 PM	29175
Surr: DNOP	78.7	70-130		%Rec	1	12/14/2016 1:38:06 PM	29175
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: AG
Benzene	ND	0.021		mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Toluene	ND	0.043		mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Ethylbenzene	ND	0.043		mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Xylenes, Total	ND	0.086		mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: 4-Bromofluorobenzene	92.3	70-130		%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: Toluene-d8	96.2	70-130		%Rec	1	12/14/2016 3:40:17 PM	A39384

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745
16-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID: LCS-29175	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 29175	RunNo: 39372								
Prep Date: 12/14/2016	Analysis Date: 12/14/2016	SeqNo: 1232663	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.4	63.8	116			
Surr: DNOP	4.2		5.000		83.2	70	130			

Sample ID: MB-29175	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: PBS	Batch ID: 29175	RunNo: 39372								
Prep Date: 12/14/2016	Analysis Date: 12/14/2016	SeqNo: 1232664	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.1	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745

16-Dec-16

Client: APEX TITAN
Project: 6B-10

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSS	Batch ID: A39384		RunNo: 39384							
Prep Date:	Analysis Date: 12/14/2016		SeqNo: 1233489		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	70	130			
Toluene	0.97	0.050	1.000	0	96.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.3	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6	70	130			

Sample ID rb	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch ID: A39384		RunNo: 39384							
Prep Date:	Analysis Date: 12/14/2016		SeqNo: 1233490		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		107	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.2	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		117	70	130			
Surr: Toluene-d8	0.47		0.5000		94.0	70	130			

Sample ID 1612745-001ams	SampType: MS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: S-13	Batch ID: A39384		RunNo: 39384							
Prep Date:	Analysis Date: 12/14/2016		SeqNo: 1233510		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.019	0.7770	0	108	49.2	155			
Toluene	0.75	0.039	0.7770	0.01906	94.5	52	154			
Surr: 1,2-Dichloroethane-d4	0.39		0.3885		99.5	70	130			
Surr: 4-Bromofluorobenzene	0.35		0.3885		90.6	70	130			
Surr: Dibromofluoromethane	0.41		0.3885		105	70	130			
Surr: Toluene-d8	0.36		0.3885		93.8	70	130			

Sample ID 1612745-001amsd	SampType: MSD		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: S-13	Batch ID: A39384		RunNo: 39384							
Prep Date:	Analysis Date: 12/14/2016		SeqNo: 1233511		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.019	0.7770	0	101	49.2	155	6.57	20	
Toluene	0.72	0.039	0.7770	0.01906	90.3	52	154	4.41	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745
 16-Dec-16

Client: APEX TITAN
 Project: 6B-10

Sample ID: 1612745-001amsd	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: S-13	Batch ID: A39384	RunNo: 39384								
Prep Date:	Analysis Date: 12/14/2016	SeqNo: 1233511 Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.41		0.3885		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.36		0.3885		91.8	70	130	0	0	
Surr: Dibromofluoromethane	0.40		0.3885		104	70	130	0	0	
Surr: Toluene-d8	0.37		0.3885		95.0	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745

16-Dec-16

Client: APEX TITAN

Project: 6B-10

Sample ID	2.5ug gro lcs	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	G39384	RunNo:	39384					
Prep Date:		Analysis Date:	12/14/2016	SeqNo:	1233373	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.4	62.9	123			
Surr: BFB	420		500.0		83.3	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	G39384	RunNo:	39384					
Prep Date:		Analysis Date:	12/14/2016	SeqNo:	1233374	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	400		500.0		80.0	70	130			

Sample ID	1612745-001AMS	SampType:	MS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	S-13	Batch ID:	G39384	RunNo:	39384					
Prep Date:		Analysis Date:	12/14/2016	SeqNo:	1234053	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.9	19.42	1.655	92.6	52.3	132			
Surr: BFB	340		388.5		88.3	70	130			

Sample ID	1612745-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	S-13	Batch ID:	G39384	RunNo:	39384					
Prep Date:		Analysis Date:	12/14/2016	SeqNo:	1234054	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.9	19.42	1.655	86.6	52.3	132	6.12	20	
Surr: BFB	340		388.5		88.7	70	130	0	0	

