District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

OIL CONS. DIV DIST. 3

FEB 09 2016

Form C-141 Revised August 8, 2011

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

Release Notification and Corrective Action

| | OPERATOR | | nitial Report | \boxtimes | Final Report |
|---|---------------------------|------------|---------------|-------------|--------------|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long | | | | |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599- | 2286 | | | |
| Facility Name: Lateral K-31 (Two Release Sites) | Facility Type: Natural Ga | as Gatheri | ng Line | | |
| | | | | | |

Surface Owner: State

Section

16

Township

25N

Range

6W

Unit Letter

D/N

Mineral Owner: BLM

Feet from

the

API No.

East/West County Line Rio Arriba

Latitude <u>36.40482</u> Longitude <u>107.478125</u> Latitude <u>36.39373</u> Longitude <u>107.47519</u>

LOCATION OF RELEASE

Feet from

the

North/South

Line

NATURE OF RELEASE

| Type of Release: Natural Gas | Volume of Release: 58.38 MCF | Volume Recovered: None |
|---------------------------------------|--|--|
| Source of Release: Internal corrosion | Date and Hour of Occurrence: 2/19/2015 @ 3:00 p.m. | Date and Hour of Discovery: 2/19/2015 @ 5:00 p.m. |
| Was Immediate Notice Given? | If YES, To Whom? | |
| 🗌 Yes 🔲 No 🖾 Not Required | | |
| By Whom? | Date and Hour: | |
| Was a Watercourse Reached? | If YES, Volume Impacting the Wa | atercourse |
| 🗌 Yes 🖾 No | | |

If a Watercourse was Impacted, Describe Fully.*.

Describe Cause of Problem and Remedial Action: On February 19, 2015, Enterprise discovered two leaks on the Lateral K-31 pipeline. The GPS locations for the leaks are 36.40482, -107.478125 and 36.39373, -107.47519. The pipeline was isolated, blown down, locked out and tagged out. No surface impacts were observed. Initial investigations were conducted prior to the replacement of approximately 5,200 feet of pipeline in October 2015.

Describe Area Affected and Cleanup Action Taken.*: A third party environmental contractor conducted an investigation during the original excavation activities and a subsequent investigation after both excavations were inadvertently backfilled during pipe replacement activities. The investigations indicated that the natural gas release caused no subsurface impacts. A third party investigation report is included with this "Final." C-141.

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

| Signatura: Vor Frede | OIL CONSERVATION | DIVISION |
|-------------------------------------|--------------------------------------|----------|
| Signature: Yow Theread | Approved by Environmental Specialist | - Acenc |
| Title: Director, Environmental | Approval Date: 219 2016 Expiration | |
| E-mail Address:jefields@eprod.com | Conditions of Approval: | |
| Date: 2 4-20/6 Phone: (713)381-6684 | | Attached |
| | nCS1507252576 | |



OIL CONS. DIV DIST. 3 FEB 0 9 2016

SUPPLEMENTAL SITE INVESTIGATION REPORT

Property:

Lateral K-31 February 2015 Pipeline Releases NW ¼ and SW ¼, S16 T25N R6W Rio Arriba County, New Mexico

> January 19, 2016 Apex Project No. 7250415G017

> > Prepared for:

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

Prepared by:

Ranee Deechilly Environmental Scientist

lyman

Kyle Summers CPG Branch Manager/Senior Geologist

Apex TITAN, Inc., a subsidiary of Apex Companies, LLC 606 S Rio Grande, Unit A, Aztec, NM 87410 T 505.334.5200 F 505.334.5204 www.apexcos.com

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| Appendix C: | Laboratory Analytical Reports & Chain of Custody Documentation |



SUPPLEMENTAL SITE INVESTIGATION REPORT

Lateral K-31 February 2015 Pipeline Releases NW ¼ and SW ¼, S16 T25N R6W Rio Arriba County, New Mexico

Apex Project No. 7250415017

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-31 (February 2015) Pipeline Release Sites are located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ and southwest (SW) ¼ of Section 16 in Township 25 North and Range 6 West in rural Rio Arriba County, New Mexico (North Release 36.40467N, 107.47813W; South Release 36.39413N, 107.47521W), referred to hereinafter as the "Site" or "Sites". The Sites are located on State land managed by the New Mexico State Land Office. The Sites are surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

During February 2015, two (2) natural gas releases were discovered on the Lateral K-31 pipeline. Enterprise exposed the pipeline to locate and evaluate the releases, but halted repair activities while discussions ensued regarding the replacement of the entire section (over 5,000 feet of pipeline) with new pipe. Between February 2015 and July 2015, Enterprise abandoned and replaced the existing Lateral K-31 pipeline section with new pipe. The release Sites were inadvertently backfilled during surface reclamation activities after the new pipeline installation. Stockpile samples had been collected prior to the Sites being backfilled, but delineation had not yet been performed. As a result, additional Site investigation was warranted to determine if hydrocarbon impacted soils remained.

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 supplemental site investigation was to evaluate the extent of constituents of concern (COCs), if present, in the soils at the Site.

2.0 SITE RANKING

In accordance with the New Mexico Energy, Minerals, and Natural Resources Department (ENMRD) Oil Conservation Division (OCD) *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the execution 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:

1



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

Based on Apex's evaluation of the scoring criteria, the North Site would have a maximum Total Ranking Score of "40".

| | South Site | | |
|---|-------------------|----|---------------|
| Rankin | g Criteria | | Ranking Score |
| | <50 feet | 20 | |
| Depth to Groundwater | 50 to 99 feet | 10 | 20 |
| | >100 feet | 0 | |
| Wellhead Protection Area • <1,000 feet from a water | Yes | 20 | 0 |
| source, or; <200 feet from private domestic water source. | No | 0 | ° |
| | <200 feet | 20 | |
| Distance to Surface Water Body | 200 to 1,000 feet | 10 | 0 |
| | >1,000 feet 0 | | |
| Total Ran | king Score | | 20 |

Based on Apex's evaluation of the scoring criteria, the South Site would have a maximum Total Ranking Score of "20".

- Depth to groundwater, as measured in monitoring wells near the two Sites, ranges from approximately 8 to 20 feet below grade surface (bgs), resulting in a depth to groundwater ranking of "20".
- No water source wells (municipal/community wells) were identified within 1,000 feet of the two Sites. No private domestic water sources were identified within 200 feet of the Sites. The lack of water source proximities results in a wellhead protection area ranking of "0".
- The North release point is located adjacent to an ephemeral wash that is identified as a "blue line" on the United States Geological Society topographic map. This information supports a ranking of "20" for distance to surface water for the North Site. The South release point is located approximately 1,500 feet west of the Largo Wash, resulting in a distance to surface water ranking of "0" for the South Site.



3.0 SITE INVESTIGATION

3.1 Soil Borings/Stockpiles

During July 2015, four (4) composite soil samples were collected from the North Site stockpiled soils, and two (2) composite soil samples were collected from the South Site stockpiled soils, to determine the potential to reuse the soil as backfill material. The release Sites were inadvertently backfilled during reclamation activities on the new pipeline installation, prior to soil delineation activities for the releases.

During September and November 2015, Apex Titan, Inc. (Apex), advanced seven (7) hand auger soil borings at the North release and five (5) hand auger soil borings at the South release site. The soil borings were advanced as near as practicable to the former points of release and topographically upgradient and downgradient from the points of release. A photoionization detector (PID) was utilized to field-screen the soil cuttings for the presence of volatile organic compounds (VOCs). The resulting PID readings did not indicate the presence of hydrocarbon affected soils. Additionally, analytical samples were collected from the terminus of each borehole, which in each case was deeper than the depth of the pipeline at each Site.

Figure 3 is a site map that indicates the approximate location of the excavated area in relation to pertinent land features (Appendix A).

3.2 Soil Sampling Program

Apex screened head-space samples of Site soils with a PID fitted with a 10.6 eV lamp to evaluate the soils for volatile organic compounds (VOCs).

Apex's soil sampling program included a total collection of twelve (12) soil boring samples and six (6) stockpile samples from the North and South release Sites for laboratory analysis. Due to the absence of adverse PID readings, the soil boring samples were collected from the terminus of each borehole, which in each case was deeper than the depth of the pipeline at each Site. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the pipeline releases (Appendix A).

The soil 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 secured with a custody seal. The sample cooler and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for rush analysis.

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015. Laboratory results are summarized in Table 1 and Table 2, included in Appendix B. The executed chain-of-custody form and laboratory data sheets are provided in Appendix C.

A summary of the analyses, sample matrix, and EPA-approved methods is presented in the following table:



| Analysis | Sample Matrix | No. of Samples | EPA Method |
|-------------|---------------|----------------|-------------|
| TPH GRO/DRO | Soil | 18 | SW-846 8015 |
| BTEX | Soil | 18 | SW-846 8021 |

Soil laboratory results are summarized in Tables 1 and 2 (Appendix B), respectively. The executed chain-of-custody form and laboratory data sheets are provided in Appendix C.

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 Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits associated with the soil samples collected from the two Sites to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of greater than "20".

North Release

- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RALs.
- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD RALs.
- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate combined TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD RALs for a Site ranking of "40".

South Release

- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RALs.
- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD RALs.
- The laboratory analyses of the samples collected from soils remaining in place and the reused excavated soils did not indicate combined TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD RALs for a Site ranking of "20".



Soil boring and soil stockpile sample results are provided in Table 1 and Table 2 in Appendix B.

5.0 FINDINGS AND RECOMMENDATIONS

The primary objective of the supplemental site investigation was to evaluate the extent of COCs, if present, in soils at the Site.

- Apex hand augured a total of twelve (12) soil borings at the Lateral K-31 (February 2015) North and South release Sites.
- During the completion of the sampling event, one (1) soil sample was collected from each soil boring. In addition, six (6) soil stockpile samples were collected to determine the potential to reuse unaffected soils as backfill material. Based on analytical results, soils remaining in place and the reused excavated soils do not exhibit COC concentrations above the OCD RALs for a Site ranking of greater than "20".

Based on the results of the supplemental site investigation, Apex has the following recommendations:

- Report the supplemental site investigation results to the OCD; and
- Request that no further action be required in relation to this release 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.

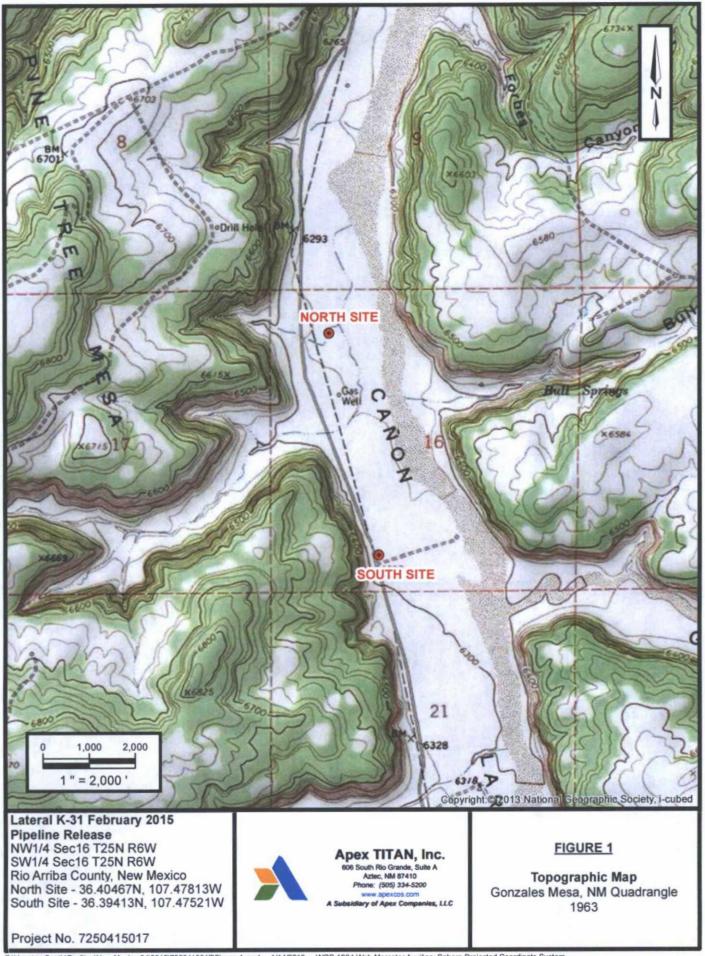
Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

