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ENTERPRISE PRODUCTS HOLDINGS LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

January 26, 2016

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Mr. Glenn von Gonten
New Mexico Energy, Minerals & Natural Resources
Department – Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

REVIEWED

By Mike Buchanan at 11:44 am, Aug 14, 2024

**RE: Corrective Action Report
Enterprise Field Services, LLC
Lateral K-7 Pipeline Release (8/30/2012)
Rio Arriba County, New Mexico
OCD RP: 3R-451**

Corrective Action Report for the Enterprise Field, LLC Lateral K-7 Pipeline Release, 3R-451: received for the record, soil remediation portion of the release complete

Dear Mr. von Gonten:

Please find attached, the above-referenced report prepared by Apex TITAN, Inc. (Apex). The report is associated with the Enterprise Field Services, LLC (Enterprise) Lateral K-7 pipeline release of natural gas condensate that occurred on August 30, 2012.

The activities detailed in the attached *Corrective Action Report (CAR)* include the removal of hydrocarbon-affected soils that remained at the Site after initial corrective actions were performed in 2012, the transportation of the affected soils to a disposal/treatment facility, confirmation sampling of soils remaining in place, and backfilling the resulting excavation with clean soils. **Based on available data, no further action appears warranted with respect to hydrocarbon-affected soils at the Site.**

Based on the information presented in the attached report, as well as prior groundwater monitoring data, Enterprise recommends: 1) completing groundwater delineation at the Site by expanding the groundwater monitoring well network and replacing pertinent monitoring wells that were removed prior to the excavation activities, and 2) determining the most appropriate groundwater closure strategy based on current groundwater conditions.

Enterprise appreciates the NMOCD's continued assistance and guidance to bring this project to closure. Should you have any questions, comments or concerns, or require additional information, please feel free to contact me any time at 713-381-8780, or at gemiller@eprod.com.

Sincerely,

Gregory E. Miller, P.G.
Supervisor, Environmental

Rodney M. Sartor, REM
Director, Environmental

/dep
Attachment

cc: Mr. Glenn von Gonten – Santa Fe, NM
Ms. Katherina Diemer – Farmington, NM
ec: Ms. Liz Scaggs – Apex, Aztec, NM



CORRECTIVE ACTION REPORT

Property:

**Lateral K-7 (8/30/12) Pipeline Release
NW 1/4, S27 T26N R7W
Rio Arriba County, New Mexico
OCD RP: 3R-451**

January 21, 2016
Apex Project No. 7030414G012

Prepared for:

**Enterprise Field Services, LLC
P.O. Box 4324
Houston, Texas 77210-4324
Attn: Mr. Greg E. Miller, P.G.**

Prepared by:

A handwritten signature in blue ink, reading 'Raneet Deechilly', written over a horizontal line.

Raneet Deechilly
Environmental Scientist

A handwritten signature in blue ink, reading 'Kyle Summers', written over a horizontal line.

Kyle Summers, CPG
Branch Manager/Senior Geologist



**Corrective Action Report
Lateral K-7 Pipeline Release (8/30/2012)
Executive Summary**

The Lateral K-7 (8/30/2012) pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) 1/4 of Section 27, Township 26 North, Range 7 West, in Rio Arriba County, New Mexico (36.46422N, 107.56505W), referred to hereinafter as the "Site" or "subject Site". The Site is located on public land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland, periodically interrupted by oil and gas production and gathering facilities, including the Enterprise Lateral K-7 natural gas gathering pipeline which traverses the area from approximately north to south.

A release of natural gas condensate was discovered at the Site on August 30, 2012. During November 2012, after pipeline repair activities had been completed, Animas Environmental Services, LLC (AES) advanced and sampled eight (8) soil borings (SB-1 through SB-8) at the Site in an effort to delineate the extent of hydrocarbon impact. Soil and groundwater samples collected from these soil borings exhibited constituent of concern (COC) concentrations that exceed both the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) *Remediation Action Levels (RALs)* for soils, and the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)* for groundwater.

During October 2013, AES advanced five (5) additional soil borings, which were completed as groundwater monitoring wells. Concentrations of COCs in groundwater were subsequently confirmed at levels above the WQCC GQSs. Subsequent semi-annual groundwater monitoring events were conducted on February 18, 2014, by AES, and on November 11, 2014 and June 23, 2015, by Apex TITAN, Inc. (Apex) to further evaluate groundwater COC concentrations over time.

During August 2015, Enterprise initiated excavation activities to remove remaining hydrocarbon-affected soils from the Site. Findings and recommendations from these activities are as follows:

- The overall surface expression of the final excavation measured approximately 90 feet long by 43 feet wide at the maximum extents, with a total depth of approximately 25 feet below grade surface (bgs). Groundwater was encountered at the base of the excavation.
- Twenty-seven (27) confirmation soil samples were collected from the resulting final excavation for laboratory analyses.
- A total of approximately 1,841 cubic yards of hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and sample-verified excavated soils, and was subsequently contoured to surrounding grade.
- Based on field observations and confirmation soil sample analytical results, soils remaining on-Site do not exhibit COC concentrations above the OCD RALs for a Site ranking of "30".
- The groundwater monitoring wells were plugged and abandoned (P&A'd) to allow the excavation of affected soils. Groundwater monitoring wells will be re-installed at the Site to allow continued groundwater monitoring.



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CORRECTIVE ACTION REPORT

Lateral K-7 (8/30/12) Pipeline Release

NW 1/4, S27 T26N R7W

Rio Arriba County, New Mexico

OCD RP: 3R-451

Apex Project No. 7030414G012

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-7 (8/30/12) pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ of Section 27 in Township 26 North and Range 7 West in rural Rio Arriba County, New Mexico (36.46422N, 107.56505W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland, periodically interrupted by oil and gas production and gathering facilities, including the Enterprise Lateral K-7 natural gas gathering pipeline which traverses the area from approximately north to south.

A natural gas pipeline release was discovered on August 30, 2012 by a third party. Enterprise subsequently initiated excavation activities to facilitate the repair of the pipeline and to remediate potential hydrocarbon impact. The leak, resulting from corrosion of the pipe, was identified and subsequently repaired. Animas Environmental Services, LLC (AES) collected five (5) soil samples from the excavation and eight (8) soil samples from four (4) "test pits" advanced outside the excavation. Based on initial field screening results, constituent of concern (COC) concentrations were present in soil above the New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Oil Conservation Division (OCD) *Remediation Action Levels (RALs)* (*Release Report for the Lateral K-7 September 2012 Release, dated September 26, 2012* – AES).

During November 2012, AES performed delineation activities to evaluate the extent of hydrocarbon impact in Site soils and groundwater, which resulted in the advancement and sampling of eight (8) soil borings. Based on laboratory analytical results of soil and groundwater samples collected from the soil borings, constituent of concern (COC) concentrations were identified in soil above the New Mexico EMNRD OCD RALs, and in groundwater above the New Mexico Water Quality Control Commission (WQCC) *Groundwater Quality Standards (GQSs)* (*Continued Site Assessment Report, dated February 25, 2013* – AES).

During October 2013, AES performed additional delineation activities, which resulted in the advancement and sampling of five (5) soil borings which were completed as groundwater monitoring wells. Based on the results of soil and groundwater sampling activities, COCs were again identified in Site soils at concentrations above the EMNRD OCD RALs and in groundwater above the New Mexico WQCC GQSs (*Groundwater Investigation Report, dated March 19, 2014* – AES).

On February 18, 2014, AES conducted a groundwater monitoring event. Groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX). The resulting concentrations exceeded the WQCC GQS for benzene in monitoring wells MW-1, MW-3 and

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MW-5.

On November 11, 2014 and June 23, 2015, Apex TITAN, Inc. (Apex) conducted groundwater monitoring events at the Site. A groundwater sample was not obtained from MW-5 due to an obstruction within the well casing. Groundwater samples were analyzed for BTEX, and the resulting concentrations exceeded the WQCC GQS for benzene in monitoring wells MW-1 and MW-3.

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 corrective action was to reduce the concentration of COCs in the on-Site soils to below the EMNRD OCD RALs by excavating hydrocarbon-affected soils from the Site and transporting them to an OCD-approved landfarm for treatment/disposal.

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of 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 | 10 |
| | 200 to 1,000 feet | 10 | |
| | >1,000 feet | 0 | |
| Total Ranking Score | | | 30 |

Based on Apex's evaluation of the scoring criteria, the Site would earn a maximum Total Ranking Score of "30". This ranking is based on the following:

- Based on depths to groundwater observed in groundwater monitoring wells at the Site, depth to groundwater is anticipated to be less than 50 feet below grade surface (bgs). This information supports a ranking 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 of "0".
- The release point is located approximately 385 feet from the Palluche Canyon wash, resulting in a distance to surface water ranking of "10".

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3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On August 12, 2015, Enterprise initiated excavation activities at the Site to remove remaining hydrocarbon-affected soils. During corrective action activities, Halo Services, Inc., provided heavy equipment and labor support. Kyle Summers and Ranee Deechilly, Apex environmental professionals, provided environmental support.

It was necessary to plug and abandon (P&A) the groundwater monitoring wells at the Site to allow the removal of the hydrocarbon-affected soils. Groundwater monitoring wells will be re-installed at the Site, as necessary, to facilitate ongoing groundwater monitoring obligations.

The overall surface expression of the final excavation measured approximately 90 feet long by 43 feet wide at the maximum extents, with a total depth of approximately 25 feet bgs.

Between August 12, 2015 and August 21, 2015, a total of 27 confirmation samples (C-1 through C-27) were collected from the sidewalls and floor of the resulting excavation for laboratory analysis. Additionally, four (4) stockpile soil samples (SP-1 through SP-4) were collected from overburden soils, and soils removed for benching, to determine the potential to reuse these soils (approximately 300 cubic yards) as backfill material.

The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand.

A total of approximately 1,841 cubic yards of hydrocarbon-affected soils were transported to the Envirotech Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and sample-verified spoils, and was subsequently contoured to surrounding grade.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features, and includes analytical results and approximate sample locations (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a photoionization detector (PID) fitted with a 10.6 eV lamp to evaluate volatile organic compounds (VOCs), and to aid in determining the excavation limits.

Apex's soil sampling program included the collection of 27 confirmation soil samples (C-1 through C-27) from the resulting excavation and four (4) stockpile samples (SP-1 through SP-4) for laboratory analysis. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was hand-delivered, with the completed chain-of-custody, to a Hall Environmental Analysis Laboratory (HEAL) representative for analysis at HEAL's Albuquerque, New Mexico facility.