Qualifiers:

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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612745

RcptNo: 1

Received by/date: AT 12/14/16

Logged By: Anne Thorne 12/14/2016 8:05:00 AM *Anne Thorne*

Completed By: Anne Thorne 12/14/2016 9:07:55 AM *Anne Thorne*

Reviewed By: *AG* 12/14/16

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: _____ 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	1.0	Good	Yes			

CHAIN OF CUSTODY RECORD



Office Location Aztec

Laboratory: Hall
 Address: ABQ
 Contact: A. Freeman
 Phone: _____
 PO/ISO #: _____

ANALYSIS REQUESTED

Lab use only
 Due Date: _____
 Temp. of coolers when received (C°): 1.5
 1 2 3 4 5
 Page 1 of 1

Project Manager: K. Summers
 Sampler's Name: Ryle Summers
 Sampler's Signature: [Signature]

Proj. No. _____ Project Name: LB-10 No/Type of Containers _____

Matrix	Date	Time	CO2	bar G	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)	
S	12/13/14	1110	X		S-13								X X	1612745-001
		1125			S-14									002
		1130			S-15									003
		1150			S-16									004
		1200			S-17									005
		1230			S-18									006
		1245			S-19									007
<u>K.S. NFS</u>														

BTEX BOD1
 TPH GROUNDMARK BOD1

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature): <u>[Signature]</u>	Date: <u>12/13/14</u> Time: <u>1602</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>12/16/14</u> Time: <u>1602</u>
Relinquished by (Signature): <u>[Signature]</u>	Date: <u>2/13/14</u> Time: <u>1546</u>	Received by (Signature): <u>[Signature]</u>	Date: <u>12/14/16</u> Time: <u>0905</u>
Relinquished by (Signature): _____	Date: _____ Time: _____	Received by (Signature): _____	Date: _____ Time: _____
Relinquished by (Signature): _____	Date: _____ Time: _____	Received by (Signature): _____	Date: _____ Time: _____

NOTES: Bill Tom Long
N26819
RUSH!
Same Day

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



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

December 19, 2016

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

RE: Lateral 6B 10

OrderNo.: 1612883

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/16/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", 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 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-20

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:00:00 PM

Lab ID: 1612883-001

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/16/2016 10:22:52 AM	29231
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2016 10:22:52 AM	29231
Surr: DNOP	87.1	70-130		%Rec	1	12/16/2016 10:22:52 AM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/16/2016 10:12:43 AM	G39452
Surr: BFB	83.0	68.3-144		%Rec	1	12/16/2016 10:12:43 AM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	12/16/2016 10:12:43 AM	B39452
Toluene	ND	0.035		mg/Kg	1	12/16/2016 10:12:43 AM	B39452
Ethylbenzene	ND	0.035		mg/Kg	1	12/16/2016 10:12:43 AM	B39452
Xylenes, Total	ND	0.070		mg/Kg	1	12/16/2016 10:12:43 AM	B39452
Surr: 4-Bromofluorobenzene	84.4	80-120		%Rec	1	12/16/2016 10:12:43 AM	B39452

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-21

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:05:00 PM

Lab ID: 1612883-002

Matrix: MEOH (SOIL) Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	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	12/16/2016 10:50:19 AM	29231
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	12/16/2016 10:50:19 AM	29231
Surr: DNOP	85.6	70-130		%Rec	1	12/16/2016 10:50:19 AM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/16/2016 10:37:14 AM	G39452
Surr: BFB	89.6	68.3-144		%Rec	1	12/16/2016 10:37:14 AM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Toluene	ND	0.035		mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Ethylbenzene	ND	0.035		mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Xylenes, Total	ND	0.069		mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	12/16/2016 10:37:14 AM	B39452