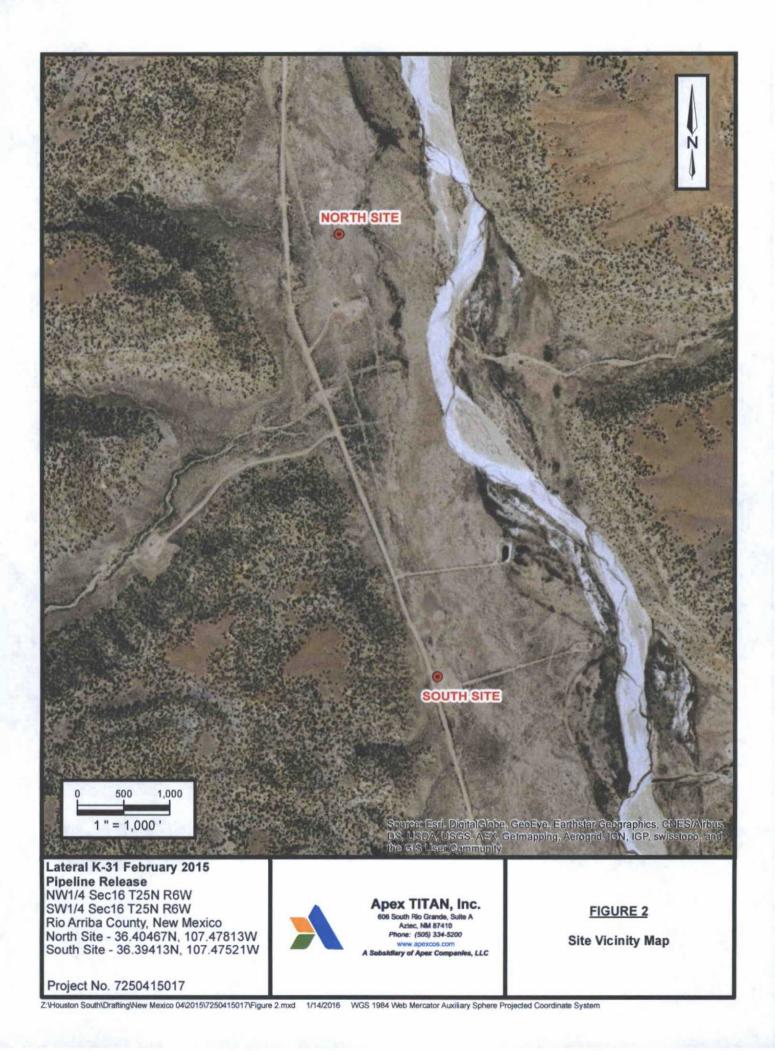


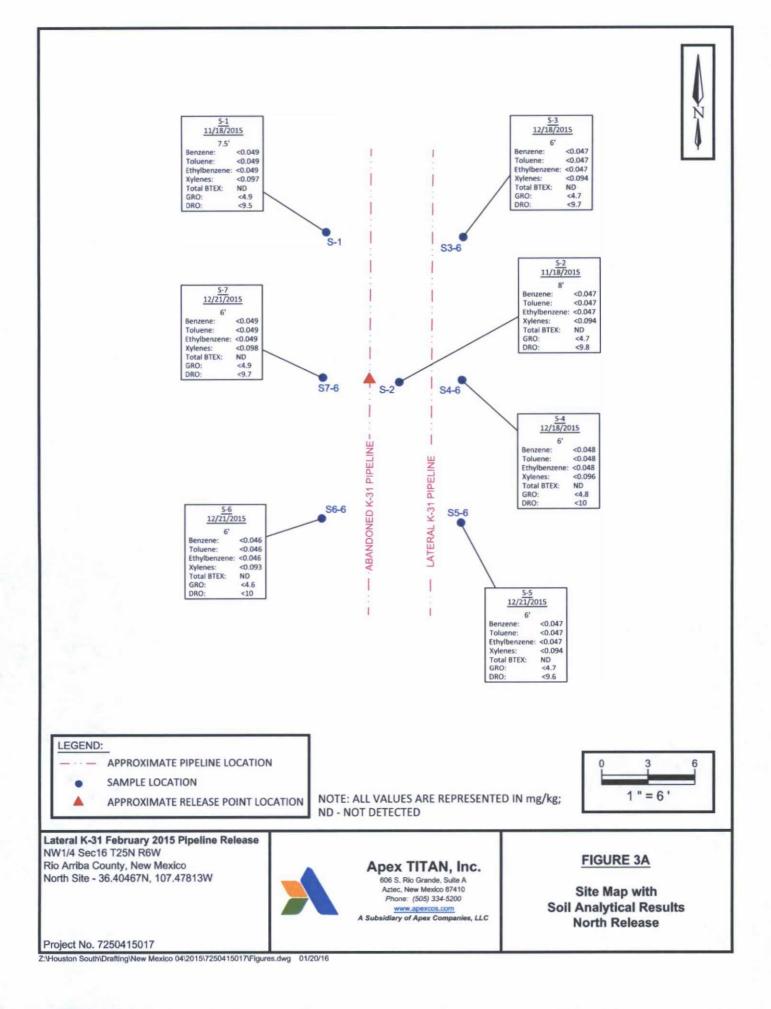
APPENDIX A

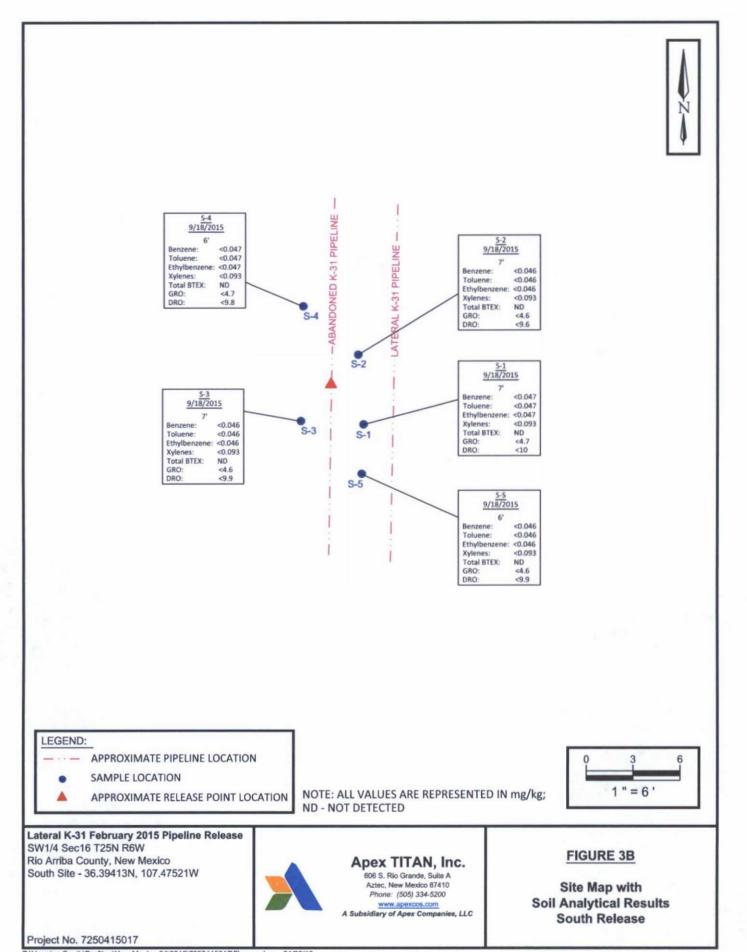
Figures



Z VHouston South/Drafting/New Mexico 04/2015/7250415017/Figure 1.mxd 1/14/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System







Z:\Houston South\Drafting\New Mexico 04\2015\7250415017\Figures.dwg 01/20/16



APPENDIX B

Tables



| | 5, 5 | a i t | | | Pipeline Releas | | | | desit. |
|-------------|-----------------|--|--------------------|--------------------|-------------------------|--------------------|-----------------------|-----------------------|-----------------------|
| 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) |
| | | Natural Resources vision, Remediation | 10 | NE | NE | NE | 50 | 1 | 00 |
| | A SA SHE STREET | | | Stockp | ile Samples | | | CONTRACTOR OF | |
| SP-1 | 7.8.15 | Stockpile | < 0.050 | < 0.050 | < 0.050 | < 0.099 | ND | <5.0 | <10 |
| SP-2 | 7.8.15 | Stockpile | < 0.049 | < 0.049 | < 0.049 | <0.099 | ND | <4.9 | <9.6 |
| SP-3 | 7.8.15 | Stockpile | < 0.050 | < 0.050 | < 0.050 | <0.10 | ND | <5.0 | <9.7 |
| SP-4 | 7.8.15 | Stockpile | < 0.047 | < 0.047 | <0.047 | < 0.095 | ND | <4.7 | <10 |
| | | | | Soil Bor | ing Samples | | | | |
| S-1 | 11.18.15 | 7.5 | < 0.049 | < 0.049 | < 0.049 | < 0.097 | ND | <4.9 | <9.5 |
| S-2 | 11.18.15 | 8 | < 0.047 | < 0.047 | < 0.047 | < 0.094 | ND | <4.7 | <9.8 |
| S-3 (S3-6) | 12.18.15 | 6 | < 0.047 | <0.047 | <0.047 | < 0.094 | ND | <4.7 | <9.7 |
| S-4 (S4-6) | 12.18.15 | 6 | <0.048 | <0.048 | <0.048 | < 0.096 | ND | <4.8 | <10 |
| S-5 (S5-6) | 12.21.15 | 6 | <0.047 | <0.047 | <0.047 | < 0.094 | ND | <4.7 | <9.6 |
| S-6 (S6-6) | 12.21.15 | 6 | < 0.046 | < 0.046 | < 0.046 | < 0.093 | ND | <4.6 | <10 |
| S-7 (S7-6) | 12.21.15 | 6 | < 0.049 | < 0.049 | < 0.049 | < 0.098 | ND | <4.9 | <9.7 |

TABLE 1

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits

NA = Not analyzed



| TABLE 2 | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|
| Lateral K-31 Pipeline Release | | | | | | | |
| SOIL ANALYTICAL SUMMARY SOUTH RELEASE | | | | | | | |

| 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) |
|--------------|---------|---|--------------------|--------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | Natural Resources ivision, Remediation | 10 | NE | NE | NE | 50 | 1 | 00 |
| Kerner Aller | | | | Stockp | lle Samples | | | | Jan Barriers |
| SP-1 | 7.8.15 | Stockpile | < 0.047 | < 0.047 | < 0.047 | < 0.094 | ND | <4.7 | <10 |
| SP-2 | 7.8.15 | Stockpile | < 0.049 | < 0.049 | < 0.049 | < 0.097 | ND | <4.9 | <10 |
| | | | | Soil Bor | ing Samples | All the second second | and the second second | | |
| S-1 | 9.18.15 | 7 | < 0.047 | < 0.047 | <0.047 | < 0.093 | ND | <4.7 | <10 |
| S-2 | 9.18.15 | 7 | < 0.046 | < 0.046 | < 0.046 | < 0.093 | ND | <4.6 | <9.6 |
| S-3 | 9.18.15 | 7 | < 0.046 | < 0.046 | < 0.046 | < 0.093 | ND | <4.6 | <9.9 |
| S-4 | 9.18.15 | 6 | < 0.047 | < 0.047 | <0.047 | < 0.093 | ND | <4.7 | <9.8 |
| S-5 | 9.18.15 | 6 | < 0.046 | < 0.046 | < 0.046 | < 0.093 | ND | <4.6 | <9.9 |

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits



APPENDIX C

Laboratory Data Sheets & 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

July 13, 2015

Heather Woods APEX TITAN 606 S. Rio Grande Unit A Aztec, NM 87410 TEL: (505) 716-2787 FAX