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for BTEX utilizing Environmental Protection Agency (EPA) SW-846 Method #8021. The soil samples were also analyzed for total petroleum

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hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing 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 New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *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 laboratory reporting limits associated with soils remaining on-Site (confirmation samples C-1 through C-27 and stockpile samples SP-1 through SP-4) to the OCD RALs for sites having a total ranking score of "30".

- The laboratory analyses of samples collected from soils remaining on-Site did not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL of 10 milligram per kilogram (mg/kg).
- The laboratory analyses of samples collected from soils remaining on-Site indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.42 mg/kg (C-13), which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of samples collected from soils remaining on-Site indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 4.6 mg/kg (C-13), which are below the OCD RAL of 100 mg/kg for a Site ranking of "30".

Sample results are provided in Table 1 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral K-7 (8/30/12) pipeline release site is located within the Enterprise ROW in the NW ¼ of Section 27 in Township 26 North and Range 7 West in rural Rio Arriba County, New Mexico. The Site is located on land managed by the BLM. The Site is surrounded by native vegetation rangeland, periodically interrupted by oil and gas production and gathering facilities, including the Enterprise Lateral K-7 natural gas gathering pipeline which traverses the area from approximately north to south.

On August 12, 2015, Enterprise initiated excavation activities to remove remaining hydrocarbon-affected soils at the Site.

- The primary objective of the corrective action was to reduce the concentration of COCs in the on-Site soils to below the EMNRD OCD RALs by excavating hydrocarbon-affected soils from the Site and transporting them to an OCD-approved landfarm for treatment/disposal.

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January 21, 2016



- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand.
- The final excavation measured approximately 90 feet long by 43 feet wide at the maximum extents, with a total depth of approximately 25 feet bgs.
- Prior to backfilling, 27 confirmation soil samples (C-1 through C-27) from the resulting excavation, and four (4) stockpile samples (SP-1 through SP-4) were collected for laboratory analysis. Based on analytical results, soils remaining on-Site do not exhibit COC concentrations above the OCD RALs for a Site ranking of "30".
- A total of approximately 1,841 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and sample-verified spoils, and was subsequently contoured to surrounding grade.

The groundwater monitoring well network, which was removed to facilitate the excavation activities, will be replaced to facilitate ongoing groundwater monitoring obligations. If adversely-affected soils are encountered during monitoring well network replacement/expansion activities, alternatives will be evaluated to address these deeper/inaccessible soils at the Site.

Based on field observations and laboratory analytical results, no additional investigation or corrective action with respect to soil impact appears warranted at this time.

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 hereunder. 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.

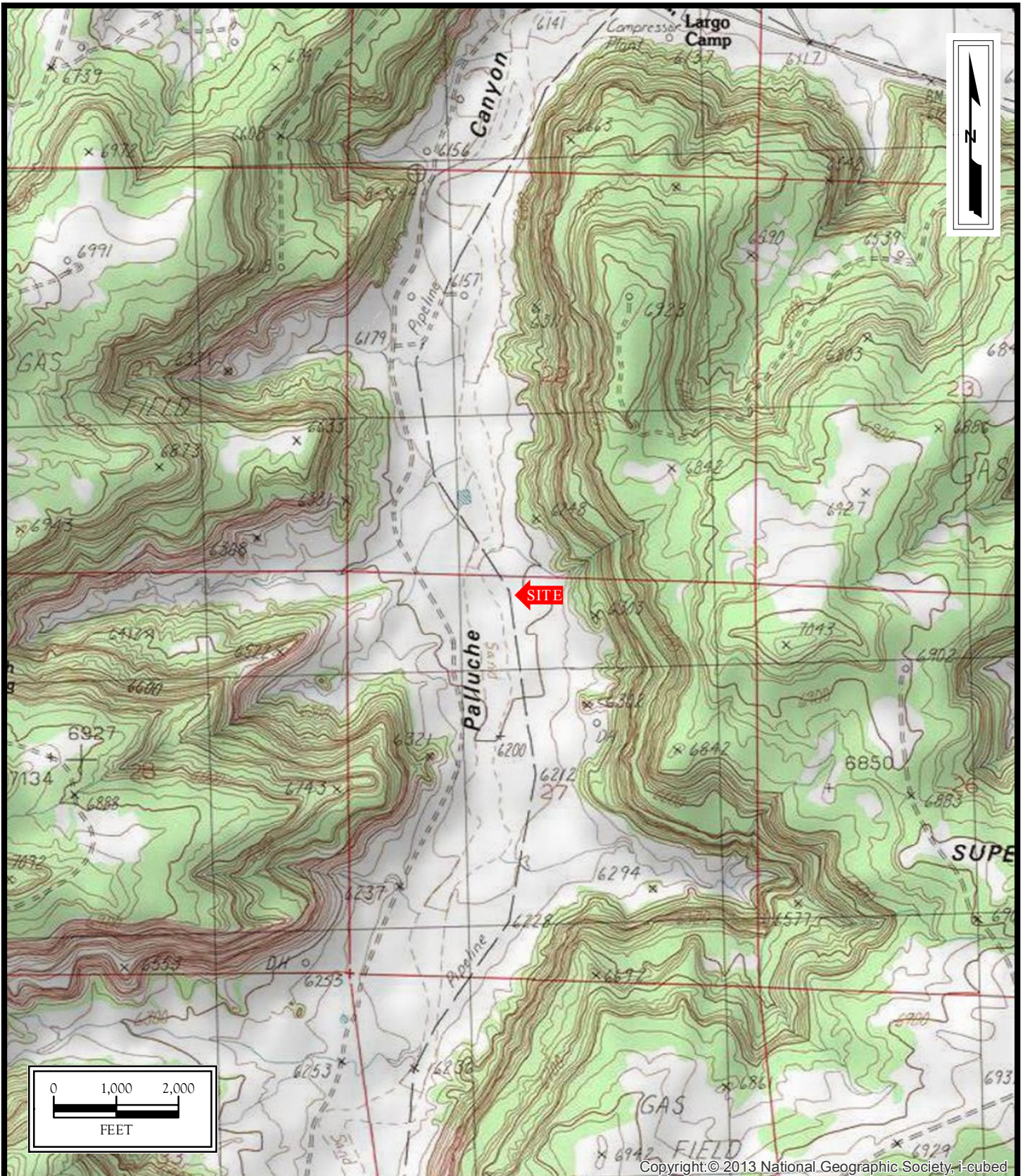
Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence 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 K-7 (08/30/12)
Pipeline Release
 NW1/4 S27 T26N R7W
 Rural Rio Arriba County, New Mexico
 36.46422N, 107.56505W

Project No. 7030414G012-003



Apex TITAN, Inc.

606 South Rio Grande, Suite A
 Aztec, NM 87410
 Phone: (505) 334-5200
www.apexcos.com

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FIGURE 1
Topographic Map
 Smouse Mesa, NM Quadrangle
 1985



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Lateral K-7 (08/30/12)**Pipeline Release**

NW1/4 S27 T26N R7W

Rural Rio Arriba County, New Mexico

36.46422N, 107.56505W

Project No. 7030414G012-003

**Apex TITAN, Inc.**

606 South Rio Grande, Suite A

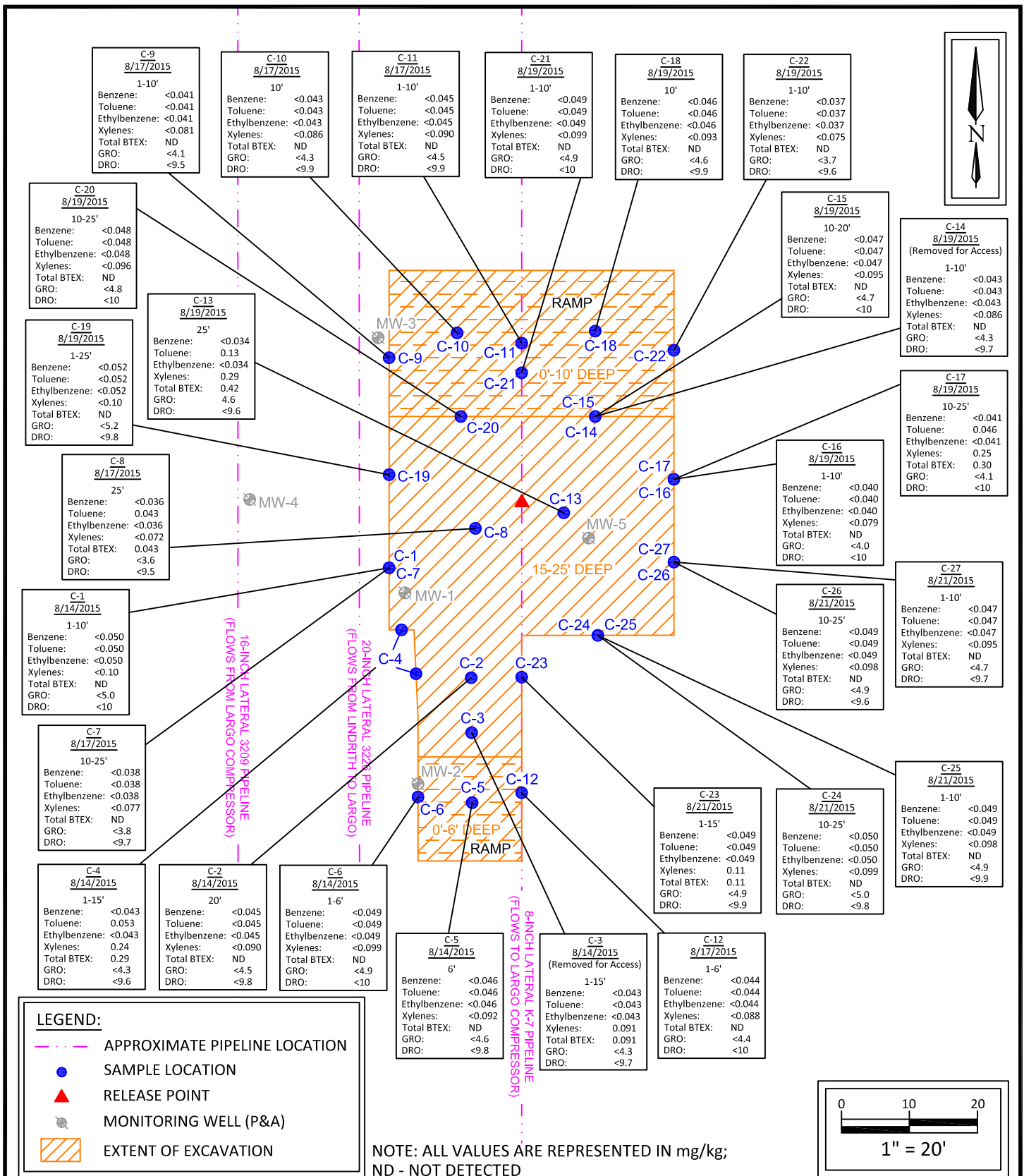
Aztec, NM 87410

Phone: (505) 334-5200

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FIGURE 2
Site Vicinity Map



Lateral K-7 (08/30/12)
Pipeline Release
 NW1/4 S27 T26N R7W
 Rural Rio Arriba County, New Mexico
 36.46422N, 107.56505W
 Project No. 7030414G012-003