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-22

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:10:00 PM

Lab ID: 1612883-003

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/16/2016 11:17:53 AM	29231
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	12/16/2016 11:17:53 AM	29231
Surr: DNOP	84.6	70-130		%Rec	1	12/16/2016 11:17:53 AM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	12/16/2016 10:54:18 AM	29188
Surr: BFB	89.0	68.3-144		%Rec	1	12/16/2016 10:54:18 AM	29188
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	12/16/2016 10:54:18 AM	29188
Toluene	ND	0.044		mg/Kg	1	12/16/2016 10:54:18 AM	29188
Ethylbenzene	ND	0.044		mg/Kg	1	12/16/2016 10:54:18 AM	29188
Xylenes, Total	ND	0.087		mg/Kg	1	12/16/2016 10:54:18 AM	29188
Surr: 4-Bromofluorobenzene	95.1	80-120		%Rec	1	12/16/2016 10:54:18 AM	29188

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-23

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:15:00 PM

Lab ID: 1612883-004

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/16/2016 11:45:31 AM	29231
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/16/2016 11:45:31 AM	29231
Surr: DNOP	85.2	70-130		%Rec	1	12/16/2016 11:45:31 AM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	12/16/2016 10:30:47 AM	29188
Surr: BFB	89.4	68.3-144		%Rec	1	12/16/2016 10:30:47 AM	29188
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	12/16/2016 10:30:47 AM	29188
Toluene	ND	0.040		mg/Kg	1	12/16/2016 10:30:47 AM	29188
Ethylbenzene	ND	0.040		mg/Kg	1	12/16/2016 10:30:47 AM	29188
Xylenes, Total	ND	0.079		mg/Kg	1	12/16/2016 10:30:47 AM	29188
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	12/16/2016 10:30:47 AM	29188

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	RI Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-24

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:20:00 PM

Lab ID: 1612883-005

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	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	12/16/2016 12:12:58 PM	29231
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/16/2016 12:12:58 PM	29231
Surr: DNOP	86.3	70-130		%Rec	1	12/16/2016 12:12:58 PM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	12/16/2016 11:01:42 AM	G39452
Surr: BFB	88.6	68.3-144		%Rec	1	12/16/2016 11:01:42 AM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	12/16/2016 11:01:42 AM	B39452
Toluene	ND	0.039		mg/Kg	1	12/16/2016 11:01:42 AM	B39452
Ethylbenzene	ND	0.039		mg/Kg	1	12/16/2016 11:01:42 AM	B39452
Xylenes, Total	ND	0.078		mg/Kg	1	12/16/2016 11:01:42 AM	B39452
Surr: 4-Bromofluorobenzene	96.6	80-120		%Rec	1	12/16/2016 11:01:42 AM	B39452

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612883

Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-25

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:25:00 PM

Lab ID: 1612883-006

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/16/2016 12:40:28 PM	29231
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	12/16/2016 12:40:28 PM	29231
Surr: DNOP	85.9	70-130		%Rec	1	12/16/2016 12:40:28 PM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/16/2016 11:26:16 AM	G39452
Surr: BFB	89.4	68.3-144		%Rec	1	12/16/2016 11:26:16 AM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/16/2016 11:26:16 AM	B39452
Toluene	ND	0.036		mg/Kg	1	12/16/2016 11:26:16 AM	B39452
Ethylbenzene	ND	0.036		mg/Kg	1	12/16/2016 11:26:16 AM	B39452
Xylenes, Total	ND	0.072		mg/Kg	1	12/16/2016 11:26:16 AM	B39452
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	12/16/2016 11:26:16 AM	B39452

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-26

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:30:00 PM

Lab ID: 1612883-007

Matrix: MEOH (SOIL)

Received Date: 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/16/2016 1:08:00 PM	29231
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/16/2016 1:08:00 PM	29231
Surr: DNOP	85.8	70-130		%Rec	1	12/16/2016 1:08:00 PM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/16/2016 11:50:56 AM	G39452
Surr: BFB	86.3	68.3-144		%Rec	1	12/16/2016 11:50:56 AM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.024		mg/Kg	1	12/16/2016 11:50:56 AM	B39452
Toluene	ND	0.047		mg/Kg	1	12/16/2016 11:50:56 AM	B39452
Ethylbenzene	ND	0.047		mg/Kg	1	12/16/2016 11:50:56 AM	B39452
Xylenes, Total	ND	0.095		mg/Kg	1	12/16/2016 11:50:56 AM	B39452
Surr: 4-Bromofluorobenzene	91.8	80-120		%Rec	1	12/16/2016 11:50:56 AM	B39452