RE: Lateral K-31 North

OrderNo.: 1507344

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/9/2015 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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

and

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1507344

Date Reported: 7/13/2015

Analyst: NSB

Analyst: NSB

7/10/2015 11:54:31 AM 20173

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

| CLIENT: APEX TITAN | | | Client Sampl | e ID: SP | 2-1 | |
|-----------------------------|-----------------|----------|---------------------|-----------|----------------------|---------|
| Project: Lateral K-31 North | | | Collection | Date: 7/8 | 3/2015 4:20:00 PM | |
| Lab ID: 1507344-001 | Matrix: | SOIL | Received | Date: 7/9 | 0/2015 7:00:00 AM | |
| Analyses | Result | RL | Qual Units | DF | Date Analyzed | Batch |
| EPA METHOD 8015M/D: DIESE | L RANGE ORGANIC | S | | | Analy | st: KJH |
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 7/10/2015 1:36:58 PM | A 20177 |
| Surr: DNOP | 108 | 57.9-140 | %REC | 1 | 7/10/2015 1:36:58 PM | / 20177 |

5.0

75.4-113

0.050

0.050

0.050

0.099

80-120

mg/Kg

%REC

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

1

1

1

1

1

1

1

ND

90.3

ND

ND

ND

ND

95.0

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | od Blank |
|-------------|---|---|----|---|-------------|
| | E | Value above quantitation range | Н | Holding times for preparation or analysi | s exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | Page 1 of 7 |
| | 0 | RSD is greater than RSDlimit | Р | Sample pH Not In Range | rage ror / |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |
| | | | | | |

Analytical Report

Lab Order 1507344

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

| CLIENT | APEX TITAN | | | Client Sampl | e ID: SP | -2 | |
|---------------------|-------------------------|-------------|----------|---------------------|-----------|-----------------------|---------|
| Project: | Lateral K-31 North | | | Collection 1 | Date: 7/8 | 3/2015 4:25:00 PM | |
| Lab ID: 1507344-002 | | Matrix: | SOIL | Received I | Date: 7/9 | 0/2015 7:00:00 AM | |
| Analyses | | Result | RL Qu | al Units | DF | Date Analyzed | Batch |
| EPA ME | THOD 8015M/D: DIESEL RA | NGE ORGANIC | s | | | Analys | t: KJH |
| Diesel R | Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 7/10/2015 1:58:34 PM | 20177 |
| Surr: | DNOP | 109 | 57.9-140 | %REC | 1 | 7/10/2015 1:58:34 PM | 20177 |
| EPA ME | THOD 8015D: GASOLINE R | ANGE | | | | Analys | t: NSB |
| Gasoline | e Range Organics (GRO) | ND | 4.9 | mg/Kg | 1 | 7/10/2015 12:23:21 PM | 1 20173 |
| Surr: | BFB | 93.4 | 75.4-113 | %REC | 1 | 7/10/2015 12:23:21 PM | 1 20173 |

E

| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
|-----------------------------|------|--------|-------|---|-----------------------|-------|
| Benzene | ND | 0.049 | mg/Kg | 1 | 7/10/2015 12:23:21 PM | 20173 |
| Toluene | ND | 0.049 | mg/Kg | 1 | 7/10/2015 12:23:21 PM | 20173 |
| Ethylbenzene | ND | 0.049 | mg/Kg | 1 | 7/10/2015 12:23:21 PM | 20173 |
| Xylenes, Total | ND | 0.099 | mg/Kg | 1 | 7/10/2015 12:23:21 PM | 20173 |
| Surr: 4-Bromofluorobenzene | 97.4 | 80-120 | %REC | 1 | 7/10/2015 12:23:21 PM | 20173 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Metho | od Blank |
|-------------|---|---|----|--|--------------|
| | E | Value above quantitation range | Н | Holding times for preparation or analysi | s exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | Page 2 of 7 |
| | 0 | RSD is greater than RSDlimit | Р | Sample pH Not In Range | 1 age 2 01 7 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

| Analytical Report | |
|-------------------|--|
|-------------------|--|

Lab Order 1507344

Date Reported: 7/13/2015

7/10/2015 12:52:10 PM 20173

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

| CLIENT: APEX TITAN | | | Client Sampl | e ID: SP | -3 | | |
|-------------------------------|---|----------|--------------|-----------|-----------------------|-------|--|
| Project: Lateral K-31 North | | | Collection 1 | Date: 7/8 | 3/2015 4:30:00 PM | | |
| Lab ID: 1507344-003 | Matrix: SOIL Received Date: 7/9/2015 7:00:00 AM | | | | | | |
| Analyses | Result | RL Qu | ual Units | DF | Date Analyzed | Batch | |
| EPA METHOD 8015M/D: DIESEL RA | NGE ORGANIC | S | | | Analyst | KJH | |
| Diesel Range Organics (DRO) | ND | 9.7 | mg/Kg | 1 | 7/10/2015 2:20:07 PM | 20177 | |
| Surr: DNOP | 109 | 57.9-140 | %REC | 1 | 7/10/2015 2:20:07 PM | 20177 | |
| EPA METHOD 8015D: GASOLINE R | ANGE | | | | Analyst | NSB | |
| Gasoline Range Organics (GRO) | ND | 5.0 | mg/Kg | 1 | 7/10/2015 12:52:10 PM | 20173 | |
| Surr: BFB | 91.4 | 75.4-113 | %REC | 1 | 7/10/2015 12:52:10 PM | 20173 | |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB | |

0.050

0.050

0.050

0.10

80-120

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

1

1

1

1

1

ND

ND

ND

ND

96.8

| Qualifiers: | | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Meth- | od Blank |
|-------------|---|---|----|--|-------------|
| | E | Value above quantitation range | Н | Holding times for preparation or analysi | s exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | Page 3 of 7 |
| | 0 | RSD is greater than RSDlimit | Р | Sample pH Not In Range | rage 5 01 / |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |
| | | | | | |

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1507344 Date Reported: 7/13/2015

| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch |
|-----------------|--------------------|---------|------|------|------------|---------------------------|-------|
| Lab ID: | 1507344-004 | Matrix: | SOIL | | Received | Date: 7/9/2015 7:00:00 AM | |
| Project: | Lateral K-31 North | | | | Collection | Date: 7/8/2015 4:35:00 PM | |
| CLIENT: | APEX TITAN | | | 0 | lient Samp | le ID: SP-4 | |

| EPA METHOD 8015M/D: DIESEL RANG | E ORGANIC | S | | | Analyst | KJH |
|---------------------------------|-----------|----------|-------|---|----------------------|-------|
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 7/10/2015 5:37:24 PM | 20177 |
| Surr: DNOP | 105 | 57.9-140 | %REC | 1 | 7/10/2015 5:37:24 PM | 20177 |
| EPA METHOD 8015D: GASOLINE RANG | GE | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 7/10/2015 1:20:59 PM | 20173 |
| Surr: BFB | 91.2 | 75.4-113 | %REC | 1 | 7/10/2015 1:20:59 PM | 20173 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 1:20:59 PM | 20173 |
| Toluene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 1:20:59 PM | 20173 |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 1:20:59 PM | 20173 |
| Xylenes, Total | ND | 0.095 | mg/Kg | 1 | 7/10/2015 1:20:59 PM | 20173 |
| Surr: 4-Bromofluorobenzene | 95.7 | 80-120 | %REC | 1 | 7/10/2015 1:20:59 PM | 20173 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in t |
|-------------|---|--|---|-----------------------|
| | Е | Value above quantitation range | Н | Holding times for pr |

- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- the associated Method Blank
- preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- Page 4 of 7
- RL Reporting Detection Limit

| Hall Envir | onmental | Anal | ysis | Labo | ratory, | Inc. |
|------------|----------|------|------|------|---------|------|
|------------|----------|------|------|------|---------|------|

WO#: 1507344

13-Jul-15

| | X TITAN al K-31 North | | | | | | | | |
|---|--------------------------|-----------|-------------|-----------|-----------|--------------|------------|------------|------|
| Sample ID MB-20177 | SampType: M | BLK | Tes | tCode: El | PA Method | 8015M/D: Die | esel Rang | e Organics | |
| Client ID: PBS | Batch ID: 20 | 0177 | F | tunNo: 2 | 7406 | | | | |
| Prep Date: 7/9/2015 | Analysis Date: 7 | /10/2015 | S | SeqNo: 8 | 22308 | Units: mg/K | g | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) Surr: DNOP | ND 10 11 | 10.00 | | 112 | 57.9 | 140 | | | |
| Sample ID LCS-20177 | SampType: L | cs | Tes | Code: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Client ID: LCSS | Batch ID: 20 | 0177 | R | unNo: 2 | 7406 | | | | |
| Prep Date: 7/9/2015 | Analysis Date: 7 | /10/2015 | S | eqNo: 8 | 22309 | Units: mg/K | g | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 53 10 | 50.00 | 0 | 106 | 57.4 | 139 | | | |
| Surr: DNOP | 4.6 | 5.000 | | 92.2 | 57.9 | 140 | | | |
| Sample ID LCS-20189 | SampType: L | cs | Tes | Code: El | PA Method | 8015M/D: Die | esel Range | e Organics | |
| Client ID: LCSS | Batch ID: 20 | 0189 | R | unNo: 2 | 7406 | | | | |
| Prep Date: 7/9/2015 | Analysis Date: 7 | /10/2015 | S | eqNo: 8 | 22697 | Units: %RE | С | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 5.6 | 5.000 | | 113 | 57.9 | 140 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN

Project: Lateral K-31 North

| Sample ID MB-20173 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | oline Rang | e | |
|---|------------------------------|----------------------|-----------------------------------|-------------|-----------------------------------|----------------------------|----------------------------|------------|---------------|------|
| Client ID: PBS | Batch | 1D: 20 | 173 | F | RunNo: 2 | 7422 | | | | |
| Prep Date: 7/9/2015 | Analysis D | ate: 7/ | 10/2015 | 5 | SeqNo: 8 | 22735 | Units: mg/M | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 890 | | 1000 | | 89.3 | 75.4 | 113 | | | |
| Surr: BFB Sample ID LCS-20173 | | ype: LC | | Tes | | | 113 8015D: Gase | line Rang | e | |
| | SampT | ype: LC | s | | | PA Method | | line Rang | 0 | |
| Sample ID LCS-20173 | SampT | n ID: 20 | :S 173 | F | tCode: El | PA Method 7422 | | | e | |
| Sample ID LCS-20173 Client ID: LCSS | SampT Batch | n ID: 20 | :S 173 /10/2015 | F | tCode: El RunNo: 2 | PA Method 7422 | 8015D: Gaso | | e RPDLimit | Qual |
| Sample ID LCS-20173 Client ID: LCSS Prep Date: 7/9/2015 | SampT Batch Analysis D | n ID: 20 Date: 7/ | S 173 110/2015 SPK value | F | tCode: El RunNo: 2 SeqNo: 8 | PA Method 7422 22736 | 8015D: Gaso Units: mg/K | (g | | Qual |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

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1507344 13-Jul-15

WO#:

| Hall Environmental A | alysis Laboratory, In |
|----------------------|-----------------------|
|----------------------|-----------------------|

Client: API Project: Lat

APEX TITAN Lateral K-31 North

| Sample ID MB-20173 | Samp | Type: MI | 3LK | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
|----------------------------|------------|-----------------|-----------|-------------|-----------|-----------|-------------|-------|----------|------|
| Client ID: PBS | Batc | Batch ID: 20173 | | | | 7422 | | | | |
| Prep Date: 7/9/2015 | Analysis [| Date: 7/ | 10/2015 | S | SeqNo: 8 | 22778 | Units: mg/k | (g | | |
| 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 | 0.96 | | 1.000 | | 95.9 | 80 | 120 | | | |
| Sample ID LCS-20173 | Samp | Type: LC | s | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: LCSS | Batc | h ID: 20 | 173 | F | RunNo: 2 | 7422 | | | | |
| Prep Date: 7/9/2015 | Analysis E | Date: 7/ | 10/2015 | S | SeqNo: 8 | 22779 | Units: mg/M | ٢g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 76.6 | 128 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 97.6 | 75 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 101 | 79.5 | 126 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 102 | 78.8 | 124 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |
| | | | | | | | | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