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FIGURE 3
Site Map with
Soil Analytical Results



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

97057-0723
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: <u>Lateral K-7 September 2012 Pipeline Release</u> |
| 3. Location of Material (Street Address, City, State or ULSTR): Unit Letter C Section 27 Township 26 North Range 7 West; 36.464234, -107.565082; Rio Arriba County |
| 4. Source and Description of Waste: Source: Natural Gas Gathering Line Description: Hydrocarbon impacted soil associated with a pipeline release. Estimated Volume <u>1500</u> yd ³ bbls Known Volume (to be entered by the operator at the end of the haul) <u>1841</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)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency ☐ Monthly ☐ Weekly ☐ Per Load

☐ 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)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 7-30-15, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, *E. Liese*, representative for Envirotech, Inc. 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: ~~To Be Determined~~ *Rienl, Ibarra, Cotant, Envirotech, Kelley, HBL, Dash, Kish, Ibarra, Ternco, BET, Rosenbaum, JP, 3 E Energy, GBL, Halo, Del Prado*

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech Inc. Soil Remediation Facility * Permit #: NM 01-0011 *94669*

Address of Facility: Hilltop, 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: Eris Liese
SIGNATURE: *Eris Liese*

TITLE: Landfarm Administrator DATE: 7-30-15
TELEPHONE NO.: 505-632-0615

Surface Waste Management Facility Authorized Agent



APPENDIX C

Photographic Documentation



SITE PHOTOGRAPHS

Lateral K-7 (08/30/12) Pipeline Release

Photograph 1

View during the initial stages of the excavation, facing north.

**Photograph 2**

View of the partially excavated Site and new pipeline, facing east.

**Photograph 3**

View of the partially excavated Site during the early stages, facing northeast.





SITE PHOTOGRAPHS

Lateral K-7 (08/30/12) Pipeline Release

Photograph 4

View of the new pipe and final excavation, facing northeast.



Photograph 5

View of the final excavation, facing north.





APPENDIX D

Table



TABLE 1
Lateral K-7 (08/30/12) Pipeline Release
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) |
|--|---------|-------------------------|--------------------|--------------------|-------------------------|--------------------|-----------------------|-----------------------|-----------------------|
| New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level | | | 10 | NE | NE | NE | 50 | 100 | |
| Stockpile Samples | | | | | | | | | |
| SP-1 | 8.12.15 | Segregated Stockpile | <0.044 | <0.044 | <0.044 | <0.087 | ND | <4.4 | <10 |
| SP-2 | 8.14.15 | Segregated Stockpile | <0.042 | <0.042 | <0.042 | <0.084 | ND | <4.2 | <9.7 |
| SP-3 | 8.14.15 | Segregated Stockpile | <0.042 | <0.042 | <0.042 | <0.084 | ND | <4.2 | <10 |
| SP-4 | 8.17.15 | Segregated Stockpile | <0.040 | <0.040 | <0.040 | <0.081 | ND | <4.0 | <9.9 |
| Excavation Confirmation Samples | | | | | | | | | |
| C-1 | 8.14.15 | 1 to 10 | <0.050 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <10 |
| C-2 | 8.14.15 | 20 | <0.045 | <0.045 | <0.045 | <0.090 | ND | <4.5 | <9.8 |
| C-3 | 8.14.15 | 1 to 15 | <0.043 | <0.043 | <0.043 | 0.091 | 0.091 | <4.3 | <9.7 |
| C-4 | 8.14.15 | 1 to 15 | <0.043 | 0.053 | <0.043 | 0.24 | 0.29 | <4.3 | <9.6 |
| C-5 | 8.14.15 | 6 | <0.046 | <0.046 | <0.046 | <0.092 | ND | <4.6 | <9.8 |
| C-6 | 8.14.15 | 1 to 6 | <0.049 | <0.049 | <0.049 | <0.099 | ND | <4.9 | <10 |
| C-7 | 8.17.15 | 10 to 25 | <0.038 | <0.038 | <0.038 | <0.077 | ND | <3.8 | <9.7 |
| C-8 | 8.17.15 | 25 | <0.036 | 0.043 | <0.036 | <0.072 | 0.043 | <3.6 | <9.5 |
| C-9 | 8.17.15 | 1 to 10 | <0.041 | <0.041 | <0.041 | <0.081 | ND | <4.1 | <9.5 |
| C-10 | 8.17.15 | 10 | <0.043 | <0.043 | <0.043 | <0.086 | ND | <4.3 | <9.9 |
| C-11 | 8.17.15 | 1 to 10 | <0.045 | <0.045 | <0.045 | <0.090 | ND | <4.5 | <9.9 |
| C-12 | 8.17.15 | 1 to 6 | <0.044 | <0.044 | <0.044 | <0.088 | ND | <4.4 | <10 |
| C-13 | 8.19.15 | 25 | <0.034 | 0.13 | <0.034 | 0.29 | 0.42 | 4.6 | <9.6 |
| C-14 | 8.19.15 | 1 to 10 | <0.043 | <0.043 | <0.043 | <0.086 | ND | <4.3 | <9.7 |



TABLE 1
Lateral K-7 (08/30/12) Pipeline Release
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) |
|--|---------|---------------------|-----------------|-----------------|----------------------|-----------------|--------------------|-----------------|-----------------|
| New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level | | | 10 | NE | NE | NE | 50 | 100 | |
| C-15 | 8.19.15 | 10 to 20 | <0.047 | <0.047 | <0.047 | <0.095 | ND | <4.7 | <10 |
| C-16 | 8.19.15 | 1 to 10 | <0.040 | <0.040 | <0.040 | <0.079 | ND | <4.0 | <10 |
| C-17 | 8.19.15 | 10 to 25 | <0.041 | 0.046 | <0.041 | 0.25 | 0.30 | <4.1 | <10 |
| C-18 | 8.19.15 | 10 | <0.046 | <0.046 | <0.046 | <0.093 | ND | <4.6 | <9.9 |
| C-19 | 8.19.15 | 1 to 25 | <0.052 | <0.052 | <0.052 | <0.10 | ND | <5.2 | <9.8 |
| C-20 | 8.19.15 | 10 to 25 | <0.048 | <0.048 | <0.048 | <0.096 | ND | <4.8 | <10 |
| C-21 | 8.19.15 | 1 to 10 | <0.049 | <0.049 | <0.049 | <0.099 | ND | <4.9 | <10 |
| C-22 | 8.19.15 | 1 to 10 | <0.037 | <0.037 | <0.037 | <0.075 | ND | <3.7 | <9.6 |
| C-23 | 8.21.15 | 1 to 15 | <0.049 | <0.049 | <0.049 | 0.11 | 0.11 | <4.9 | <9.9 |
| C-24 | 8.21.15 | 10 to 25 | <0.050 | <0.050 | <0.050 | <0.099 | ND | <5.0 | <9.8 |
| C-25 | 8.21.15 | 1 to 10 | <0.049 | <0.049 | <0.049 | <0.098 | ND | <4.9 | <9.9 |
| C-26 | 8.21.15 | 10 to 25 | <0.049 | <0.049 | <0.049 | <0.098 | ND | <4.9 | <9.6 |
| C-27 | 8.21.15 | 1 to 10 | <0.047 | <0.047 | <0.047 | <0.095 | ND | <4.7 | <9.7 |

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

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established

NA = Not analyzed



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

August 18, 2015

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

RE: Lateral K-7 (2012)

OrderNo.: 1508736

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/15/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-1

Project: Lateral K-7 (2012)

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

Lab ID: 1508736-001

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/17/2015 10:39:08 AM | 20837 |
| Surr: DNOP | 86.2 | 57.9-140 | | %REC | 1 | 8/17/2015 10:39:08 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 8/17/2015 11:24:38 AM | 20808 |
| Surr: BFB | 80.5 | 75.4-113 | | %REC | 1 | 8/17/2015 11:24:38 AM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 8/17/2015 11:24:38 AM | 20808 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 8/17/2015 11:24:38 AM | 20808 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 8/17/2015 11:24:38 AM | 20808 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 8/17/2015 11:24:38 AM | 20808 |
| Surr: 4-Bromofluorobenzene | 92.4 | 80-120 | | %REC | 1 | 8/17/2015 11:24:38 AM | 20808 |

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 | | |

Page 1 of 9

Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-2

Project: Lateral K-7 (2012)

Collection Date: 8/14/2015 2:05:00 PM

Lab ID: 1508736-002

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 8/17/2015 11:00:34 AM | 20837 |
| Surr: DNOP | 83.0 | 57.9-140 | | %REC | 1 | 8/17/2015 11:00:34 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.5 | | mg/Kg | 1 | 8/17/2015 1:54:04 PM | 20808 |
| Surr: BFB | 80.6 | 75.4-113 | | %REC | 1 | 8/17/2015 1:54:04 PM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.045 | | mg/Kg | 1 | 8/17/2015 1:54:04 PM | 20808 |
| Toluene | ND | 0.045 | | mg/Kg | 1 | 8/17/2015 1:54:04 PM | 20808 |
| Ethylbenzene | ND | 0.045 | | mg/Kg | 1 | 8/17/2015 1:54:04 PM | 20808 |
| Xylenes, Total | ND | 0.090 | | mg/Kg | 1 | 8/17/2015 1:54:04 PM | 20808 |
| Surr: 4-Bromofluorobenzene | 92.0 | 80-120 | | %REC | 1 | 8/17/2015 1:54:04 PM | 20808 |