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
 Lab Order 1612883
 Date Reported: 12/19/2016

CLIENT: APEX TITAN

Client Sample ID: S-27

Project: Lateral 6B 10

Collection Date: 12/15/2016 2:35:00 PM

Lab ID: 1612883-008

Matrix: MEOH (SOIL) **Received Date:** 12/16/2016 7:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/16/2016 1:35:25 PM	29231
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	12/16/2016 1:35:25 PM	29231
Surr: DNOP	85.9	70-130		%Rec	1	12/16/2016 1:35:25 PM	29231
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.6		mg/Kg	1	12/16/2016 12:15:32 PM	G39452
Surr: BFB	88.1	68.3-144		%Rec	1	12/16/2016 12:15:32 PM	G39452
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/16/2016 12:15:32 PM	B39452
Toluene	ND	0.036		mg/Kg	1	12/16/2016 12:15:32 PM	B39452
Ethylbenzene	ND	0.036		mg/Kg	1	12/16/2016 12:15:32 PM	B39452
Xylenes, Total	ND	0.071		mg/Kg	1	12/16/2016 12:15:32 PM	B39452
Surr: 4-Bromofluorobenzene	93.1	80-120		%Rec	1	12/16/2016 12:15:32 PM	B39452

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID	LCS-29231	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	29231	RunNo:	39450					
Prep Date:	12/16/2016	Analysis Date:	12/16/2016	SeqNo:	1235511	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	96.6	63.8	116			
Surr: DNOP	4.3		5.000		85.7	70	130			

Sample ID	MB-29231	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	29231	RunNo:	39450					
Prep Date:	12/16/2016	Analysis Date:	12/16/2016	SeqNo:	1235512	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.8		10.00		88.3	70	130			

Sample ID	1612883-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	S-20	Batch ID:	29231	RunNo:	39450					
Prep Date:	12/16/2016	Analysis Date:	12/16/2016	SeqNo:	1236423	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.30	0	93.1	51.6	130			
Surr: DNOP	4.1		5.030		81.5	70	130			

Sample ID	1612883-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	S-20	Batch ID:	29231	RunNo:	39450					
Prep Date:	12/16/2016	Analysis Date:	12/16/2016	SeqNo:	1236424	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.25	0	97.4	51.6	130	4.40	20	
Surr: DNOP	4.2		5.025		84.6	70	130	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235862			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	860		1000		85.9	68.3	144			

Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235863			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	74.6	123			
Surr: BFB	930		1000		93.1	68.3	144			

Sample ID 1612883-001AMS	SampType: MS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-20	Batch ID: G39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235864			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.5	17.42	0	114	61.3	150			
Surr: BFB	670		696.9		96.4	68.3	144			

Sample ID 1612883-001AMSD	SampType: MSD	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: S-20	Batch ID: G39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235865			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	19	3.5	17.42	0	111	61.3	150	2.62	20	
Surr: BFB	650		696.9		92.6	68.3	144	0	0	

Sample ID MB-29188	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: 29188	RunNo: 39451								
Prep Date: 12/14/2016	Analysis Date: 12/16/2016	SeqNo: 1235878			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	880		1000		88.1	68.3	144			

Sample ID LCS-29188	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: 29188	RunNo: 39451								
Prep Date: 12/14/2016	Analysis Date: 12/16/2016	SeqNo: 1235879			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	880		1000		88.1	68.3	144			

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
- RI Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client: APEX TITAN