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1507344 *13-Jul-15*

WO#:

| | HALL ENVIRONMENTAL |
|------|-----------------------|
| - C. | ANALYSIS |
| | LABORATORY |
| | |

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: | 15073 | 44 | | | RcptNo: 1 |
|---|---------------------------|---------|--------------|----------|-----|----------------------------------|
| Received by/date: | 07/09/15 | | | | | |
| Logged By: Lindsay Mangin | 7/9/2015 7.00:00 AM | | | A State | 11p |) |
| Completed By. Lindsay Mangin | 7/9/2015 7 51:57 AM | | | Andath | la | , , |
| Reviewed By: | pala | - | | 00 | 0 | |
| Chain of Custody | o drafte | 2 | | | | |
| 1. Custody seals intact on sample bottles? | | Yes | 7 | No | | Not Present |
| 2. Is Chain of Custody complete? | | Yes | Y | No | | Not Present |
| 3. How was the sample delivered? | | Cour | | | | |
| Log In | | | | | | |
| 4. Was an attempt made to cool the samp | les? | Yes | V | No | | NA |
| 5. Were all samples received at a tempera | ture of >0' C to 6.0°C | Yes | > | No | | NA |
| 6. Sample(s) in proper container(s)? | | Yes | V | No | | |
| 7. Sufficient sample volume for indicated te | est(s)? | Yes | V | No | | |
| 8, Are samples (except VOA and ONG) pro | | Yes | 1 | No | | |
| 9. Was preservative added to bottles? | | Yes | - | No | 1 | NA 🗌 |
| 10.VOA vials have zero headspace? | | Yes | | No | | No VOA Vials 🗹 |
| 11. Were any sample containers received b | roken? | Yes | | No | 1 | # of preserved |
| | | | | | | bottles checked |
| 12 Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes | \checkmark | No | | for pH: (<2 or >12 unless not |
| 13. Are matrices correctly identified on Chair | | Yes | ~ | No | | Adjusted? |
| 14. Is it clear what analyses were requested | | Yes | ~ | No | | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | | Yes | ~ | No | | Checked by: |
| (in no, noticy costonics for autionization.) | | | | | | |
| Special Handling (if applicable) | | | | | | |
| 16. Was client notified of all discrepancies w | ith this order? | Yes | | No | | NA 🗹 |
| Person Notified: | Date | | | | _ | |
| By Whom: | Via: | eMa | ii 📋 | Phone 🔲 | Fax | In Person |
| Regarding: | | | | | _ | |
| Client Instructions: | | | | | | |
| 17. Additional remarks: | | | | | | |
| 18. <u>Cooler Information</u> Cooler No Temp °C Condition | Seal Intact Seal No S | Seal Da | te | Signed B | v | I |
| | South Hilling And Hilling | | | 4.9.00 D | 1 | |

| ager <u>Hu</u> | 100 | | | Phone: PO/SO #: _ Sampler's Sign | Albug | y F | e n | M | _ | al | | Red | ALYSIS | ED (Dathogo | | | | | | | | 1 2 | oolers lived (C°): 3 |
|----------------|---|-------------------------|---|---|---|--|--|---|---|---|--|--|---|--|--|--|--|--|--|---|--|---|--|
| 200111 | Denie | ect Na | 1000 | | | 1 | No/Ty | pe of C | Contain | hers | | | HA H | 7 / | / | / | / / | / | 1 | | | | |
| | L | ate | eral K-3 | | | | | | | | | ċ | A SI | / | / | / / | / | / | / | | | | |
| Time | CoEo | Grab | Identifying Mar | ks of Sample(s) | Start | End | VOA | AG | 11 52 E | Glass | P/O | 8 | 109 | / | / / | // | / | / | / | La | ab Sa | mple ID (La | b Use Only) |
| 1620 | | 5 | SP- | | | | | | | | | X | x | | | | | | 15 | 07 | -3 | 44-0 | 201 |
| | | | Sp- | 2 | | | | | | | | × | x | | | | | | | | | -0 | DZ |
| | | | SP. | 3 | | | | | | | | × | × | | | | | | | | | | |
| | | | SP- | 4 | | | | | | | | X | × | | | | | | _ | | | -00 | rt |
| | | | | - | | | | - | | | - | | - | | | - | - | | | | - | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | + | | | | | | | |
| | | - | | and Burk D | | | P | | | | | | | | | | | | | | | | |
| (Signature) | ç | - | Date: 191 | ime: Receiv | ved by: | (Signa | ure) | · | 7 | Date: | 15 | Tir | me: | NOTE | B | 11 | to E | nder | Pris | ۹. | | | |
| (Signature) | 63 | - | Date: 1/8/15 20 | ime: Receiv | ved by | VSight | iture) | _ | d | Date: | 1 | Tir | me: | | A | ton . | To | nL | ong | , <i>Г</i> . | ٥٢ | hany | Sandor |
| | e ager Hu e Deechill Time 1620 1625 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 1635 | e Normal (Signature) | ion $Azec, N$ ager $Hw/0(ds)$ e Deechilly Project Na Late Time $C G G$ m a p b 1620 1625 1635 1 | ion Aztec, NM ager HW 0(b 3 e Dec chilly Project Name Lateral K-3 Time $C G G$ ib25 Sp- b1b25 Sp- b1b25 Sp- b1b25 Sp- b1b35 Sp- b | ion $Azec, NM$ Contact: Phone: ager $HW0(DS$ PO/SO #: PO/SO #: Poiect Name Lateral K-31 M Project Name Lateral K-31 M N Time $C G G$ Identifying Marks of Sample(s) P b Identifying Marks of Sample(s) P b Identifyi | ion <u>Azłec, tNM</u> ager <u>Hu/0(JS</u> e <u>Sampler's Signature</u> <i>Project Name</i> <i>Lateral</i> <u>X-31</u> <u>Marks of Sample(s)</u> Project Name <i>Lateral</i> <u>X-31</u> <u>Marks of Sample(s)</u> <u>1625</u> <u>SP-2</u> <u>1625</u> <u>SP-2</u> <u>1635</u> <u>SP-2</u> <u>1635</u> <u>SP-4</u> <u>1635</u> <u>SP-4</u> <u>SP-3</u> <u>1635</u> <u>SP-4</u> <u>SP-3</u> <u>1635</u> <u>SP-4</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-3</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP-4</u> <u>SP</u> | ion $A24ec, NM$ ager $Hw/0(ds$ Contact: $Amdy F$ Phone: ager $Hw/0(ds$ PO/SO #: e Sampler's Signature Project Name $Lateral \chi-31 Hereither$ | ion $A24ec, NM$ ager HullO(DS Contact: Andy Free Phone: $ager HullO(DS PO/SO #:eee Contact: Andy Free PO/SO #:ePoisci Name La + e ral k - 31 Poisci NarthTime O ablo2D SP - 1lo2S SP - 2lo2D SP - 3lo2S SP - 2lo3S SP - 3lo3S SP - 4lo3S SP -$ | ion $A24ec, NM$ Contact: $Amdy FreeMall Phone: ager Hwl0(y3)PO/SO #:Poison SignatureProject NameLateral k-31$ Poison North Time $\frac{C}{m}$ $\frac{G}{a}$ Identifying Marks of Sample(s) $\frac{1}{25}$ $$ | ion $A24ec, NIM$ ager $Hwl0(JS$ Point $Point Point Point Point Point Point Point Point Project Name Point Project Name Point Point Point Point Project Name Point P$ | ion $A24ec, NIM$ ager $Hu/0(DS$ Contact: $Amdy FreeM2N$ Phone: Phone: Phone: Project Name Laferal E-3/EPP Nerth Time $C G G$ $m f a$ Identifying Marks of Sample(s) $\frac{1}{25} = \frac{1}{25} = $ | ion $A24eC_{4}NM$ Contact: $Andy FreeMan$ Phone: ager $Hu/0(ds$ PO/SO #: Poiect Name $Lateral \times 31$ Project Name $Lateral \times 31$ Project Name $Lateral \times 31$ Time C T T T T T T T T | ton $A2Aec, NIM$ ager $Hu/0(ds$ Phone: ager $Hu/0(ds$ PO/SO #: e Sampler's Signature Po/SO #: Project Name Lar+eral k-31 Project Project Name Lar+eral k-31 Project Proj | ton $A24ec, NM$ Contact: $Andy FreeMan$ Phone: ager $Hw J0(ds$ Poise $Hw J0(ds$ Project Name Laferal x-31 $NerthTime \frac{C}{m} \frac{C}{a} Identifying Marks of Sample(s) \frac{1}{25} \frac{1}{2$ | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Inon Azdec, TMM Contact: Andy Freeman Phone: Phone: Phone: Phone: Project Name Project Name Lateral X-31 Morrype of Containers If H Time Project Name Nortype of Containers If H Image: Morrype of Containers If H If H Image: Specific Support Specific Support Specific Support Image: Internet Nortype of Containers If H Image: Specific State Specific State Specific State Ib20 Specific State Specific State Specific State Internet Ib25 Specific State Internet Internet Internet Internet Ib25 Specific State Internet Internet Internet Internet Ib25 Spec | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | ton Aztec, NM Contact: Andy FreeM20 Phone: Phone: Phone: Po | ion Azzec, nim Contact: Andy Freeman Image: Andy Freeman |

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

January 18, 2016

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

RE: Lateral K-31 North

OrderNo.: 1511A09

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 11/21/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 01, 2015.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

| Analytical | Report |
|------------|--------|
| | |

Lab Order 1511A09

Date Reported: 1/18/2016

Hall Environmental Analysis Laboratory, Inc.

| CLIENT: APEX TITAN | | | Client Samp | e ID: S- | 1 | |
|--------------------------------|-------------|----------|--------------------|----------|----------------------|----------|
| Project: Lateral K-31 North | | | Collection | Date: 11 | /18/2015 3:45:00 PM | 1 |
| Lab ID: 1511A09-001 | Matrix: | SOIL | Received | Date: 11 | /21/2015 8:30:00 AM | M |
| Analyses | Result | RL Qu | al Units | DF | Date Analyzed | Batch |
| EPA METHOD 8015M/D: DIESEL RAN | IGE ORGANIC | S | | | Analy | /st: TOM |
| Diesel Range Organics (DRO) | ND | 9.5 | mg/Kg | 1 | 11/25/2015 10:43:40 | AM 22508 |
| Surr: DNOP | 93.4 | 70-130 | %REC | 1 | 11/25/2015 10:43:40 | AM 22508 |
| EPA METHOD 8015D: GASOLINE RA | NGE | | | | Analy | st: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | mg/Kg | 1 | 11/24/2015 1:55:59 F | PM 22473 |
| Surr: BFB | 82.8 | 66.2-112 | %REC | 1 | 11/24/2015 1:55:59 F | PM 22473 |
| EPA METHOD 8021B: VOLATILES | | | | | Analy | st: NSB |
| Benzene | ND | 0.049 | mg/Kg | 1 | 11/24/2015 1:55:59 F | PM 22473 |
| | | | | | | |

| Toluene ND 0.049 mg/Kg 1 11/24/2015 1:55:59 PM 22 Ethylbenzene ND 0.049 mg/Kg 1 11/24/2015 1:55:59 PM 22 Xylenes, Total ND 0.097 mg/Kg 1 11/24/2015 1:55:59 PM 22 Stript 4 Promofluerobenzene ND 0.097 mg/Kg 1 11/24/2015 1:55:59 PM 22 | Benzene | ND | 0.049 | mg/Kg | 1 | 11/24/2015 1:55:59 PM | 224/3 |
|---|----------------------------|-----|--------|-------|---|-----------------------|-------|
| Xylenes, Total ND 0.097 mg/Kg 1 11/24/2015 1:55:59 PM 22 | Toluene | ND | 0.049 | mg/Kg | 1 | 11/24/2015 1:55:59 PM | 22473 |
| - Junear | Ethylbenzene | ND | 0.049 | mg/Kg | 1 | 11/24/2015 1:55:59 PM | 22473 |
| Surr: 4 Promofluorobonzono 105 90.120 % PEC 1 11/24/2015 1:55:50 PM 2 | Xylenes, Total | ND | 0.097 | mg/Kg | 1 | 11/24/2015 1:55:59 PM | 22473 |
| Sull. 4-Diditionabelizene 105 60-120 76/CEC 1 11/24/2015 1.55.59 FM 22 | Surr: 4-Bromofluorobenzene | 105 | 80-120 | %REC | 1 | 11/24/2015 1:55:59 PM | 22473 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method I | Blank |
|--------------------|----|---|----|---|-------------|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 1 of 5 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | rage 1 01 5 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report Lab Order 1511A09