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 | | |

Page 2 of 9

Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-3

Project: Lateral K-7 (2012)

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

Lab ID: 1508736-003

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 8/17/2015 11:27:47 AM | 20837 |
| Surr: DNOP | 92.1 | 57.9-140 | | %REC | 1 | 8/17/2015 11:27:47 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.3 | | mg/Kg | 1 | 8/17/2015 12:14:30 PM | 20808 |
| Surr: BFB | 84.7 | 75.4-113 | | %REC | 1 | 8/17/2015 12:14:30 PM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.043 | | mg/Kg | 1 | 8/17/2015 12:14:30 PM | 20808 |
| Toluene | ND | 0.043 | | mg/Kg | 1 | 8/17/2015 12:14:30 PM | 20808 |
| Ethylbenzene | ND | 0.043 | | mg/Kg | 1 | 8/17/2015 12:14:30 PM | 20808 |
| Xylenes, Total | 0.091 | 0.087 | | mg/Kg | 1 | 8/17/2015 12:14:30 PM | 20808 |
| Surr: 4-Bromofluorobenzene | 96.8 | 80-120 | | %REC | 1 | 8/17/2015 12:14:30 PM | 20808 |

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 | | |

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Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-4

Project: Lateral K-7 (2012)

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

Lab ID: 1508736-004

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 8/17/2015 11:49:11 AM | 20837 |
| Surr: DNOP | 91.5 | 57.9-140 | | %REC | 1 | 8/17/2015 11:49:11 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.3 | | mg/Kg | 1 | 8/17/2015 12:39:25 PM | 20808 |
| Surr: BFB | 84.9 | 75.4-113 | | %REC | 1 | 8/17/2015 12:39:25 PM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.043 | | mg/Kg | 1 | 8/17/2015 12:39:25 PM | 20808 |
| Toluene | 0.053 | 0.043 | | mg/Kg | 1 | 8/17/2015 12:39:25 PM | 20808 |
| Ethylbenzene | ND | 0.043 | | mg/Kg | 1 | 8/17/2015 12:39:25 PM | 20808 |
| Xylenes, Total | 0.24 | 0.086 | | mg/Kg | 1 | 8/17/2015 12:39:25 PM | 20808 |
| Surr: 4-Bromofluorobenzene | 97.3 | 80-120 | | %REC | 1 | 8/17/2015 12:39:25 PM | 20808 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 4 of 9 |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-5

Project: Lateral K-7 (2012)

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

Lab ID: 1508736-005

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 8/17/2015 12:10:34 PM | 20837 |
| Surr: DNOP | 87.0 | 57.9-140 | | %REC | 1 | 8/17/2015 12:10:34 PM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 8/17/2015 1:04:19 PM | 20808 |
| Surr: BFB | 79.7 | 75.4-113 | | %REC | 1 | 8/17/2015 1:04:19 PM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.046 | | mg/Kg | 1 | 8/17/2015 1:04:19 PM | 20808 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 8/17/2015 1:04:19 PM | 20808 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 8/17/2015 1:04:19 PM | 20808 |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 8/17/2015 1:04:19 PM | 20808 |
| Surr: 4-Bromofluorobenzene | 91.1 | 80-120 | | %REC | 1 | 8/17/2015 1:04:19 PM | 20808 |

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 | | |

Page 5 of 9

Analytical Report

Lab Order 1508736

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-6

Project: Lateral K-7 (2012)

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

Lab ID: 1508736-006

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/17/2015 12:32:11 PM | 20837 |
| Surr: DNOP | 90.9 | 57.9-140 | | %REC | 1 | 8/17/2015 12:32:11 PM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 8/17/2015 1:29:13 PM | 20808 |
| Surr: BFB | 84.1 | 75.4-113 | | %REC | 1 | 8/17/2015 1:29:13 PM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 8/17/2015 1:29:13 PM | 20808 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 8/17/2015 1:29:13 PM | 20808 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 8/17/2015 1:29:13 PM | 20808 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 8/17/2015 1:29:13 PM | 20808 |
| Surr: 4-Bromofluorobenzene | 97.2 | 80-120 | | %REC | 1 | 8/17/2015 1:29:13 PM | 20808 |

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 | | |

Page 6 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508736

18-Aug-15

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

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | MB-20837 | SampType: | MBLK | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: | 20837 | RunNo: | 28250 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852691 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.2 | | 10.00 | | 81.8 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | LCS-20837 | SampType: | LCS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | Batch ID: | 20837 | RunNo: | 28250 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852692 | 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 | 86.3 | 57.4 | 139 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 74.0 | 57.9 | 140 | | | |

Qualifiers:

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

Page 7 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508736

18-Aug-15

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

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20808 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853273 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 800 | | 1000 | | 80.3 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20808 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853274 | 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 | 106 | 79.6 | 122 | | | |
| Surr: BFB | 920 | | 1000 | | 91.6 | 75.4 | 113 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Page 8 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508736

18-Aug-15

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

| | | | | | | | | | | |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20808 | SampType: | MBLK | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853390 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.92 | | 1.000 | | 92.0 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20808 | SampType: | LCS | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853391 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.99 | 0.050 | 1.000 | 0 | 99.0 | 76.6 | 128 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 97.1 | 75 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 79.5 | 126 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 96.9 | 78.8 | 124 | | | |
| 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

RL Reporting Detection Limit

Page 9 of 9



*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: 1508736

RcptNo: 1

Received by/date: A 08/15/15

Logged By: Anne Thorne 8/15/2015 9:50:00 AM

Completed By: **Anne Thorne** 8/15/2015

Reviewed By:  08/15/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log in

- | | | | |
|---|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 10. VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA Vials <input checked="" type="checkbox"/> |
| 11. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
- # 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:

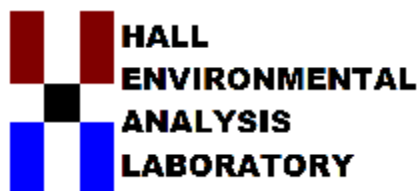
18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.4 | Good | Yes | | | |

CHAIN OF CUSTODY RECORD

| APEX | | Office Location <u>Aztec, NM</u> | | Laboratory: <u>Hall Environmental</u> | | Address: <u>Albuquerque, NM</u> | | Contact: <u>Andy Freeman</u> | | Phone: _____ | | PO/SO #: <u>AFE# A15106</u> | | Sample's Name: <u>Nyle Summers</u> | | Sample's Signature: <u>[Signature]</u> | | Project Name: <u>Lateral K-7 (2012)</u> | | No/Type of Containers | | Analysis Requested | | Lab use only Due Date: | | Temp. of coolers when received (C°): | | Page <u>1</u> of <u>1</u> | |
|---|--------|----------------------------------|------|---------------------------------------|-------------|-----------------------------------|-----|---|--------|-------------------|-----|---|------------------------------|------------------------------------|------------------------------|--|------------------------------|---|------------------------------|-----------------------|------------------------------|--------------------|------------------------------|---------------------------|------------------------------|---|------------------------------|---------------------------|--|
| Proj. No. | Matrix | Date | Time | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | Lab Sample ID (Lab Use Only) | | |
| | S | 8/14/15 | 1400 | C-1 | | | | | | | | 1508736 | -001 | | | | | | | | | | | | | | | | |
| | | | 1405 | C-2 | | | | | | | | | -002 | | | | | | | | | | | | | | | | |
| | | | 1410 | C-3 | | | | | | | | | -003 | | | | | | | | | | | | | | | | |
| | | | 1415 | C-4 | | | | | | | | | -004 | | | | | | | | | | | | | | | | |
| | | | 1420 | C-5 | | | | | | | | | -005 | | | | | | | | | | | | | | | | |
| | | | 1425 | C-6 | | | | | | | | | -006 | | | | | | | | | | | | | | | | |
| <p style="text-align: center;"><u>NFS</u> <u>10/5</u></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Turn around time | | <input type="checkbox"/> Normal | | <input type="checkbox"/> 25% Rush | | <input type="checkbox"/> 50% Rush | | <input checked="" type="checkbox"/> 100% Rush | | Some Del. | | NOTES: | | | | | | | | | | | | | | | | | |
| Relinquished by (Signature) | | Date: <u>8/14/15</u> | | Time: <u>1717</u> | | Received by: (Signature) | | Date: <u>8/14/15</u> | | Time: <u>1717</u> | | Bill to Tom Long AFE# A15106 Rush | | | | | | | | | | | | | | | | | |
| Relinquished by (Signature) | | Date: <u>8/14/15</u> | | Time: <u>2040</u> | | Received by: (Signature) | | Date: <u>8/15/15</u> | | Time: <u>0950</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 250 ml - Glass wide mouth
 A - Air Bag
 C - Charcoal tube P/O - Plastic or other
 SL - sludge O - Oil



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

August 18, 2015

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

RE: Lateral K-7

OrderNo.: 1508732

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/15/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508732

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-1

Project: Lateral K-7

Collection Date: 8/12/2015 1:00:00 PM

Lab ID: 1508732-001

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/17/2015 10:13:59 AM | 20837 |
| Surr: DNOP | 97.5 | 57.9-140 | | %REC | 1 | 8/17/2015 10:13:59 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.4 | | mg/Kg | 1 | 8/17/2015 10:10:00 AM | 20808 |
| Surr: BFB | 98.9 | 1.81-113 | | %REC | 1 | 8/17/2015 10:10:00 AM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.044 | | mg/Kg | 1 | 8/17/2015 10:10:00 AM | 20808 |
| Toluene | ND | 0.044 | | mg/Kg | 1 | 8/17/2015 10:10:00 AM | 20808 |
| Ethylbenzene | ND | 0.044 | | mg/Kg | 1 | 8/17/2015 10:10:00 AM | 20808 |
| Xylenes, Total | ND | 0.087 | | mg/Kg | 1 | 8/17/2015 10:10:00 AM | 20808 |
| Surr: 4-Bromofluorobenzene | 98.6 | 80-120 | | %REC | 1 | 8/17/2015 10:10:00 AM | 20808 |