Project: Lateral 6B 10

Sample ID	LCS-29188	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	29188	RunNo:	39451					
Prep Date:	12/14/2016	Analysis Date:	12/16/2016	SeqNo:	1235879	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	100	74.6	123			
Surr: BFB	960		1000		95.8	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883
19-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: B39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235870			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: B39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235871			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	75.2	115			
Toluene	1.0	0.050	1.000	0	99.8	80.7	112			
Ethylbenzene	0.98	0.050	1.000	0	97.9	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	95.2	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.5	80	120			

Sample ID 1612883-002AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-21	Batch ID: B39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235872			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.017	0.6920	0	105	61.5	138			
Toluene	0.70	0.035	0.6920	0	102	71.4	127			
Ethylbenzene	0.69	0.035	0.6920	0	99.2	70.9	132			
Xylenes, Total	2.0	0.069	2.076	0.01059	95.1	76.2	123			
Surr: 4-Bromofluorobenzene	0.65		0.6920		94.2	80	120			

Sample ID 1612883-002AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-21	Batch ID: B39452	RunNo: 39452								
Prep Date:	Analysis Date: 12/16/2016	SeqNo: 1235873			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.017	0.6920	0	105	61.5	138	0.772	20	
Toluene	0.72	0.035	0.6920	0	103	71.4	127	1.59	20	
Ethylbenzene	0.69	0.035	0.6920	0	99.4	70.9	132	0.111	20	
Xylenes, Total	2.0	0.069	2.076	0.01059	94.3	76.2	123	0.875	20	
Surr: 4-Bromofluorobenzene	0.67		0.6920		97.3	80	120	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID: MB-29188	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Batch ID: 29188	RunNo: 39451								
Prep Date: 12/14/2016	Analysis Date: 12/16/2016	SeqNo: 1235892	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID: LCS-29188	SampType: LCS	TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch ID: 29188	RunNo: 39451								
Prep Date: 12/14/2016	Analysis Date: 12/16/2016	SeqNo: 1235893	Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	110	75.2	115			
Toluene	1.0	0.050	1.000	0	103	80.7	112			
Ethylbenzene	0.98	0.050	1.000	0	98.3	78.9	117			
Xylenes, Total	3.0	0.10	3.000	0	98.9	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		102	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
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612883

RcptNo: 1

Received by/date: *[Signature]* 12/16/16

Logged By: Lindsay Mangin

12/16/2016 7:15:00 AM

[Signature]

Completed By: Lindsay Mangin

12/16/2016 7:19:58 AM

[Signature]

Reviewed By: *[Signature]*

12/16/16

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 ✓ # of preserved bottles checked for pH: (<2 or >12 unless noted)
- 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ✓ No Adjusted?
- 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 Checked by:

Special Handling (if applicable)

- 16. Was client notified of all discrepancies with this order? Yes No NA ✓

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX
Office Location Aztec N.M.

Laboratory: Hall Env
Address: A30 N.M.

ANALYSIS REQUESTED

BTEX SO2
TPH GRO/DRO/MRO SO2

Lab use only
Due Date:
Temp. of coolers when received (C°): 3.3

1	2	3	4	5
---	---	---	---	---

Contact: A. Freeman
Phone:
PO/ISO #:

Page 1 of 1

Project Manager K. Summis
Sampler's Name Oned Aganti Sampler's Signature [Signature]

Proj. No. Project Name Lateral 6B-10 No/Type of Containers

Matrix	Date	Time	COE	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	12/15/16	1400			S-20								1612883-001
		1405			S-21								-002
		1410			S-22								-003
		1415			S-23								-004
		1420			S-24								-005
		1425			S-25								-006
		1430			S-26								-007
		1435			S-27								-008

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature) <u>[Signature]</u>	Date: <u>12-15-16</u>	Time: <u>1550</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>12/15/16</u>	Time: <u>1550</u>
Relinquished by (Signature) <u>[Signature]</u>	Date: <u>12/15/16</u>	Time: <u>1813</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>12/16/16</u>	Time: <u>0715</u>
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES:
Bill to Tom Long
AFE # N26819
[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 C - Charcoal tube SL - sludge O - Oil P/O - Plastic or other



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

December 20, 2016

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

RE: Lateral 6B 10

OrderNo.: 1612942

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/17/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-28