Date Reported: 1/18/2016

11/24/2015 2:20:36 PM 22473

11/24/2015 2:20:36 PM 22473

11/24/2015 2:20:36 PM 22473

11/24/2015 2:20:36 PM 22473

1 11/24/2015 2:20:36 PM 22473

1 11/24/2015 2:20:36 PM 22473

1 11/24/2015 2:20:36 PM 22473

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

| CLIENT: | APEX TITAN | | | Client Sampl | e ID: S- | 2 | |
|----------|------------------------|---------------|--------|---------------------|----------|---------------------|----------|
| Project: | Lateral K-31 North | | | Collection | Date: 11 | /18/2015 4:00:00 PN | 1 |
| Lab ID: | 1511A09-002 | Matrix: | SOIL | Received | Date: 11 | /21/2015 8:30:00 AM | Μ |
| Analyses | | Result | RL Qu | al Units | DF | Date Analyzed | Batch |
| EPA MET | THOD 8015M/D: DIESEL R | ANGE ORGANICS | 5 | | | Analy | st: TOM |
| Diesel R | ange Organics (DRO) | ND | 9.8 | mg/Kg | 1 | 11/25/2015 11:48:47 | AM 22508 |
| Surr: | DNOP | 101 | 70-130 | %REC | 1 | 11/25/2015 11:48:47 | AM 22508 |
| EPA MET | THOD 8015D: GASOLINE | RANGE | | | | Analy | st: NSB |

4.7

66.2-112

0.047

0.047

0.047

0.094

80-120

mg/Kg

%REC

mg/Kg

mg/Kg

mg/Kg mg/Kg

%REC

1

1

1

1

ND

82.7

ND

ND

ND

ND

105

| Qualifiers: | | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|--------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 2 of 5 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 2 01 5 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |
| | | | | | |

| Hall Environmental A | Analysis | Laboratory, | Inc. |
|----------------------|----------|-------------|------|
|----------------------|----------|-------------|------|

49

4.9

9.7

48.45

4.845

Client: APEX TITAN

Project: Lateral K-31 North

| | | | | | | | | | _ | | | | |
|---|--|--|---|--|--|--|--------------------------|------------------------|------|--|--|--|--|
| Sample ID MB-22508 | SampType: N | IBLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | | | | | |
| Client ID: PBS | Batch ID: 2 | 2508 | RunNo: 30480 | | | | | | | | | | |
| Prep Date: 11/24/2015 | Analysis Date: | 11/25/2015 | S | SeqNo: 9 | 30408 | Units: mg/k | ٢g | | | | | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | | |
| Diesel Range Organics (DRO) | ND 10 | | | | | | | | | | | | |
| Surr: DNOP | 12 | 10.00 | - | 117 | 70 | 130 | | | | | | | |
| Sample ID LCS-22508 | SampType: L | cs | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | | | | | |
| Client ID: LCSS | Batch ID: 2 | 2508 | RunNo: 30480 | | | | | | | | | | |
| Prep Date: 11/24/2015 | Analysis Date: | 11/25/2015 | S | SeqNo: 9 | 30409 | Units: mg/k | g | | | | | | |
| Analyte | Result PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | | |
| Diesel Range Organics (DRO) | 57 10 | 50.00 | 0 | 115 | 57.4 | 139 | | | | | | | |
| Surr: DNOP | 5.6 | 5.000 | | 112 | 70 | 130 | | | | | | | |
| | | | | | | The second second second | | | | | | | |
| Sample ID 1511A09-001AMS | SampType: N | IS | Tes | tCode: EF | PA Method | 8015M/D: Di | esel Range | e Organics | | | | | |
| 1.7. | SampType: N Batch ID: 2 | | | tCode: EF | | 8015M/D: Di | esel Range | e Organics | | | | | |
| Client ID: S-1 | | 2508 | R | | 0480 | 8015M/D: Di | | e Organics | | | | | |
| Client ID: S-1 Prep Date: 11/24/2015 | Batch ID: 2 | 2508 11/25/2015 | R | RunNo: 30 | 0480 | | | e Organics RPDLimit | Qual | | | | |
| Sample ID 1511A09-001AMS Client ID: S-1 Prep Date: 11/24/2015 Analyte Diesel Range Organics (DRO) | Batch ID: 2 Analysis Date: | 2508 11/25/2015 SPK value | F | RunNo: 30 SeqNo: 93 | 0480 30428 | Units: mg/k | g | | Qual | | | | |
| Client ID: S-1 Prep Date: 11/24/2015 Analyte | Batch ID: 2 Analysis Date: 4 Result PQL | 2508 11/25/2015 SPK value | R S SPK Ref Val | RunNo: 30 SeqNo: 9: %REC | 0480 30428 LowLimit | Units: mg/K HighLimit | g | | Qual | | | | |
| Client ID: S-1 Prep Date: 11/24/2015 Analyte Diesel Range Organics (DRO) | Batch ID: 2 Analysis Date: 1 Result PQL 49 10 5.4 | 2508 11/25/2015 SPK value 0 49.80 4.980 | R S SPK Ref Val 0 | RunNo: 30 SeqNo: 93 %REC 99.1 108 | 0480 30428 LowLimit 31.2 70 | Units: mg/k HighLimit 162 | g %RPD | RPDLimit | Qual | | | | |
| Client ID: S-1 Prep Date: 11/24/2015 Analyte Diesel Range Organics (DRO) Surr: DNOP | Batch ID: 2 Analysis Date: 1 Result PQL 49 10 5.4 | 2508 11/25/2015 SPK value 0 49.80 4.980 | R SPK Ref Val 0 Test | RunNo: 30 SeqNo: 93 %REC 99.1 108 | 0480 30428 LowLimit 31.2 70 PA Method | Units: mg/K HighLimit 162 130 | g %RPD | RPDLimit | Qual | | | | |
| Client ID: S-1 Prep Date: 11/24/2015 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID 1511A09-001AMS | Batch ID: 2 Analysis Date: 4 Result PQL 49 10 5.4 D SampType: M | 2508 11/25/2015 SPK value 0 49.80 4.980 ISD 2508 | R S SPK Ref Val 0 Tesi R | RunNo: 30 SeqNo: 93 %REC 99.1 108 tCode: EF | 0480 30428 LowLimit 31.2 70 PA Method 0480 | Units: mg/K HighLimit 162 130 | Sg %RPD esel Range | RPDLimit | Qual | | | | |

0

101

102

31.2

70

162

130

0.497

0

31.7

0

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Diesel Range Organics (DRO)

Surr: DNOP

- 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

WO#: 1511A09

18-Jan-16

Page 3 of 5

| Hall Env | ironmental | Analysis | Laboratory, | Inc. |
|----------|------------|----------|-------------|------|
|----------|------------|----------|-------------|------|

Client: APEX TITAN

Project: Lateral K-31 North

| TestCode: EPA Method 8015D: Gasoline Range | Sample ID MB-22473 SampType: MBLK |
|---|---|
| RunNo: 30448 | Client ID: PBS Batch ID: 22473 |
| SeqNo: 929762 Units: mg/Kg | Prep Date: 11/23/2015 Analysis Date: 11/24/2015 |
| Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual | Analyte Result PQL SPK value |
| | Sasoline Range Organics (GRO) ND 5.0 |
| 88.8 66.2 112 | Surr: BFB 890 1000 |
| TestCode: EPA Method 8015D: Gasoline Range | Sample ID LCS-22473 SampType: LCS |
| RunNo: 30448 | Client ID: LCSS Batch ID: 22473 |
| SeqNo: 929763 Units: mg/Kg | Prep Date: 11/23/2015 Analysis Date: 11/24/2015 |
| Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual | Analyte Result PQL SPK value |
| 0 110 79.6 122 | Casoline Range Organics (GRO) 27 5.0 25.00 |
| 104 66.2 112 | Surr: BFB 1000 1000 |
| TestCode: EPA Method 8015D: Gasoline Range | Sample ID 5ML RB SampType: MBLK |
| RunNo: 30448 | Client ID: PBS Batch ID: A30448 |
| SeqNo: 929783 Units: %REC | Prep Date: Analysis Date: 11/24/2015 |
| Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual | Analyte Result PQL SPK value |
| 76.4 66.2 112 | Surr: BFB 760 1000 |
| TestCode: EPA Method 8015D: Gasoline Range | Sample ID 2.5UG GRO LCS SampType: LCS |
| RunNo: 30448 | Client ID: LCSS Batch ID: A30448 |
| SeqNo: 929784 Units: %REC | Prep Date: Analysis Date: 11/24/2015 |
| Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual | Analyte Result PQL SPK value |
| | |
| TestCode: EPA Method 8015D: Gasoline Range RunNo: 30448 SeqNo: 929784 Units: %REC | Sample ID 2.5UG GRO LCS SampType: LCS Client ID: LCSS Batch ID: A30448 Prep Date: Analysis Date: 11/24/2015 |

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

WO#: 1511A09

18-Jan-16

Page 4 of 5

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: APEX TITAN

Project: Lateral K-31 North

| Sample ID | MB-22473 | SampT | ype: ME | BLK | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | | | | |
|----------------|----------------|------------|----------|-----------|--------------|----------|-----------|-------------|-------|----------|------|--|--|--|
| Client ID: | PBS | Batch | n ID: 22 | 473 | RunNo: 30448 | | | | | | | | | |
| Prep Date: | 11/23/2015 | Analysis D | ate: 11 | 1/24/2015 | S | SeqNo: 9 | 29804 | Units: mg/k | (g | | | | | |
| 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-Bromo | ofluorobenzene | 1.2 | | 1.000 | | 117 | 80 | 120 | | | | | | |
| Sample ID | LCS-22473 | SampT | ype: LC | s | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | | | | |
| Client ID: | LCSS | Batch | D: 22 | 473 | F | RunNo: 3 | 0448 | | | | | | | |
| Prep Date: | 11/23/2015 | Analysis D | ate: 11 | 1/24/2015 | S | BeqNo: 9 | 29816 | Units: mg/k | ٢g | | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | |
| Benzene | | 0.98 | 0.050 | 1.000 | 0 | 98.2 | 80 | 120 | | | | | | |
| Toluene | | 0.93 | 0.050 | 1.000 | 0 | 93.1 | 80 | 120 | | | | | | |
| Ethylbenzene | | 0.98 | 0.050 | 1.000 | 0 | 98.2 | 80 | 120 | | | | | | |
| Xylenes, Total | | 2.9 | 0.10 | 3.000 | 0 | 96.0 | 80 | 120 | | | | | | |
| Surr: 4-Bromo | ofluorobenzene | 1.4 | | 1.000 | | 137 | 80 | 120 | | | S | | | |
| Sample ID | 5ML RB | SampT | ype: ME | BLK | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | | | | |
| Client ID: | PBS | Batch | 1D: B3 | 0448 | F | RunNo: 3 | 0448 | | | | | | | |
| Prep Date: | | Analysis D | ate: 11 | 1/24/2015 | 5 | SeqNo: 9 | 29827 | Units: %RE | C | | | | | |
| Analyte | 2 | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | |
| Surr: 4-Bromo | ofluorobenzene | 0.95 | | 1.000 | | 95.4 | 80 | 120 | | | | | | |
| Sample ID | 100NG BTEX LCS | SampT | ype: LC | S | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | - | | | |
| Client ID: | LCSS | Batch | n ID: 83 | 0448 | F | RunNo: 3 | 0448 | | | | | | | |
| Prep Date: | | Analysis D | ate: 11 | 1/24/2015 | S | SeqNo: 9 | 29828 | Units: %RE | С | | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | |
| Surr: 4-Bromo | fluorobenzene | 1.2 | | 1.000 | | 124 | 80 | 120 | | 1.0 | S | | | |