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 | | |

Page 1 of 6

Analytical Report

Lab Order 1508732

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-2

Project: Lateral K-7

Collection Date: 8/14/2015 2:30:00 PM

Lab ID: 1508732-002

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 8/17/2015 10:41:13 AM | 20837 |
| Surr: DNOP | 101 | 57.9-140 | | %REC | 1 | 8/17/2015 10:41:13 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.2 | | mg/Kg | 1 | 8/17/2015 10:34:50 AM | 20808 |
| Surr: BFB | 82.2 | 75.4-113 | | %REC | 1 | 8/17/2015 10:34:50 AM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:34:50 AM | 20808 |
| Toluene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:34:50 AM | 20808 |
| Ethylbenzene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:34:50 AM | 20808 |
| Xylenes, Total | ND | 0.084 | | mg/Kg | 1 | 8/17/2015 10:34:50 AM | 20808 |
| Surr: 4-Bromofluorobenzene | 94.3 | 80-120 | | %REC | 1 | 8/17/2015 10:34:50 AM | 20808 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 2 of 6 |
| | 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 | | | |

Analytical Report

Lab Order 1508732

Date Reported: 8/18/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-3

Project: Lateral K-7

Collection Date: 8/14/2015 2:35:00 PM

Lab ID: 1508732-003

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/17/2015 11:08:16 AM | 20837 |
| Surr: DNOP | 100 | 57.9-140 | | %REC | 1 | 8/17/2015 11:08:16 AM | 20837 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.2 | | mg/Kg | 1 | 8/17/2015 10:59:39 AM | 20808 |
| Surr: BFB | 79.3 | 75.4-113 | | %REC | 1 | 8/17/2015 10:59:39 AM | 20808 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:59:39 AM | 20808 |
| Toluene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:59:39 AM | 20808 |
| Ethylbenzene | ND | 0.042 | | mg/Kg | 1 | 8/17/2015 10:59:39 AM | 20808 |
| Xylenes, Total | ND | 0.084 | | mg/Kg | 1 | 8/17/2015 10:59:39 AM | 20808 |
| Surr: 4-Bromofluorobenzene | 92.1 | 80-120 | | %REC | 1 | 8/17/2015 10:59:39 AM | 20808 |

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 | | |

Page 3 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508732

18-Aug-15

Client: APEX TITAN
Project: Lateral K-7

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | MB-20837 | SampType: | MBLK | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: | 20837 | RunNo: | 28250 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852691 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.2 | | 10.00 | | 81.8 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | LCS-20837 | SampType: | LCS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | Batch ID: | 20837 | RunNo: | 28250 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852692 | 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 | 86.3 | 57.4 | 139 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 74.0 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | 1508732-001AMS | SampType: | MS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | SP-1 | Batch ID: | 20837 | RunNo: | 28251 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852938 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 50 | 10 | 49.90 | 3.667 | 92.3 | 42.3 | 146 | | | |
| Surr: DNOP | 5.0 | | 4.990 | | 99.3 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|-----------------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | 1508732-001AMSD | SampType: | MSD | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | SP-1 | Batch ID: | 20837 | RunNo: | 28251 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 852939 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 10 | 49.90 | 3.667 | 95.0 | 42.3 | 146 | 2.68 | 28.9 | |
| Surr: DNOP | 5.0 | | 4.990 | | 99.3 | 57.9 | 140 | 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

Page 4 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508732

18-Aug-15

Client: APEX TITAN
Project: Lateral K-7

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20808 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853273 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 800 | | 1000 | | 80.3 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20808 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853274 | 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 | 106 | 79.6 | 122 | | | |
| Surr: BFB | 920 | | 1000 | | 91.6 | 75.4 | 113 | | | |

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 | |

Page 5 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508732

18-Aug-15

Client: APEX TITAN
Project: Lateral K-7

| | | | | | | | | | | |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20808 | SampType: | MBLK | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853390 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.92 | | 1.000 | | 92.0 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-----------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20808 | SampType: | LCS | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | Batch ID: | 20808 | RunNo: | 28260 | | | | | |
| Prep Date: | 8/14/2015 | Analysis Date: | 8/17/2015 | SeqNo: | 853391 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.99 | 0.050 | 1.000 | 0 | 99.0 | 76.6 | 128 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 97.1 | 75 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 79.5 | 126 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 96.9 | 78.8 | 124 | | | |
| 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

RL Reporting Detection Limit

Page 6 of 6



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: 1508732

RcptNo: 1

Received by/date: AT 08/15/15

Logged By: Anne Thorne

8/15/2015 9:50:00 AM

Anne Thorne

Completed By: Anne Thorne

8/15/2015

*Anne Thorne*Reviewed By: *[Signature]*08/15/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.4 | Good | Yes | | | |

CHAIN OF CUSTODY RECORD

| | | | | | | | | | | | |
|---|---------|---|--------------------------------|---|-----------|---|-----|---|-----------|---------------------------------------|--|
|  APEX Office Location <u>Aztec, NM</u> | | Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: <u></u> PO/SO #: <u>AFE#A15016</u> Project Manager <u>KSUMANUS</u> Sampler's Name <u>Nyle Summers</u> | | ANALYSIS REQUESTED 801 BTK 8015 TPT GEOLIDS | | Lab use only Due Date: <u></u> Temp. of coolers when received (C°): 1 <u>2</u> 3 <u>4</u> 5 Page <u>1</u> of <u>1</u> 44 | | | | | |
| Project No. <u></u> Project Name <u>Lateral K-7</u> No/Type of Containers <u></u> | | No/Type of Containers <u></u> | | Lab Sample ID (Lab Use Only) <u>1508732 -001</u> <u>-002</u> <u>-003</u> | | 44 | | | | | |
| Matrix | Date | Time | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G | 250 ml | Glass Jar | P/O | |
| S | 8/14/15 | 1300 | SP-1 | | | | | | 1 | | |
| 1 | 8/14/15 | 1430 | SP-2 | | | | | | ↓ | | |
| 6 | 8/14/15 | 1435 | SP-3 | | | | | | | | |
| NES 16-5 | | | | | | | | | | | |
| Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush Same Day | | | | | | | | | | | |
| Relinquished by (Signature) | | 8/14/15 1717 | | Received by (Signature) | | 8/14/15 1717 | | Date: 8/14/15 1717 | | | |
| Relinquished by (Signature) | | 8/14/15 2040 | | Received by (Signature) | | 8/15/15 0950 | | Date: 8/15/15 0950 | | | |
| Relinquished by (Signature) | | | | Received by (Signature) | | | | Date: | | | |
| Relinquished by (Signature) | | | | Received by (Signature) | | | | Date: | | | |
| Matrix Container | | WW - Wastewater VOA - 40 ml vial | | W - Water A/G - Amber / Or Glass 1 Liter | | S - Soil SD - Solid | | L - Liquid 250 ml - Glass wide mouth | | A - Air Bag P/O - Plastic or other | |
| C - Charcoal tube | | SL - sludge | | O - Oil | | | | | | | |

Bill to Tom Long
 AFE#A15016
 Rush



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

August 31, 2015

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

RE: Lateral K-7 (2012)

OrderNo.: 1508B84

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/22/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508B84

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-23

Project: Lateral K-7 (2012)

Collection Date: 8/21/2015 2:30:00 PM

Lab ID: 1508B84-001

Matrix: SOIL

Received Date: 8/22/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 8/27/2015 2:30:49 PM | 20981 |
| Surr: DNOP | 71.5 | 57.9-140 | | %REC | 1 | 8/27/2015 2:30:49 PM | 20981 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 8/26/2015 3:32:37 PM | 20969 |
| Surr: BFB | 88.7 | 75.4-113 | | %REC | 1 | 8/26/2015 3:32:37 PM | 20969 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 3:32:37 PM | 20969 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 3:32:37 PM | 20969 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 3:32:37 PM | 20969 |
| Xylenes, Total | 0.11 | 0.098 | | mg/Kg | 1 | 8/26/2015 3:32:37 PM | 20969 |
| Surr: 4-Bromofluorobenzene | 101 | 80-120 | | %REC | 1 | 8/26/2015 3:32:37 PM | 20969 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 1 of 8 |
| | 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 | | | |

Analytical Report

Lab Order 1508B84

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-24

Project: Lateral K-7 (2012)

Collection Date: 8/21/2015 2:35:00 PM

Lab ID: 1508B84-002

Matrix: SOIL

Received Date: 8/22/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 8/27/2015 2:52:18 PM | 20981 |
| Surr: DNOP | 84.6 | 57.9-140 | | %REC | 1 | 8/27/2015 2:52:18 PM | 20981 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 8/26/2015 3:57:32 PM | 20969 |
| Surr: BFB | 84.7 | 75.4-113 | | %REC | 1 | 8/26/2015 3:57:32 PM | 20969 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.050 | | mg/Kg | 1 | 8/26/2015 3:57:32 PM | 20969 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 8/26/2015 3:57:32 PM | 20969 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 8/26/2015 3:57:32 PM | 20969 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 8/26/2015 3:57:32 PM | 20969 |
| Surr: 4-Bromofluorobenzene | 98.7 | 80-120 | | %REC | 1 | 8/26/2015 3:57:32 PM | 20969 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 2 of 8 |
| | 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 | | | |

Analytical Report

Lab Order 1508B84

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-25

Project: Lateral K-7 (2012)

Collection Date: 8/21/2015 2:40:00 PM

Lab ID: 1508B84-003

Matrix: SOIL

Received Date: 8/22/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 8/27/2015 3:13:37 PM | 20981 |
| Surr: DNOP | 79.7 | 57.9-140 | | %REC | 1 | 8/27/2015 3:13:37 PM | 20981 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 8/26/2015 4:22:23 PM | 20969 |
| Surr: BFB | 82.6 | 75.4-113 | | %REC | 1 | 8/26/2015 4:22:23 PM | 20969 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:22:23 PM | 20969 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:22:23 PM | 20969 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:22:23 PM | 20969 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 8/26/2015 4:22:23 PM | 20969 |
| Surr: 4-Bromofluorobenzene | 96.6 | 80-120 | | %REC | 1 | 8/26/2015 4:22:23 PM | 20969 |

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 | | |

Page 3 of 8

Analytical Report

Lab Order 1508B84

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-26

Project: Lateral K-7 (2012)