Project: Lateral 6B 10

Collection Date: 12/16/2016 11:00:00 AM

Lab ID: 1612942-001

Matrix: MEOH (SOIL)

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	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	12/19/2016 11:53:15 AM	29257
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/19/2016 11:53:15 AM	29257
Surr: DNOP	85.9	70-130		%Rec	1	12/19/2016 11:53:15 AM	29257
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	12/19/2016 10:45:05 AM	G39493
Surr: BFB	85.1	68.3-144		%Rec	1	12/19/2016 10:45:05 AM	G39493
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	12/19/2016 10:45:05 AM	B39493
Toluene	ND	0.038		mg/Kg	1	12/19/2016 10:45:05 AM	B39493
Ethylbenzene	ND	0.038		mg/Kg	1	12/19/2016 10:45:05 AM	B39493
Xylenes, Total	ND	0.076		mg/Kg	1	12/19/2016 10:45:05 AM	B39493
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	12/19/2016 10:45:05 AM	B39493

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

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

Analytical Report

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-29

Project: Lateral 6B 10

Collection Date: 12/16/2016 11:05:00 AM

Lab ID: 1612942-002

Matrix: MEOH (SOIL)

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	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	12/19/2016 12:20:38 PM	29257
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/19/2016 12:20:38 PM	29257
Surr: DNOP	84.5	70-130		%Rec	1	12/19/2016 12:20:38 PM	29257
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/19/2016 11:08:32 AM	G39493
Surr: BFB	86.2	68.3-144		%Rec	1	12/19/2016 11:08:32 AM	G39493
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	12/19/2016 11:08:32 AM	B39493
Toluene	ND	0.035		mg/Kg	1	12/19/2016 11:08:32 AM	B39493
Ethylbenzene	ND	0.035		mg/Kg	1	12/19/2016 11:08:32 AM	B39493
Xylenes, Total	ND	0.069		mg/Kg	1	12/19/2016 11:08:32 AM	B39493
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	12/19/2016 11:08:32 AM	B39493

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

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

Analytical Report

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-30

Project: Lateral 6B 10

Collection Date: 12/16/2016 11:10:00 AM

Lab ID: 1612942-003

Matrix: MEOH (SOIL)

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/19/2016 12:47:41 PM	29257
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/19/2016 12:47:41 PM	29257
Surr: DNOP	88.2	70-130		%Rec	1	12/19/2016 12:47:41 PM	29257
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	12/19/2016 11:32:11 AM	G39493
Surr: BFB	85.8	68.3-144		%Rec	1	12/19/2016 11:32:11 AM	G39493
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.019		mg/Kg	1	12/19/2016 11:32:11 AM	B39493
Toluene	ND	0.037		mg/Kg	1	12/19/2016 11:32:11 AM	B39493
Ethylbenzene	ND	0.037		mg/Kg	1	12/19/2016 11:32:11 AM	B39493
Xylenes, Total	ND	0.074		mg/Kg	1	12/19/2016 11:32:11 AM	B39493
Surr: 4-Bromofluorobenzene	94.2	80-120		%Rec	1	12/19/2016 11:32:11 AM	B39493

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

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-31

Project: Lateral 6B 10

Collection Date: 12/16/2016 11:15:00 AM

Lab ID: 1612942-004

Matrix: MEOH (SOIL)

Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	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	12/19/2016 1:14:55 PM	29257
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/19/2016 1:14:55 PM	29257
Surr: DNOP	85.3	70-130		%Rec	1	12/19/2016 1:14:55 PM	29257
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/19/2016 11:55:45 AM	G39493
Surr: BFB	87.9	68.3-144		%Rec	1	12/19/2016 11:55:45 AM	G39493
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.018		mg/Kg	1	12/19/2016 11:55:45 AM	B39493
Toluene	ND	0.035		mg/Kg	1	12/19/2016 11:55:45 AM	B39493
Ethylbenzene	ND	0.035		mg/Kg	1	12/19/2016 11:55:45 AM	B39493
Xylenes, Total	ND	0.071		mg/Kg	1	12/19/2016 11:55:45 AM	B39493
Surr: 4-Bromofluorobenzene	95.9	80-120		%Rec	1	12/19/2016 11:55:45 AM	B39493