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

WO#: 1511A09

18-Jan-16

Page 5 of 5

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | TEL: 505-3- | amental Analyst 4901 Albuquerqu 45-3975 FAX: 5 www.halleuvira | Hawkins N NM 8710 15-345-410 | Sample Log-In Check List | | | | | |
|---|------------------|---|------------------------------------|--------------------------|-----------------------------------|----------------------|--|--|--|
| Client Name APEX AZTEC | Work Order N | lumber: 1511/ | 09 | | RcptNo | 1 | | | |
| Received by/date: HM | 11/21/1 | 5 | | | | | | | |
| Logged By: Ashley Gallegos | 11/21/2015 8:3 | 0:00 AM | 1 | AJ | | | | | |
| Completed By: Ashley Gallegos | 11/23/2015 12:0 | 03:13 PM | 4 | Ag | | | | | |
| Reviewed By: 05 | 11/23/15 | | | 4 | | | | | |
| 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? | | Cour | er | | | | | | |
| login | | | | | | | | | |
| Log In | | Yes | 2 | No | NA | | | | |
| 4. Was an attempt made to cool the samples? | | Tes | (M) | NO | | | | | |
| 5. Were all samples received at a temperature | of >0° C to 6.0° | C Yes | V | No 🗌 | NA 🗌 | | | | |
| 6. Sample(s) in proper container(s)? | | Yes | × | No 🗌 | | | | | |
| 7. Sufficient sample volume for indicated test(s | 5)? | Yes | ~ | No 🗌 | | | | | |
| 8. Are samples (except VOA and ONG) proper | ly preserved? | Yes | ~ | No 🗌 | | | | | |
| 9. Was preservative added to bottles? | | Yes | | No 🖌 | NA | | | | |
| 10. VOA viais have zero headspace? | | Yes | | No 🗌 | No VOA Vials | | | | |
| 11. Were any sample containers received broke | an? | Yes | | No 🗹 | | | | | |
| | | | | | # of preserved bottles checked | | | | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | | Yes | × | No | for pH: (<2 | or >12 unless noted) | | | |
| 13. Are matrices correctly identified on Chain of | Custody? | Yes | 1 | No 🗌 | Adjusted? | | | | |
| 14. Is it clear what analyses were requested? | | Yes | \checkmark | No 🗌 | | | | | |
| 15. Were all holding times able to be met? | | Yes | V | No | Checked by: | | | | |
| (If no, notify customer for authorization.) | | | | | | | | | |
| Special Handling (if applicable) | | | | | | | | | |
| 16. Was client notified of all discrepancies with | this order? | Yes | | No | NA 🗹 | | | | |
| Person Notified | | Date | | | | | | | |
| By Whom: | | Via: eMa | iil 🗌 Pho | one Fax | In Person | | | | |
| Regarding | | | | | | | | | |
| Client Instructions: | | | | | | | | | |
| 17. Additional remarks: | | | | | | | | | |
| 18. Cooler Information | | | | | | | | | |
| | eal Intact Seal | No Seal Di | ate S | ligned By | 4 | | | | |
| 1 1.2 Good Yes | 5 | | | | 1 | | | | |
| Page 1 of 1 | | | | | | | | | |

| | | | | | | | | | | | | | | | | _ | CHAIN OF CUSTODY RECORD | |
|---|--|------------------------------|-------|--------|-------------------------------------|-------------------------------------|--------|------------------------------------|----------------|-------------------|------------|-------|-----|--|---------|-------|------------------------------|--|
| | A | | | | | Laboratanu | 1) | | Ea. | | | - | (| ANALYSIS REQUESTED | 111 | // | Lab use only Due Date: | |
| APEX Laboratory: Hall Environmental Address: Albuquequeque | | | | | | | | | Ľ | | / / / | / / | | | | | | |
| | | | Lor | | A | Address: | A | prog | urg | ing | - Mari | -1 | _ | - / / / / / Temp. of co when received | | | | |
| Offic | fice Location <u>AzteciNIM</u> Contact: <u>A.Freeman</u> | | | | | | | | | | 30 | / / | | | | | | |
| | | | | | | Phone: | | 40 | 100. | | | | | | 7 / / | 11 | Page_1_of | |
| Proje | ect Manag | perk | Sin | m | news | PO/SO #: 1 | | 500 | 11501 | 7 | | | _ | Part Caro | /// | | | |
| | ler's Name | | | | , | Sampler's Signa | ature | ^ | | | | | - | N H | /// | / | | |
| Re | anse D | rechill | Y | | 2 | RiDucc | ful | Gt | | | | | | A H | /// | / / | | |
| Proj. I | No. | | Proje | ect Na | ame | North | | · . | | pe of (| Contain | hers | | BULL TIPH | /// | 11 | / / | |
| 72 | 504150 | 17 | C | G | | (Jan 201 | | | | | | | | 83 | /// | / / | | |
| Matrix | Date | Time | CoEp | Grab | Identifying Mar | rks of Sample(s) | Start | End | VOA | AG | 250 ml | Glass | P/0 | | /// | 1 | Lab Sample ID (Lab Use Only) | |
| 3 | 11/18/15 | 1545 | | | 5 | 1 | | | | | | 1 | | XX | | | 1511A09-001 | |
| 3 | 11/18/15 | | | | and the second data was seen in the | -2 | | | | | | 1 | | XX | | | -003 | |
| ~ | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | / | 1 | | | | | | | | | | | | | | | |
| | | | | / | | | | | | | | | | | | | | |
| _ | | | | | / | ABS | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | - | | | | | | | | |
| | | | | | | | | | | | | / | - | | | | | |
| | round time | Signature | | - | | | 100% | a literature and the second second | ture) | | | Date | | Time: NO | TES: | | | |
| Re | uished by | ill | | 1 | ROIT 15 | 48 /1 | Niz | th | JC | eb | - 1 | 1/20 | sla | -1548 | | 5.11 | to Tom Long E N20590 | |
| Peino | wished by (| Signature) | 14 | 1 | | Time: Receiv | ed by | (Righa | iture) | | | Date | 100 | Time: | Na | AFF | ENIZAFEA | |
| Relind | uished by | Signature) | - and | 1 | | Time: Receiv | ed by | Signa | aure) | | | Date | - | Time: | 1 | in c | 1090>70 | |
| Relino | uished by | Signature) | | - | Date: | Time: Receiv | red by | (Signa | ture) | | + | Date | : 1 | Time: | | | | |
| 1.1 | | | 1 | | | 0.0.1 00.0 | | | | 41-0 | | | 0 | | huden a | 01 | | |
| Matrix Contai | | V - Wastewa A - 40 ml via | | | W - Water A/G - Amber / O | S - Soil SD - So r Glass 1 Liter | 00 | 250 ml - | d A Glass v | - Air B vide m | ag outh | | | rcoal tube SL - s | ludge O | - Oil | | |

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

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

December 30, 2015

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

RE: Lateral K-31 (2015)

OrderNo.: 1512A12

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/22/2015 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 30, 2015.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Lab Order 1512A12

Date Reported: 12/30/2015

12/24/2015 11:33:17 AM 22945

Hall Environmental Analysis Laboratory, Inc.

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

| CLIENT: | APEX TITAN | | | Client Sampl | e ID: S3 | -6 | |
|-----------|-------------------------|------------|----------|--------------|----------|------------------------|---------|
| Project: | Lateral K-31 (2015) | | | Collection | Date: 12 | /18/2015 12:10:00 PM | |
| Lab ID: | 1512A12-001 | Matrix: | SOIL | Received | Date: 12 | /22/2015 7:45:00 AM | |
| Analyses | | Result | RL Qu | ual Units | DF | Date Analyzed | Batch |
| EPA MET | HOD 8015M/D: DIESEL RAN | GE ORGANIC | S | | | Analyst | KJH |
| Diesel Ra | ange Organics (DRO) | ND | 9.7 | mg/Kg | 1 | 12/28/2015 2:07:28 PM | 22934 |
| Surr: D | NOP | 87.0 | 70-130 | %REC | 1 | 12/28/2015 2:07:28 PM | 22934 |
| EPA MET | HOD 8015D: GASOLINE RAN | NGE | | | | Analyst | NSB |
| Gasoline | Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 12/24/2015 11:33:17 AM | 1 22945 |
| Surr: E | BFB | 82.7 | 66.2-112 | %REC | 1 | 12/24/2015 11:33:17 AM | 1 22945 |
| EPA MET | HOD 8021B: VOLATILES | | | | | Analyst | NSB |

0.047

0.047

0.047

0.094

80-120

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

1

1

1

1

1

ND

ND

ND

ND

111

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank | |
|-------------|----|---|----|--|-------------|--|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 1 of 9 | |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | rage 1019 | |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | | |
| | S | % Recovery outside of range due to dilution or matrix | | | | |
| | | | | | | |

Analytical Report

Lab Order 1512A12

Date Reported: 12/30/2015

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch |
|-----------------|---------------------|------------------------|------|------|------------|-----------------------------|-------|
| Lab ID: | 1512A12-002 | Matrix: | SOIL | | Received | Date: 12/22/2015 7:45:00 AN | 1 |
| Project: | Lateral K-31 (2015) | | | | Collection | Date: 12/18/2015 1:45:00 PM | t |
| CLIENT: | APEX TITAN | Client Sample ID: S4-6 | | | | | |

| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | s | | | Analyst: KJH |
|--------------------------------|------------|----------|-------|---|-----------------------------|
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 12/28/2015 2:29:15 PM 2293 |
| Surr: DNOP | 92.5 | 70-130 | %REC | 1 | 12/28/2015 2:29:15 PM 2293 |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | mg/Kg | 1 | 12/24/2015 12:46:47 PM 2294 |
| Surr: BFB | 81.9 | 66.2-112 | %REC | 1 | 12/24/2015 12:46:47 PM 2294 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: NSB |
| Benzene | ND | 0.048 | mg/Kg | 1 | 12/24/2015 12:46:47 PM 2294 |
| Toluene | ND | 0.048 | mg/Kg | 1 | 12/24/2015 12:46:47 PM 2294 |
| Ethylbenzene | ND | 0.048 | mg/Kg | 1 | 12/24/2015 12:46:47 PM 2294 |
| Xylenes, Total | ND | 0.096 | mg/Kg | 1 | 12/24/2015 12:46:47 PM 2294 |
| Surr: 4-Bromofluorobenzene | 109 | 80-120 | %REC | 1 | 12/24/2015 12:46:47 PM 2294 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|-------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 2 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | Fage 2 01 9 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report Lab Order 1512A12

Date Reported: 12/30/2015

Hall Environmental Analysis Laboratory, Inc.

| EPA MET | HOD 8015M/D: DIESEL R | ANGE ORGANICS | | | | Analy | st: KJH | | |
|----------|-----------------------|------------------------|----|------|------------|--------------------------------------|---------|--|--|
| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch | | |
| Lab ID: | 1512A12-003 | Matrix: SOIL | | | | Received Date: 12/22/2015 7:45:00 AM | | | |
| Project: | Lateral K-31 (2015) | | | | Collection | Date: 12/21/2015 10:35:00 A | M | | |
| CLIENT: | APEX TITAN | Client Sample ID: S5-6 | | | | | | | |

| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 12/28/2015 2:51:02 PM | 22934 |
|---------------------------------|------|----------|-------|---|-----------------------|-------|
| Surr: DNOP | 88.3 | 70-130 | %REC | 1 | 12/28/2015 2:51:02 PM | 22934 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 12/24/2015 2:00:26 PM | 22945 |
| Surr: BFB | 70.6 | 66.2-112 | %REC | 1 | 12/24/2015 2:00:26 PM | 22945 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.047 | mg/Kg | 1 | 12/24/2015 2:00:26 PM | 22945 |
| Toluene | ND | 0.047 | mg/Kg | 1 | 12/24/2015 2:00:26 PM | 22945 |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 12/24/2015 2:00:26 PM | 22945 |
| Xylenes, Total | ND | 0.094 | mg/Kg | 1 | 12/24/2015 2:00:26 PM | 22945 |
| Surr: 4-Bromofluorobenzene | 86.4 | 80-120 | %REC | 1 | 12/24/2015 2:00:26 PM | 22945 |

| Qualifiers: | | Value exceeds Maximum Contaminant Level. | в | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|--------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 3 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 5 01 9 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report