Collection Date: 8/21/2015 2:45:00 PM

Lab ID: 1508B84-004

Matrix: SOIL

Received Date: 8/22/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 8/27/2015 3:35:04 PM | 20981 |
| Surr: DNOP | 76.5 | 57.9-140 | | %REC | 1 | 8/27/2015 3:35:04 PM | 20981 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 8/26/2015 4:47:14 PM | 20969 |
| Surr: BFB | 83.1 | 75.4-113 | | %REC | 1 | 8/26/2015 4:47:14 PM | 20969 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:47:14 PM | 20969 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:47:14 PM | 20969 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 8/26/2015 4:47:14 PM | 20969 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 8/26/2015 4:47:14 PM | 20969 |
| Surr: 4-Bromofluorobenzene | 96.8 | 80-120 | | %REC | 1 | 8/26/2015 4:47:14 PM | 20969 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 4 of 8 |
| | 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 | | | |

Analytical Report

Lab Order 1508B84

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-27

Project: Lateral K-7 (2012)

Collection Date: 8/21/2015 2:50:00 PM

Lab ID: 1508B84-005

Matrix: SOIL

Received Date: 8/22/2015 8:30:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 8/27/2015 3:56:28 PM | 20981 |
| Surr: DNOP | 74.5 | 57.9-140 | | %REC | 1 | 8/27/2015 3:56:28 PM | 20981 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 8/26/2015 8:05:58 PM | 20969 |
| Surr: BFB | 83.9 | 75.4-113 | | %REC | 1 | 8/26/2015 8:05:58 PM | 20969 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.047 | | mg/Kg | 1 | 8/26/2015 8:05:58 PM | 20969 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 8/26/2015 8:05:58 PM | 20969 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 8/26/2015 8:05:58 PM | 20969 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 8/26/2015 8:05:58 PM | 20969 |
| Surr: 4-Bromofluorobenzene | 98.7 | 80-120 | | %REC | 1 | 8/26/2015 8:05:58 PM | 20969 |

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 | | |

Page 5 of 8

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508B84

31-Aug-15

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

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | MB-20981 | SampType: | MBLK | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: | 20981 | RunNo: | 28501 | | | | | |
| Prep Date: | 8/26/2015 | Analysis Date: | 8/27/2015 | SeqNo: | 862004 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.9 | | 10.00 | | 98.7 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|-----------|----------------|-----------|-------------|---|----------|-----------|------|----------|------|
| Sample ID | LCS-20981 | SampType: | LCS | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | Batch ID: | 20981 | RunNo: | 28501 | | | | | |
| Prep Date: | 8/26/2015 | Analysis Date: | 8/27/2015 | SeqNo: | 862005 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 92.7 | 57.4 | 139 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 94.1 | 57.9 | 140 | | | |

Qualifiers:

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

Page 6 of 8

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508B84

31-Aug-15

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

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20969 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20969 | RunNo: | 28483 | | | | | |
| Prep Date: | 8/25/2015 | Analysis Date: | 8/26/2015 | SeqNo: | 860952 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 800 | | 1000 | | 79.9 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20969 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20969 | RunNo: | 28483 | | | | | |
| Prep Date: | 8/25/2015 | Analysis Date: | 8/26/2015 | SeqNo: | 860953 | 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 | 102 | 79.6 | 122 | | | |
| Surr: BFB | 920 | | 1000 | | 92.2 | 75.4 | 113 | | | |

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 | |

Page 7 of 8

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508B84

31-Aug-15

Client: APEX TITAN

Project: Lateral K-7 (2012)

| | | | | | | | | | | |
|----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | MB-20969 | | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | | Batch ID: 20969 | | RunNo: 28483 | | | | | |
| Prep Date: | 8/25/2015 | | Analysis Date: 8/26/2015 | | SeqNo: 861082 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 94.5 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-20969 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | | Batch ID: 20969 | | RunNo: 28483 | | | | | |
| Prep Date: | 8/25/2015 | | Analysis Date: 8/26/2015 | | SeqNo: 861083 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.93 | 0.050 | 1.000 | 0 | 93.1 | 76.6 | 128 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 95.1 | 75 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 99.6 | 79.5 | 126 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 96.1 | 78.8 | 124 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 105 | 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

Page 8 of 8



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: 1508B84

RcptNo: 1

| | | |
|-------------------|-----------------|--------------------------------|
| Received by/date: | <i>GA</i> | <i>08/22/15</i> |
| Logged By: | Ashley Gallegos | 8/22/2015 8:30:00 AM <i>AG</i> |
| Completed By: | Ashley Gallegos | 8/24/2015 5:56:09 PM <i>AG</i> |
| Reviewed By: | <i>CS</i> | <i>08/25/15</i> |

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: | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding: | _____ | | |
| Client Instructions: | _____ | | |

- Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.9 | Good | Yes | | | |

CHAIN OF CUSTODY RECORD

| APEX | | Office Location | | Laboratory: | | Address: | | Contact: | | Phone: | | PO/ISO #: | | Sampler's Signature | | Project Name | | No/Type of Containers | | ANALYSIS REQUESTED | | Lab use only | |
|--|---------|-----------------|--|--------------------|--|--------------------------------|--|--------------|--|--------|--|------------------|--|-----------------------|--|--------------------|--|-----------------------|--|--------------------|--|--------------------------------------|--------------|
| APEX | | Aztec, NM | | Hall Environmental | | Albuquerque, NM | | Andy Freeman | | | | APE # A15106 | | R. Deechilly | | Lateral K-7 (2012) | | | | | | Due Date: | |
| Project Manager | | K. SUMMERS | | | | | | | | | | | | | | | | | | | | Temp. of coolers when received (C°): | |
| Sampler's Name | | R. Deechilly | | | | | | | | | | | | | | | | | | | | 1 2 3 4 5 | |
| Proj. No. | | | | | | | | | | | | | | | | | | | | | | Page 1 of 1 | |
| Matrix | | Date | | Time | | Identifying Marks of Sample(s) | | Depth | | End | | VOA | | No/Type of Containers | | | | | | | | Lab Sample ID (Lab Use Only) | |
| S | 8/21/15 | 1430 | | C-23 | | | | | | | | | | | | | | | | | | | 1508 B84-001 |
| S | 1425 | | | C-24 | | | | | | | | | | | | | | | | | | | -002 |
| S | 1440 | | | C-25 | | | | | | | | | | | | | | | | | | | -003 |
| S | 1445 | | | C-26 | | | | | | | | | | | | | | | | | | | -004 |
| S | 1450 | | | C-27 | | | | | | | | | | | | | | | | | | | -005 |
| NFS | | | | | | | | | | | | | | | | | | | | | | | |
| Turn around time <input checked="" type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush | | | | | | | | | | | | | | | | | | | | | | | |
| Relinquished by (Signature) | | Date: | | Time: | | Received by (Signature) | | Date: | | Time: | | NOTES: | | | | | | | | | | | |
| R. Deechilly | | 8/21/15 | | 1720 | | M. Deechilly | | 8/21/15 | | 1720 | | Temp = 1.9°C | | | | | | | | | | | |
| Relinquished by (Signature) | | Date: | | Time: | | Received by (Signature) | | Date: | | Time: | | Bill to Tom Long | | | | | | | | | | | |
| M. Deechilly | | 8/21/15 | | 1824 | | M. Deechilly | | 8/22/15 | | 0830 | | APE # A15106 | | | | | | | | | | | |
| 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 AVG - Amber / Or Glass 1 Liter L - Liquid 250 ml - Glass wide mouth C - Charcoal tube P/O - Plastic or other SL - sludge O - Oil



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

August 24, 2015

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

RE: Lateral K-7 (2012)

OrderNo.: 1508971

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 10 sample(s) on 8/20/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-13

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-001

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 8/20/2015 11:18:53 AM | 20893 |
| Surr: DNOP | 78.7 | 57.9-140 | | %REC | 1 | 8/20/2015 11:18:53 AM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 4.6 | 3.4 | | mg/Kg | 1 | 8/20/2015 10:07:34 AM | 20870 |
| Surr: BFB | 89.8 | 75.4-113 | | %REC | 1 | 8/20/2015 10:07:34 AM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.034 | | mg/Kg | 1 | 8/20/2015 10:07:34 AM | 20870 |
| Toluene | 0.13 | 0.034 | | mg/Kg | 1 | 8/20/2015 10:07:34 AM | 20870 |
| Ethylbenzene | ND | 0.034 | | mg/Kg | 1 | 8/20/2015 10:07:34 AM | 20870 |
| Xylenes, Total | 0.29 | 0.067 | | mg/Kg | 1 | 8/20/2015 10:07:34 AM | 20870 |
| Surr: 4-Bromofluorobenzene | 102 | 80-120 | | %REC | 1 | 8/20/2015 10:07:34 AM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-14

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-002

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 8/20/2015 11:40:00 AM | 20893 |
| Surr: DNOP | 80.7 | 57.9-140 | | %REC | 1 | 8/20/2015 11:40:00 AM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.3 | | mg/Kg | 1 | 8/20/2015 10:32:22 AM | 20870 |
| Surr: BFB | 84.4 | 75.4-113 | | %REC | 1 | 8/20/2015 10:32:22 AM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.043 | | mg/Kg | 1 | 8/20/2015 10:32:22 AM | 20870 |
| Toluene | ND | 0.043 | | mg/Kg | 1 | 8/20/2015 10:32:22 AM | 20870 |
| Ethylbenzene | ND | 0.043 | | mg/Kg | 1 | 8/20/2015 10:32:22 AM | 20870 |
| Xylenes, Total | ND | 0.086 | | mg/Kg | 1 | 8/20/2015 10:32:22 AM | 20870 |
| Surr: 4-Bromofluorobenzene | 98.9 | 80-120 | | %REC | 1 | 8/20/2015 10:32:22 AM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-15

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-003

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/20/2015 12:01:18 PM | 20893 |
| Surr: DNOP | 83.0 | 57.9-140 | | %REC | 1 | 8/20/2015 12:01:18 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 8/20/2015 10:57:16 AM | 20870 |
| Surr: BFB | 86.1 | 75.4-113 | | %REC | 1 | 8/20/2015 10:57:16 AM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.047 | | mg/Kg | 1 | 8/20/2015 10:57:16 AM | 20870 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 8/20/2015 10:57:16 AM | 20870 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 8/20/2015 10:57:16 AM | 20870 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 8/20/2015 10:57:16 AM | 20870 |
| Surr: 4-Bromofluorobenzene | 101 | 80-120 | | %REC | 1 | 8/20/2015 10:57:16 AM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-16