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612942
 20-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID	LCS-29257	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	29257	RunNo:	39484					
Prep Date:	12/19/2016	Analysis Date:	12/19/2016	SeqNo:	1236591	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	96.7	63.8	116			
Surr: DNOP	4.3		5.000		86.9	70	130			

Sample ID	MB-29257	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	29257	RunNo:	39484					
Prep Date:	12/19/2016	Analysis Date:	12/19/2016	SeqNo:	1236592	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.2		10.00		82.3	70	130			

Sample ID	LCS-29233	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	29233	RunNo:	39485					
Prep Date:	12/16/2016	Analysis Date:	12/19/2016	SeqNo:	1237666	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.8	70	130			

Sample ID	MB-29233	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	29233	RunNo:	39485					
Prep Date:	12/16/2016	Analysis Date:	12/19/2016	SeqNo:	1237667	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612942

20-Dec-16

Client: APEX TITAN

Project: Lateral 6B 10

Sample ID	RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G39493	RunNo:	39493					
Prep Date:		Analysis Date:	12/19/2016	SeqNo:	1237109	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	900		1000		89.9	68.3	144			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G39493	RunNo:	39493					
Prep Date:		Analysis Date:	12/19/2016	SeqNo:	1237110	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.4	74.6	123			
Surr: BFB	950		1000		95.3	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612942

20-Dec-16

Client: APEX TITAN
Project: Lateral 6B 10

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B39493		RunNo: 39493							
Prep Date:	Analysis Date: 12/19/2016		SeqNo: 1237116		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.5	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B39493		RunNo: 39493							
Prep Date:	Analysis Date: 12/19/2016		SeqNo: 1237117		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.8	75.2	115			
Toluene	0.96	0.050	1.000	0	96.3	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	95.4	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	96.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	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
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1612942 RcptNo: 1

Received by/date: *[Signature]* 12/17/16

Logged By: Lindsay Mangin 12/17/2016 7:45:00 AM *[Signature]*

Completed By: Lindsay Mangin 12/17/2016 8:19:30 AM *[Signature]*

Reviewed By: *[Signature]* 12/19/16

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: _____ 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	2.1	Good	Yes			

CHAIN OF CUSTODY RECORD

APEX
 Office Location Aztec N.M.
 Project Manager K Summers

Laboratory: Hall Env
 Address: ABQ N.M.
 Contact: A Freeman
 Phone: _____
 PO/SO #: _____

ANALYSIS REQUESTED

BTEX 5021
 TPH GRO / PRO / AIR 5025

Lab use only
 Due Date: _____
 Temp. of coolers when received (C°): 2.1
 1 2 3 4 5
 Page 1 of 1

Sampler's Name Ched DiPonti Sampler's Signature [Signature]

Proj. No. _____ Project Name Lateral 6B-10 No/Type of Containers _____

Matrix	Date	Time	COLEP	START	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	12/16/16	1100			S-28								11612942-001
S		1105			S-29								-002
S		1110			S-30								-003
S		1115			S-31								-004
		1120			S-32								
		1125			S-33								

Turn around time Normal 25% Rush 50% Rush 100% Rush

Relinquished by (Signature) <u>[Signature]</u>	Date: <u>12/16/16</u>	Time: <u>1305</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>12/16/16</u>	Time: <u>1305</u>
Relinquished by (Signature) <u>[Signature]</u>	Date: <u>12/16/16</u>	Time: <u>1800</u>	Received by (Signature) <u>[Signature]</u>	Date: <u>12/17/16</u>	Time: <u>0745</u>
Relinquished by (Signature) _____	Date: _____	Time: _____	Received by (Signature) _____	Date: _____	Time: _____
Relinquished by (Signature) _____	Date: _____	Time: _____	Received by (Signature) _____	Date: _____	Time: _____