Lab Order 1512A12

Date Reported: 12/30/2015

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | R | L Qua | Units | DF Date Analyzed | Batch | |
|----------|---------------------|------------------------|---|-------|----------|-----------------------------|-------|--|
| Lab ID: | 1512A12-004 | Matrix: | SOIL | | Received | Date: 12/22/2015 7:45:00 AM | M | |
| Project: | Lateral K-31 (2015) | | Collection Date: 12/21/2015 11:30:00 AM | | | | | |
| CLIENT: | APEX TITAN | Client Sample ID: S6-6 | | | | | | |

| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | S | | | Analyst: | KJH |
|----------------------------------|---------|----------|-------|---|-----------------------|-------|
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 12/28/2015 3:12:39 PM | 22934 |
| Surr: DNOP | 88.6 | 70-130 | %REC | 1 | 12/28/2015 3:12:39 PM | 22934 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | mg/Kg | 1 | 12/24/2015 2:24:57 PM | 22945 |
| Surr: BFB | 83.4 | 66.2-112 | %REC | 1 | 12/24/2015 2:24:57 PM | 22945 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.046 | mg/Kg | 1 | 12/24/2015 2:24:57 PM | 22945 |
| Toluene | ND | 0.046 | mg/Kg | 1 | 12/24/2015 2:24:57 PM | 22945 |
| Ethylbenzene | ND | 0.046 | mg/Kg | 1 | 12/24/2015 2:24:57 PM | 22945 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 12/24/2015 2:24:57 PM | 22945 |
| Surr: 4-Bromofluorobenzene | 112 | 80-120 | %REC | 1 | 12/24/2015 2:24:57 PM | 22945 |
| | | | | | | |

| * Value exceeds Maximum Contaminant Level. | | В | Analyte detected in the associated Method | Blank |
|--|---|--|---|--|
| D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 4 of 9 |
| ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 4 01 9 |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| S | % Recovery outside of range due to dilution or matrix | | | |
| | | 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 | DSample Diluted Due to MatrixEHHolding times for preparation or analysis exceededJNDNot Detected at the Reporting LimitPRRPD outside accepted recovery limitsRL | DSample Diluted Due to MatrixEValue above quantitation rangeHHolding times for preparation or analysis exceededJAnalyte detected below quantitation limitsNDNot Detected at the Reporting LimitPSample pH Not In RangeRRPD outside accepted recovery limitsRLReporting Detection Limit |

Analytical Report

Lab Order 1512A12

Date Reported: 12/30/2015

12/28/2015 3:34:19 PM 22934

12/24/2015 2:49:24 PM 22945

Analyst: NSB

Analyst: NSB

Hall Environmental Analysis Laboratory, Inc.

Surr: DNOP

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

EPA METHOD 8021B: VOLATILES

Surr: 4-Bromofluorobenzene

CLIENT: APEX TITAN Client Sample ID: S7-6 Project: Lateral K-31 (2015) Collection Date: 12/21/2015 12:25:00 PM Lab ID: 1512A12-005 Matrix: SOIL Received Date: 12/22/2015 7:45:00 AM Analyses Result **RL Oual** Units **DF** Date Analyzed Batch EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: KJH **Diesel Range Organics (DRO)** ND 9.7 mg/Kg 1 12/28/2015 3:34:19 PM 22934

70-130

66.2-112

0.049

0.049

0.049

0.098

80-120

4.9

93.8

ND

84.6

ND

ND

ND

ND

114

%REC

mg/Kg

%REC

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

1

1

1

1

1

1

1

1

| Qualifiers: | | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|-------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 5 of 9 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | rage 5 01 9 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |
| | | | | | |

Client: Project: Lateral K-31 (2015)

APEX TITAN

| Project: Lateral | IK-31 (2015) | |
|-----------------------------|---------------------------|--|
| Sample ID MB-22934 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 22934 | RunNo: 31075 |
| Prep Date: 12/23/2015 | Analysis Date: 12/28/2015 | SeqNo: 950854 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 | 8.7 10.00 | 87.0 70 130 |
| Sample ID LCS-22934 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 22934 | RunNo: 31075 |
| Prep Date: 12/23/2015 | Analysis Date: 12/28/2015 | SeqNo: 950855 Units: mg/Kg |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 47 10 50.00 | 0 94.2 65.8 136 |
| Surr: DNOP | 5.0 5.000 | 99.6 70 130 |
| Sample ID LCS-22933 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 22933 | RunNo: 31069 |
| Prep Date: 12/23/2015 | Analysis Date: 12/28/2015 | SeqNo: 950983 Units: %REC |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 5.2 5.000 | 104 70 130 |
| Sample ID MB-22969 | SampType: MBLK | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: PBS | Batch ID: 22969 | RunNo: 31107 |
| Prep Date: 12/28/2015 | Analysis Date: 12/29/2015 | SeqNo: 951981 Units: %REC |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Surr: DNOP | 10 10.00 | 102 70 130 |
| Sample ID LCS-22969 | SampType: LCS | TestCode: EPA Method 8015M/D: Diesel Range Organics |
| Client ID: LCSS | Batch ID: 22969 | RunNo: 31107 |
| Prep Date: 12/28/2015 | Analysis Date: 12/29/2015 | SeqNo: 951987 Units: %REC |
| Analyte | Result PQL SPK value | SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| | | |

Qualifiers:

. Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- Р Sample pH Not In Range
- RL Reporting Detection Limit

WO#: 1512A12

Page 6 of 9

31-Dec-15

WO#: 1512A12

31-Dec-15

Client: APEX TITAN

| Chienter | THE LOCK THETHER |
|----------|---------------------|
| Project: | Lateral K-31 (2015) |

| rojeen | | 51 (2010) | | | | | | | | | |
|---------------|------------------|-------------|--------|-----------|-------------|---------|-----------|-------------|------------|----------|------|
| Sample ID | MB-22945 | SampTy | pe: MI | BLK | Test | Code: E | PA Method | 8015D: Gase | oline Rang | e | |
| Client ID: | PBS | Batch | ID: 22 | 945 | R | unNo: 3 | 31062 | | | | |
| Prep Date: | 12/23/2015 | Analysis Da | te: 1 | 2/24/2015 | S | eqNo: 9 | 50266 | Units: mg/k | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | | 820 | | 1000 | | 81.7 | 66.2 | 112 | | | |
| Sample ID | LCS-22945 | SampTy | pe: LC | cs | Test | Code: E | PA Method | 8015D: Gase | oline Rang | e | |
| Client ID: | LCSS | Batch | D: 22 | 945 | R | unNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis Da | te: 1 | 2/24/2015 | s | eqNo: 9 | 50267 | Units: mg/H | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 100 | 79.6 | 122 | | | |
| Surr: BFB | | 910 | | 1000 | | 90.7 | 66.2 | 112 | | | |
| Sample ID | 1512A12-002AMS | SampTy | pe: MS | S | Test | Code: E | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | S4-6 | Batch | D: 22 | 945 | R | unNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis Da | te: 1 | 2/24/2015 | S | eqNo: 9 | 50270 | Units: mg/k | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Rang | e Organics (GRO) | 27 | 4.8 | 24.18 | 0 | 114 | 62.5 | 151 | | | |
| Surr: BFB | | 940 | | 967.1 | | 97.2 | 66.2 | 112 | | | |
| Sample ID | 1512A12-002AMSI | SampTy | pe: MS | SD | Test | Code: E | PA Method | 8015D: Gaso | line Rang | e | |
| Client ID: | S4-6 | Batch | D: 22 | 945 | R | unNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis Da | te: 12 | 2/24/2015 | s | eqNo: 9 | 50271 | Units: mg/k | g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Sacoline Rang | e Organics (GRO) | 29 | 4.8 | 24.08 | 0 | 119 | 62.5 | 151 | 4.15 | 22.1 | |
| Jasonne Rang | | | | | | | | | | | |

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
- Page 7 of 9

- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

| Hall | Environmental | Analysis | Labora | tory, | Inc. |
|------|---------------|----------|--------|-------|------|
|------|---------------|----------|--------|-------|------|

Client:

APEX TITAN Lateral K-31 (2015)

| Project: | Lateral K | -31 (2015 |) | | | | | | | | |
|----------------|----------------|------------|-----------------|-----------|-------------|---------------------------------------|-----------|-------------|-----------------------------------|----------|------|
| Sample ID | MB-22945 | SampT | Гуре: МЕ | BLK | Tes | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | Batcl | Batch ID: 22945 | | | RunNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis D | Date: 12 | 2/24/2015 | S | SeqNo: 9 | 50286 | Units: mg/H | <g< th=""><th></th><th></th></g<> | | |
| 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-Brom | ofluorobenzene | 1.1 | | 1.000 | | 108 | 80 | 120 | | | |
| Sample ID | LCS-22945 | SampT | Type: LC | s | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: | LCSS | Batch | h ID: 22 | 945 | F | RunNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis D | Date: 12 | 2/24/2015 | 5 | SeqNo: 9 | 50305 | Units: mg/l | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Toluene | | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Ethylbenzene | | 1.0 | 0.050 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Xylenes, Total | | 3.1 | 0.10 | 3.000 | 0 | 103 | 80 | 120 | | | |
| Surr: 4-Brom | ofluorobenzene | 1.2 | | 1.000 | | 124 | 80 | 120 | | | S |
| Sample ID | 1512A12-001AMS | SampT | ype: MS | 6 | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: | S3-6 | Batch | h ID: 22 | 945 | F | | | | | | |
| Prep Date: | 12/23/2015 | Analysis D | Date: 12 | 2/24/2015 | S | eqNo: 9 | 50311 | Units: mg/k | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.99 | 0.047 | 0.9381 | 0 | 105 | 69.6 | 136 | | | |
| Toluene | | 1.1 | 0.047 | 0.9381 | 0 | 113 | 76.2 | 134 | | | |
| Ethylbenzene | | 1.1 | 0.047 | 0.9381 | 0 | 116 | 75.8 | 137 | | | |
| Xylenes, Total | | 3.3 | 0.094 | 2.814 | 0 | 119 | 78.9 | 133 | | | |
| Surr: 4-Brom | ofluorobenzene | 1.2 | | 0.9381 | | 123 | 80 | 120 | | | S |
| Sample ID | 1512A12-001AMS | D SampT | ype: MS | D | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: | S3-6 | Batch | h ID: 22 | 945 | R | unNo: 3 | 1062 | | | | |
| Prep Date: | 12/23/2015 | Analysis D | ate: 12 | 2/24/2015 | S | eqNo: 9 | 50312 | Units: mg/k | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 0.95 | 0.047 | 0.9390 | 0 | 101 | 69.6 | 136 | 3.44 | 20 | |
| Toluene | | 1.0 | 0.047 | 0.9390 | 0 | 110 | 76.2 | 134 | 2.32 | 20 | |
| Ethylbenzene | | 1.1 | 0.047 | 0.9390 | 0 | 113 | 75.8 | 137 | 2.87 | 20 | |
| Inter Total | | 3.2 | 0.094 | 2.817 | 0 | 115 | 78.9 | 133 | 3.08 | 20 | |
| Xylenes, Total | | | | | | | | | | | |

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

WO#: 1512A12

31-Dec-15

Page 8 of 9

Client: APEX TITAN Project: Lateral K-31 (2015)

| Sample ID MB-22951 | SampType: MBLK | Tes | tCode: EPA Method | 8021B: Volatiles | | |
|----------------------------|------------------------|---------------------|-------------------|------------------|--------------|------|
| Client ID: PBS | Batch ID: 22951 | F | RunNo: 31062 | | | |
| Prep Date: 12/23/2015 | Analysis Date: 12/24/2 | 2015 5 | SeqNo: 950330 | Units: %REC | | |
| Analyte | Result PQL SPH | K value SPK Ref Val | %REC LowLimit | HighLimit %R | RPD RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.1 | 1.000 | 107 80 | 120 | | |
| Sample ID LCS-22951 | SampType: LCS | Tes | tCode: EPA Method | 8021B: Volatiles | | |
| Client ID: LCSS | Batch ID: 22951 | F | RunNo: 31062 | | | |
| Prep Date: 12/23/2015 | Analysis Date: 12/24/2 | 2015 5 | SeqNo: 950331 | Units: %REC | | |
| Analyte | Result PQL SPH | K value SPK Ref Val | %REC LowLimit | HighLimit %R | RPD RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 1.2 | 1.000 | 119 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