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-004

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/20/2015 12:22:29 PM | 20893 |
| Surr: DNOP | 81.3 | 57.9-140 | | %REC | 1 | 8/20/2015 12:22:29 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.0 | | mg/Kg | 1 | 8/20/2015 11:22:08 AM | 20870 |
| Surr: BFB | 82.9 | 75.4-113 | | %REC | 1 | 8/20/2015 11:22:08 AM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.040 | | mg/Kg | 1 | 8/20/2015 11:22:08 AM | 20870 |
| Toluene | ND | 0.040 | | mg/Kg | 1 | 8/20/2015 11:22:08 AM | 20870 |
| Ethylbenzene | ND | 0.040 | | mg/Kg | 1 | 8/20/2015 11:22:08 AM | 20870 |
| Xylenes, Total | ND | 0.079 | | mg/Kg | 1 | 8/20/2015 11:22:08 AM | 20870 |
| Surr: 4-Bromofluorobenzene | 96.5 | 80-120 | | %REC | 1 | 8/20/2015 11:22:08 AM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-17

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-005

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/20/2015 12:43:54 PM | 20893 |
| Surr: DNOP | 84.5 | 57.9-140 | | %REC | 1 | 8/20/2015 12:43:54 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.1 | | mg/Kg | 1 | 8/20/2015 11:47:09 AM | 20870 |
| Surr: BFB | 87.1 | 75.4-113 | | %REC | 1 | 8/20/2015 11:47:09 AM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.041 | | mg/Kg | 1 | 8/20/2015 11:47:09 AM | 20870 |
| Toluene | 0.046 | 0.041 | | mg/Kg | 1 | 8/20/2015 11:47:09 AM | 20870 |
| Ethylbenzene | ND | 0.041 | | mg/Kg | 1 | 8/20/2015 11:47:09 AM | 20870 |
| Xylenes, Total | 0.25 | 0.083 | | mg/Kg | 1 | 8/20/2015 11:47:09 AM | 20870 |
| Surr: 4-Bromofluorobenzene | 101 | 80-120 | | %REC | 1 | 8/20/2015 11:47:09 AM | 20870 |

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 | | |

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1508971
Date Reported: 8/24/2015

CLIENT: APEX TITAN

Client Sample ID: C-18

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-006

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 8/20/2015 11:26:05 AM | 20893 |
| Surr: DNOP | 100 | 57.9-140 | | %REC | 1 | 8/20/2015 11:26:05 AM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 8/20/2015 12:11:57 PM | 20870 |
| Surr: BFB | 85.3 | 75.4-113 | | %REC | 1 | 8/20/2015 12:11:57 PM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.046 | | mg/Kg | 1 | 8/20/2015 12:11:57 PM | 20870 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 8/20/2015 12:11:57 PM | 20870 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 8/20/2015 12:11:57 PM | 20870 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 8/20/2015 12:11:57 PM | 20870 |
| Surr: 4-Bromofluorobenzene | 98.7 | 80-120 | | %REC | 1 | 8/20/2015 12:11:57 PM | 20870 |

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 | | |

Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-19

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-007

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 8/20/2015 11:52:36 AM | 20893 |
| Surr: DNOP | 102 | 57.9-140 | | %REC | 1 | 8/20/2015 11:52:36 AM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 5.2 | | mg/Kg | 1 | 8/20/2015 12:36:47 PM | 20870 |
| Surr: BFB | 83.9 | 75.4-113 | | %REC | 1 | 8/20/2015 12:36:47 PM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.052 | | mg/Kg | 1 | 8/20/2015 12:36:47 PM | 20870 |
| Toluene | ND | 0.052 | | mg/Kg | 1 | 8/20/2015 12:36:47 PM | 20870 |
| Ethylbenzene | ND | 0.052 | | mg/Kg | 1 | 8/20/2015 12:36:47 PM | 20870 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 8/20/2015 12:36:47 PM | 20870 |
| Surr: 4-Bromofluorobenzene | 96.7 | 80-120 | | %REC | 1 | 8/20/2015 12:36:47 PM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-20

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-008

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/20/2015 12:19:26 PM | 20893 |
| Surr: DNOP | 101 | 57.9-140 | | %REC | 1 | 8/20/2015 12:19:26 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 8/20/2015 1:01:39 PM | 20870 |
| Surr: BFB | 82.7 | 75.4-113 | | %REC | 1 | 8/20/2015 1:01:39 PM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.048 | | mg/Kg | 1 | 8/20/2015 1:01:39 PM | 20870 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 8/20/2015 1:01:39 PM | 20870 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 8/20/2015 1:01:39 PM | 20870 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 8/20/2015 1:01:39 PM | 20870 |
| Surr: 4-Bromofluorobenzene | 95.2 | 80-120 | | %REC | 1 | 8/20/2015 1:01:39 PM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-21

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-009

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 8/20/2015 12:46:22 PM | 20893 |
| Surr: DNOP | 103 | 57.9-140 | | %REC | 1 | 8/20/2015 12:46:22 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 8/20/2015 1:26:33 PM | 20870 |
| Surr: BFB | 87.8 | 75.4-113 | | %REC | 1 | 8/20/2015 1:26:33 PM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.049 | | mg/Kg | 1 | 8/20/2015 1:26:33 PM | 20870 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 8/20/2015 1:26:33 PM | 20870 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 8/20/2015 1:26:33 PM | 20870 |
| Xylenes, Total | ND | 0.099 | | mg/Kg | 1 | 8/20/2015 1:26:33 PM | 20870 |
| Surr: 4-Bromofluorobenzene | 102 | 80-120 | | %REC | 1 | 8/20/2015 1:26:33 PM | 20870 |

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 | | |

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Analytical Report

Lab Order 1508971

Date Reported: 8/24/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-22

Project: Lateral K-7 (2012)

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

Lab ID: 1508971-010

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 8/20/2015 1:13:21 PM | 20893 |
| Surr: DNOP | 104 | 57.9-140 | | %REC | 1 | 8/20/2015 1:13:21 PM | 20893 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 3.7 | | mg/Kg | 1 | 8/20/2015 1:51:25 PM | 20870 |
| Surr: BFB | 80.3 | 75.4-113 | | %REC | 1 | 8/20/2015 1:51:25 PM | 20870 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.037 | | mg/Kg | 1 | 8/20/2015 1:51:25 PM | 20870 |
| Toluene | ND | 0.037 | | mg/Kg | 1 | 8/20/2015 1:51:25 PM | 20870 |
| Ethylbenzene | ND | 0.037 | | mg/Kg | 1 | 8/20/2015 1:51:25 PM | 20870 |
| Xylenes, Total | ND | 0.075 | | mg/Kg | 1 | 8/20/2015 1:51:25 PM | 20870 |
| Surr: 4-Bromofluorobenzene | 92.1 | 80-120 | | %REC | 1 | 8/20/2015 1:51:25 PM | 20870 |

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 | | |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508971

24-Aug-15

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

| | | | | | | | | | | | |
|-----------------------------|-----------|-----|----------------|-------------|------|-----------|---|------|--------------|------|--|
| Sample ID | MB-20893 | | SampType: | MBLK | | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | |
| Client ID: | PBS | | Batch ID: | 20893 | | RunNo: | 28339 | | | | |
| Prep Date: | 8/20/2015 | | Analysis Date: | 8/20/2015 | | SeqNo: | 855806 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | | |
| Surr: DNOP | 9.6 | | 10.00 | | 96.2 | 57.9 | 140 | | | | |

| | | | | | | | | | | |
|-----------------------------|-----------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | LCS-20893 | | SampType: LCS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | | Batch ID: 20893 | | RunNo: 28339 | | | | | |
| Prep Date: | 8/20/2015 | | Analysis Date: 8/20/2015 | | SeqNo: 855807 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 48 | 10 | 50.00 | 0 | 95.4 | 57.4 | 139 | | | |
| Surr: DNOP | 3.9 | | 5.000 | | 78.4 | 57.9 | 140 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------|-----|--------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | 1508971-001AMS | | SampType: MS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | C-13 | | Batch ID: 20893 | | RunNo: 28339 | | | | | |
| Prep Date: | 8/20/2015 | | Analysis Date: 8/20/2015 | | SeqNo: 856015 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 49 | 9.6 | 48.03 | 0 | 102 | 42.3 | 146 | | | |
| Surr: DNOP | 4.1 | | 4.803 | | 86.3 | 57.9 | 140 | | | |

| | | | | | | | | | | | |
|-----------------------------|-----------------|-----|----------------|-------------|------|-----------|---|------|--------------|------|--|
| Sample ID | 1508971-001AMSD | | SampType: | MSD | | TestCode: | EPA Method 8015M/D: Diesel Range Organics | | | | |
| Client ID: | C-13 | | Batch ID: | 20893 | | RunNo: | 28339 | | | | |
| Prep Date: | 8/20/2015 | | Analysis Date: | 8/20/2015 | | SeqNo: | 856064 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Diesel Range Organics (DRO) | 52 | 10 | 50.51 | 0 | 102 | 42.3 | 146 | 5.58 | 28.9 | | |
| Surr: DNOP | 4.4 | | 5.051 | | 87.5 | 57.9 | 140 | 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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508971
24-Aug-15

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

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20870 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20870 | RunNo: | 28350 | | | | | |
| Prep Date: | 8/19/2015 | Analysis Date: | 8/20/2015 | SeqNo: | 856333 | 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 | 850 | | 1000 | | 84.9 | 75.4 | 113 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-20870 | SampType: | LCS | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | Batch ID: | 20870 | RunNo: | 28350 | | | | | |
| Prep Date: | 8/19/2015 | Analysis Date: | 8/20/2015 | SeqNo: | 856334 | 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 | 98.9 | 79.6 | 122 | | | |
| Surr: BFB | 900 | | 1000 | | 90.1 | 75.4 | 113 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508971
24-Aug-15

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

| | | | | | | | | | | |
|----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | MB-20870 | | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | | Batch ID: 20870 | | RunNo: 28350 | | | | | |
| Prep Date: | 8/19/2015 | | Analysis Date: 8/20/2015 | | SeqNo: 856345 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 0.050 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 102 | 80 | 120 | | | |

| | | | | | | | | | | |
|----------------------------|-----------|-------|--------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-20870 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | | Batch ID: 20870 | | RunNo: 28350 | | | | | |
| Prep Date: | 8/19/2015 | | Analysis Date: 8/20/2015 | | SeqNo: 856346 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.96 | 0.050 | 1.000 | 0 | 96.3 | 76.6 | 128 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 97.8 | 75 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 99.7 | 79.5 | 126 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 96.1 | 78.8 | 124 | | | |
| 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