NOTES:
 Bill to Tom Long
 AFE # N 26 819
 Same Day

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



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

December 22, 2016

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

RE: Lateral 6B-10

OrderNo.: 1612B30

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/21/2016 for the analyses presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1612B30

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-1

Project: Lateral 6B-10

Collection Date: 12/20/2016 2:30:00 PM

Lab ID: 1612B30-001

Matrix: SOIL

Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	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	12/21/2016 9:56:21 AM	29323
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2016 9:56:21 AM	29323
Surr: DNOP	82.2	70-130		%Rec	1	12/21/2016 9:56:21 AM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	7.5		mg/Kg	2	12/21/2016 10:30:51 AM	G39562
Surr: BFB	94.0	68.3-144		%Rec	2	12/21/2016 10:30:51 AM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.037		mg/Kg	2	12/21/2016 10:30:51 AM	B39562
Toluene	ND	0.075		mg/Kg	2	12/21/2016 10:30:51 AM	B39562
Ethylbenzene	ND	0.075		mg/Kg	2	12/21/2016 10:30:51 AM	B39562
Xylenes, Total	ND	0.15		mg/Kg	2	12/21/2016 10:30:51 AM	B39562
Surr: 4-Bromofluorobenzene	106	80-120		%Rec	2	12/21/2016 10:30:51 AM	B39562

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	RI	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1612B30

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-2

Project: Lateral 6B-10

Collection Date: 12/20/2016 2:35:00 PM

Lab ID: 1612B30-002

Matrix: SOIL

Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	40	9.9		mg/Kg	1	12/21/2016 10:23:22 AM	29323
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/21/2016 10:23:22 AM	29323
Surr: DNOP	83.8	70-130		%Rec	1	12/21/2016 10:23:22 AM	29323
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	18		mg/Kg	5	12/21/2016 10:06:32 AM	G39562
Surr: BFB	121	68.3-144		%Rec	5	12/21/2016 10:06:32 AM	G39562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.089		mg/Kg	5	12/21/2016 10:06:32 AM	B39562
Toluene	ND	0.18		mg/Kg	5	12/21/2016 10:06:32 AM	B39562
Ethylbenzene	ND	0.18		mg/Kg	5	12/21/2016 10:06:32 AM	B39562
Xylenes, Total	0.88	0.35		mg/Kg	5	12/21/2016 10:06:32 AM	B39562
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	5	12/21/2016 10:06:32 AM	B39562

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

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B30
 22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID LCS-29323	SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238761		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.8	63.8	116			
Surr: DNOP	4.2		5.000		83.8	70	130			

Sample ID MB-29323	SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29323		RunNo: 39554							
Prep Date: 12/21/2016	Analysis Date: 12/21/2016		SeqNo: 1238762		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B30

22-Dec-16

Client: APEX TITAN

Project: Lateral 6B-10

Sample ID RB	SampType: MBLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PBS	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239331			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	900		1000		90.4	68.3	144			

Sample ID 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: LCSS	Batch ID: G39562	RunNo: 39562								
Prep Date:	Analysis Date: 12/21/2016	SeqNo: 1239332			Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	116	74.6	123			
Surr: BFB	930		1000		93.0	68.3	144			

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 | RI Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B30
 22-Dec-16

Client: APEX TITAN
Project: Lateral 6B-10

Sample ID RB	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239369		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID 100NG BTEX LCS	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: B39562		RunNo: 39562							
Prep Date:	Analysis Date: 12/21/2016		SeqNo: 1239370		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	109	75.2	115			
Toluene	1.1	0.050	1.000	0	106	80.7	112			
Ethylbenzene	1.0	0.050	1.000	0	105	78.9	117			
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	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
- RI Reporting Detection Limit
- W Sample container temperature is out of limit as specified



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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1612B30

RcptNo: 1

Received by/date: AS 12/21/16

Logged By: Anne Thorne 12/21/2016 8:00:00 AM *Anne Thorne*

Completed By: Anne Thorne 12/21/2016 8:33:58 AM *Anne Thorne*

Reviewed By: *[Signature]* 12/21/16

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: _____ 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	1.0	Good	Yes			