RL Reporting Detection Limit

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Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1508971

RcptNo: 1

Received by/date: AT 08/20/15

Logged By: Anne Thorne

8/20/2015 7:15:00 AM

Anne Thorne

Completed By: Anne Thorne

8/20/2015

*Anne Thorne*Reviewed By: *[Signature]*08/20/15**Chain of Custody**

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |

CHAIN OF CUSTODY RECORD

[illegible]

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204



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

August 19, 2015

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

RE: Lateral K-7 (2012)

OrderNo.: 1508822

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/18/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508822

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-4

Project: Lateral K-7 (2012)

Collection Date: 8/17/2015 2:00:00 PM

Lab ID: 1508822-001

Matrix: SOIL

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

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: KJH |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 8/18/2015 3:47:34 PM | 20853 |
| Surr: DNOP | 89.8 | 57.9-140 | | %REC | 1 | 8/18/2015 3:47:34 PM | 20853 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.0 | | mg/Kg | 1 | 8/18/2015 2:17:31 PM | 20847 |
| Surr: BFB | 84.4 | 75.4-113 | | %REC | 1 | 8/18/2015 2:17:31 PM | 20847 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.040 | | mg/Kg | 1 | 8/18/2015 2:17:31 PM | 20847 |
| Toluene | ND | 0.040 | | mg/Kg | 1 | 8/18/2015 2:17:31 PM | 20847 |
| Ethylbenzene | ND | 0.040 | | mg/Kg | 1 | 8/18/2015 2:17:31 PM | 20847 |
| Xylenes, Total | ND | 0.081 | | mg/Kg | 1 | 8/18/2015 2:17:31 PM | 20847 |
| Surr: 4-Bromofluorobenzene | 96.9 | 80-120 | | %REC | 1 | 8/18/2015 2:17:31 PM | 20847 |

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 1 of 4 |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 1508822

19-Aug-15

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

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

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

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

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.
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

Page 2 of 4

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508822

19-Aug-15

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

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20847 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20847 | RunNo: | 28291 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/18/2015 | SeqNo: | 854187 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 800 | | 1000 | | 80.3 | 75.4 | 113 | | | |

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Page 3 of 4

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508822

19-Aug-15

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

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

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

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

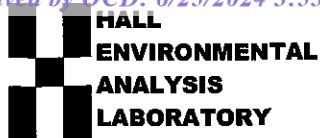
E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Page 4 of 4



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: 1508822

RcptNo: 1

Received by/date: AT 08/18/15

Logged By: Anne Thorne

8/18/2015 7:00:00 AM

Anne Thorne

Completed By: Anne Thorne

8/18/2015

Anne Thorne

Reviewed By:

*mg**08/18/15***Chain of Custody**

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.2 | Good | Yes | | | |

CHAIN OF CUSTODY RECORD

| | | | | | | | | | | | |
|---|--------|---|------|---|-------------|--|-----|---|--------|---|-----|
|  APEX Office Location <u>Aztec, NM</u> | | Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ PO/ISO #: _____ | | ANALYSIS REQUESTED <u>8021 BTEX</u> <u>8015 TPH GRO/DRO</u> | | Lab use only Due Date: <u>1.2</u> Temp. of coolers when received (C°): 1 <u> </u> 2 <u> </u> 3 <u> </u> 4 <u> </u> 5 <u> </u> Page <u>1</u> of <u>1</u> | | | | | |
| Project Manager <u>K. Summers</u> Sampler's Name <u>Ranee Daechilly</u> Project Name <u>Lateral K-7(2012)</u> | | Sampler's Signature <u>Ranee Daechilly</u> No/Type of Containers _____ | | Lab Sample ID (Lab Use Only) <u>1508 822-001</u> | | | | | | | |
| Proj. No. | Matrix | Date | Time | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G | 250 ml | Glass Jar | P/O |
| | S | 8/17/15 | 1400 | SP-4 | | | | | | 1 | |
| <u>NTS</u> | | | | | | | | | | | |
| Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush <u>2 Day</u> Results by <u>8/15</u> | | | | | | | | | | | |
| Relinquished by (Signature) | | Date: <u>8/17/15</u> | | Time: <u>1930</u> | | Received by: (Signature) | | Date: <u>8/17/15</u> | | Time: <u>1930</u> | |
| Relinquished by (Signature) | | Date: <u>8/17/15</u> | | Time: <u>2010</u> | | Received by: (Signature) | | Date: <u>8/18/15</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 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 | | C - Charcoal tube P/O - Plastic or other | |
| | | | | | | | | | | SL - sludge O - Oil | |

Bill to Tom Long
 AFE # A15106

2 day rush 8/19/15



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

August 19, 2015

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

RE: Lateral K-7 (2012)

OrderNo.: 1508821

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/18/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

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

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-7

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-001

Matrix: SOIL

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

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

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

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

Page 1 of 9

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-8

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-002

Matrix: SOIL

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

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

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

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

Page 2 of 9

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-9

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-003

Matrix: SOIL

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

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

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

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

Page 3 of 9

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-10

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-004

Matrix: SOIL

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

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

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

| | | | | | |
|--------------------|----|---|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 4 of 9 |
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-11

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-005

Matrix: SOIL

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

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

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

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

Page 5 of 9

Analytical Report

Lab Order 1508821

Date Reported: 8/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-12

Project: Lateral K-7 (2012)

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

Lab ID: 1508821-006

Matrix: SOIL

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

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

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

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

Page 6 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

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

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

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

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

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

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

Page 7 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

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

| | | | | | | | | | | |
|-------------------------------|-----------|----------------|-----------|-------------|----------------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-20847 | SampType: | MBLK | TestCode: | EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | Batch ID: | 20847 | RunNo: | 28291 | | | | | |
| Prep Date: | 8/17/2015 | Analysis Date: | 8/18/2015 | SeqNo: | 854187 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 800 | | 1000 | | 80.3 | 75.4 | 113 | | | |

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

Qualifiers:

| | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | 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 | |

Page 8 of 9

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508821

19-Aug-15

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

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

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

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

Page 9 of 9

Sample Log-In Check List

Client Name: **APEX AZTEC**

Work Order Number: 1508821

RcptNo: 1

Received by/date: AT 08/18/15

Logged By: **Anne Thorne**

8/18/2015 7:00:00 AM

Aime Herman

Completed By: **Anne Thorne**

8/18/2015

Anne Brown

Reviewed By:

mg

08/18/15

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

- | | | | |
|--|---|--|--|
| 4. Was an attempt made to cool the samples? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 6. Sample(s) in proper container(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Sufficient sample volume for indicated test(s)? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Was preservative added to bottles? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 10. VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA Vials <input checked="" type="checkbox"/> |
| 11. Were any sample containers received broken? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 14. Is it clear what analyses were requested? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
- # of preserved bottles checked for pH: (<2)

Adjusted? Adjusted?

Checked by: 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 | 1.2 | Not Good | Yes | | | |

CHAIN OF CUSTODY RECORD

| APEX Office Location <u>Artec, NM</u> | | | | | | Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ PO/SO #: _____ | | | | | | ANALYSIS REQUESTED <u>8/15 TPT - COLORED</u> <u>8/21 BITE</u> | | | | | | Lab Sample ID (Lab Use Only) <u>1508821-001</u> <u>-002</u> <u>-003</u> <u>-004</u> <u>-005</u> <u>-006</u> <u>-</u> | | | | | |
|--|---------|--------------|---------|-----------------------|--|--|--|-------------|--|-----------|--|---|--|-----|--|--------|--|---|--|-----|---|--|--|
| | | | | | | Project Manager <u>K. Summers</u> Sampler's Name <u>Ranee Doeckilly</u> Sampler's Signature <u>[Signature]</u> | | | | | | | | | | | | | | | | | |
| Proj. No. | | Project Name | | No/Type of Containers | | Identifying Marks of Sample(s) | | Start Depth | | End Depth | | VOA | | A/G | | 250 ml | | Glass Jar | | P/O | | | |
| | | C o m p | G r a b | | | | | | | | | | | | | | | | | | | | |
| S | 8/17/15 | 1330 | | | | C-7 | | | | | | | | | | | | | | X | X | | |
| S | | 1335 | | | | C-8 | | | | | | | | | | | | | | X | X | | |
| S | | 1340 | | | | C-9 | | | | | | | | | | | | | | X | X | | |
| S | | 1345 | | | | C-10 | | | | | | | | | | | | | | X | X | | |
| S | | 1350 | | | | C-11 | | | | | | | | | | | | | | X | X | | |
| S | | 1355 | | | | C-12 | | | | | | | | | | | | | | X | X | | |
| <u>NFS</u> | | | | | | | | | | | | | | | | | | | | | | | |
| Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush <u>2 Day / Results by 8/19</u> | | | | | | | | | | | | | | | | | | | | | | | |
| Relinquished by (Signature) <u>[Signature]</u> | | | | | | Received by: (Signature) <u>[Signature]</u> | | | | | | Date: <u>8/17/15</u> Time: <u>1930</u> | | | | | | | | | | | |
| Relinquished by (Signature) <u>[Signature]</u> | | | | | | Received by: (Signature) <u>[Signature]</u> | | | | | | Date: <u>8/17/15</u> Time: <u>0700</u> | | | | | | | | | | | |
| Relinquished by (Signature) <u>[Signature]</u> | | | | | | Received by: (Signature) <u>[Signature]</u> | | | | | | Date: <u>8/18/15</u> Time: _____ | | | | | | | | | | | |
| Relinquished by (Signature) _____ | | | | | | Received by: (Signature) _____ | | | | | | Date: _____ Time: _____ | | | | | | | | | | | |
| Relinquished by (Signature) _____ | | | | | | Received by: (Signature) _____ | | | | | | Date: _____ Time: _____ | | | | | | | | | | | |

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

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

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Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 357540

CONDITIONS

| | |
|---|--|
| Operator: Enterprise Field Services, LLC PO Box 4324 Houston, TX 77210 | OGRID: |
| | 241602 |
| | Action Number: 357540 |
| | Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------------|--|----------------|
| michael.buchanan | Corrective Action Report for the Enterprise Field, LLC Lateral K-7 Pipeline Release, 3R-451: received for the record, soil remediation portion of the release complete | 8/14/2024 |