1512A12 31-Dec-15

WO#:

| ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-3 | ntal Analysis Labora 4901 Hawkin Albuquerque, NM 8 975 FAX: 505-345-4 v.hallenvironmental. | s NE 7109 Sam 4107 | ple Log-In C | heck List |
|---|--|--------------------------|-----------------------------------|----------------------|
| Client Name: APEX AZTEC Work Order Num | ber: 1512A12 | | RcptNo: | 1 |
| Received by/date: CM 12/22/15 | | | | |
| Logged By: Anne Thorne 12/22/2015 7:45:00 | AM | ame In- | - | |
| Completed By: Anne Thorne 12/22/2015 | | 1. 11 | | |
| Reviewed By: My 12/22/ | 1 | Ume Arm | | |
| Chain of Custody | 5 | | | |
| 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 🗌 | | |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes 🗹 | No 🗌 | | |
| 6. Sample(s) in proper container(s)? | Yes 🗹 | No 🗌 | | |
| 7. Sufficient sample volume for indicated test(s)? | Yes 🗹 | No 🗆 | | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes 🗹 | No 🗌 | | |
| 9. Was preservative added to bottles? | Yes 🗋 | No 🗹 | NA 🗌 | |
| 10. VOA vials have zero headspace? | Yes | No 🗌 | No VOA Vials 🗹 | |
| 11. Were any sample containers received broken? | Yes | No 🗹 | # of preserved bottles checked | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes 🗹 | No 🗆 | for pH: | or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes 🗹 | No 🗆 | Adjusted? | |
| 14. Is it clear what analyses were requested? | Yes 🗹 | No 🗆 | | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes 🗹 | No 🗌 | Checked by: | |
| Special Handling (if applicable) | | | | |
| 16. Was client notified of all discrepancies with this order? | Yes 🗌 | No 🗆 | NA 🗹 | 7 |

Person Notified: Date 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 | | Good | Yes | | | |

Page 1 of 1

| | | | | | | | | | | | | | | CHAIN OF CUSTODY RECOR |
|------------------|-------------|------------------------------|-------|--------|------------------------------|--------------------------------------|---------|-----------------------|-----------------------|-------------------|-----------|--------------|--|--|
| | | | | | | | | 1 | | | | . / | ANALYSIS / | Lab use only Due Date: |
| | | | | | | Laboratory: | H | all | Env | 100 | ment | V | REQUESTED | |
| A | PEX | | | | | Laboratory: Address: Contact: | ALL | int | 110 | | N | 1 | 14 | |
| 0 | E Locatio | h | ter | Λ | In | | 11100 | gu | -q | p a | | - | 1 Sec | Temp. of coolers when received (C*): 1, 2 |
| Onic | e Locatio | n _ <u>// C -</u> | | , / | | Contact: | 41 | . / | - | | - | | 00 | |
| _ | | | | _ | | Phone: | hay | 9 - | 123 | 210. | ~ | | ·NO | |
| Deale | ct Mana | V | C | | | PO/SO #: _ | 773 | Calif | te | - | n) | | 37 | |
| Proje | er's Name | ger _A. | 2 | una | ~3 | Sampler's Sign | atura | 11 | 1 | | ca | | - voy/ | |
| | The II | Apon | ł; | | | Test a sign | 10 | the | and the second second | | | | A. | |
| Proj. I | 10. 5041 | , | Proje | ect Na | Laterd 1 | 1-3/ 12 | 25) | | No/Ty | ype of (| Containe | 5 | CH C | |
| Matrix | | Time | CoEn | Grab | Identifying Ma | arks of Sample(s) | | End | VOA | AG | 250 mi | PIO | | Lab Sample ID (Lab Use Only) |
| S | 12-18-15 | 12:10 | | | -53-6 | 6 | | | | | | | | 1512A12 -00 |
| 1 | 12-18-15 | | | | 54-6 | 6 | | | | | | 1 | | 762 |
| S | 0.2215 | 10:35 | | | 55-1 | 6 | | | | | | 1 | | -703 |
| - | 12-2-15 | | | | 56-6 | > | | | | | | 1 | | -604 |
| 5 | 12-24-15 | | | | 57-6 | 6 | | | | | 1 | | | 745 |
| | | | | | | | | | | | | | | |
| | | | - | | _ | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | - | - | | | | | | |
| _ | _ | | - | | | | | | | | | | | |
| Turn e | round time | Nor | mal | | 25% Rush | 3 50% Rush | 100% | Rush | | | | _ | | |
| | uished by | | | | | Time: Recei | ved by: | (Signa | ture) | | D | ate: | Time: NOTES: | |
| Belind | uished by | (Signature) | | | Date: | 38 A | ved by | (B) | ature) | | 0 | ate: 1 | 153C | ill to Enterprise |
| Relina | uished by | (Signature) | te | | Date: | Time: Receiv | 1 - | | | | 12 | 22/1 ate: | 5 07215 Time: | Tom long n-AFEI N20590 |
| \smile | | | | | | | 1 | M | 3 | | | | 1 | m-AFFI NODERO |
| Relind | uished by | (Signature) | | | Date: | Time: Receiv | ved by | (Signa | ature) | | | ate: | Time: // | 100390 |
| Matrix Contai | | V - Wastewa A - 40 ml via | | _ | W - Water A/G - Amber / C | S - Soil SD - So Dr Glass 1 Liter | lid | L - Liqui 250 ml - | d A Glass | - Air B wide m | ag | | arcoal tube SL - sludge Mastic or other | 0-01 |

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



July 13, 2015

Heather Woods APEX TITAN 606 S. Rio Grande Unit A Aztec, NM 87410 TEL: (505) 716-2787 FAX

RE: Lateral K-31 South

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

OrderNo.: 1507343

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/9/2015 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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1507343

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: SP-1 Project: Lateral K-31 South Collection Date: 7/8/2015 2:20:00 PM Lab ID: 1507343-001 Matrix: SOIL Received Date: 7/9/2015 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 | 7/10/2015 12:54:00 PM | 20177 |
|----------------------------------|------|----------|-------|---|-----------------------|-------|
| Surr: DNOP | 109 | 57.9-140 | %REC | 1 | 7/10/2015 12:54:00 PM | 20177 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 7/10/2015 10:57:07 AM | 20173 |
| Surr: BFB | 91.0 | 75.4-113 | %REC | 1 | 7/10/2015 10:57:07 AM | 20173 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 10:57:07 AM | 20173 |
| Toluene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 10:57:07 AM | 20173 |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 7/10/2015 10:57:07 AM | 20173 |
| Xylenes, Total | ND | 0.094 | mg/Kg | 1 | 7/10/2015 10:57:07 AM | 20173 |
| Surr: 4-Bromofluorobenzene | 97.9 | 80-120 | %REC | 1 | 7/10/2015 10:57:07 AM | 20173 |
| | | | | | | |

| ated Method Blank | Analyte detected in the associated Method Blank |
|----------------------|---|
| or analysis exceeded | Holding times for preparation or analysis exceeded |
| Limit Page 1 of | Not Detected at the Reporting Limit Page |
| 1 age 1 01 | Sample pH Not In Range |
| | Reporting Detection Limit |
| | |
| | Not Detected at the Reporting Sample pH Not In Range |

| Analytical | Report |
|------------|--------|
|------------|--------|

Lab Order 1507343

Date Reported: 7/13/2015

Analyst: NSB

Analyst: NSB

7/10/2015 11:25:49 AM 20173

Hall Environmental Analysis Laboratory, Inc.

EPA METHOD 8015D: GASOLINE RANGE

Gasoline Range Organics (GRO)

Surr: 4-Bromofluorobenzene

EPA METHOD 8021B: VOLATILES

Surr: BFB

Benzene

Toluene

Ethylbenzene

Xylenes, Total

CLIENT: APEX TITAN Client Sample ID: SP-2 **Project:** Lateral K-31 South Collection Date: 7/8/2015 2:25:00 PM Received Date: 7/9/2015 7:00:00 AM Lab ID: 1507343-002 Matrix: SOIL **RL** Qual Units Analyses Result **DF** Date Analyzed Batch EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: KJH **Diesel Range Organics (DRO)** ND 10 mg/Kg 1 7/10/2015 1:15:32 PM 20177 Surr: DNOP %REC 7/10/2015 1:15:32 PM 20177 106 57.9-140 1

4.9

75.4-113

0.049

0.049

0.049

0.097

80-120

mg/Kg

%REC

mg/Kg

mg/Kg

mg/Kg

mg/Kg

%REC

1

1

1

1

1

1

1

ND

90.6

ND

ND

ND

ND

95.9

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | od Blank |
|-------------|---|---|----|---|--------------|
| | E | Value above quantitation range | Н | Holding times for preparation or analysi | s exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit | Page 2 of 5 |
| | 0 | RSD is greater than RSDlimit | P | Sample pH Not In Range | 1 age 2 01 5 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | Spike Recovery outside accepted recovery limits | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507343

13-Jul-15

| Client: Project: | APEX 1 Lateral | TITAN K-31 South | | | | | | | | |
|------------------------------|-------------------|---------------------|-------------|-------------|-----------|-----------|--------------|-----------|------------|------|
| Sample ID | MB-20177 | SampType: | MBLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: | PBS | Batch ID: | 20177 | F | RunNo: 2 | 7406 | | | | |
| Prep Date: | 7/9/2015 | Analysis Date: | 7/10/2015 | S | eqNo: 8 | 22308 | Units: mg/K | (g | | |
| Analyte | | Result PC | L SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range O Surr: DNOP | rganics (DRO) | ND 11 | 10 10.00 | | 112 | 57.9 | 140 | | - | |
| Sample ID | LCS-20177 | SampType: | LCS | Tes | Code: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
| Client ID: | LCSS | Batch ID: | 20177 | R | unNo: 2 | 7406 | | | | |
| Prep Date: | 7/9/2015 | Analysis Date: | 7/10/2015 | S | eqNo: 8 | 22309 | Units: mg/K | (g | | |
| Analyte | | Result PC | L SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range O | rganics (DRO) | 53 | 10 50.00 | 0 | 106 | 57.4 | 139 | | | |
| Surr: DNOP | | 4.6 | 5.000 | | 92.2 | 57.9 | 140 | | | |
| Sample ID | LCS-20189 | SampType: | LCS | Test | Code: El | PA Method | 8015M/D: Die | esel Rang | e Organics | |
| Client ID: | LCSS | Batch ID: | 20189 | R | unNo: 2 | 7406 | | | | |
| Prep Date: | 7/9/2015 | Analysis Date: | 7/10/2015 | S | eqNo: 8 | 22697 | Units: %RE | С | | |
| Analyte | | Result PC | L SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | | 5.6 | 5.000 | | 113 | 57.9 | 140 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 3 of 5

Client: APEX TITAN

Project: Lateral K-31 South

| Sample ID MB-20173 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | e | |
|---|---|----------------------|----------------|---------------|-----------------------|---------------|----------------------------|-----------|---------------|------|
| Client ID: PBS | Batch | n ID: 20 | 173 | F | RunNo: 2 | 7422 | | | | |
| Prep Date: 7/9/2015 | rep Date: 7/9/2015 Analysis Date: 7/10/2015 | | | SeqNo: 822735 | | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) Surr: BFB | ND 890 | 5.0 | 1000 | | 89.3 | 75.4 | 113 | | | |
| max and an end of the second | | | | | | | | | | |
| Sample ID LCS-20173 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8015D: Gaso | line Rang | 0 | |
| Sample ID LCS-20173 Client ID: LCSS | | ype: LC D: 20 | | | tCode: El RunNo: 2 | | 8015D: Gaso | line Rang | e | |
| | | D: 20 | 173 | F | | 7422 | 8015D: Gaso Units: mg/K | | e | |
| Client ID: LCSS | Batch | D: 20 | 173 10/2015 | F | RunNo: 2 | 7422 | | | e RPDLimit | Qual |
| Client ID: LCSS Prep Date: 7/9/2015 | Batch Analysis D | n ID: 20 Date: 7/ | 173 10/2015 | F | RunNo: 2 SeqNo: 8 | 7422 22736 | Units: mg/K | g | | Qual |

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 4 of 5

12 1.1 15

WO#: 1507343

13-Jul-15

QC SUMMARY REPORT

| Hall Environme | ntal Ana | lysis L | aborat | tory, | Inc. |
|----------------|----------|---------|--------|-------|------|
|----------------|----------|---------|--------|-------|------|

Client: APEX TITAN

Project: Lateral K-31 South

| Sample ID MB-20173 | Samp | Гуре: МЕ | BLK | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
|----------------------------|------------|----------|-----------|-------------|----------|-----------|-------------|-------|----------|------|
| Client ID: PBS | Batc | h ID: 20 | 173 | F | RunNo: 2 | 7422 | | | | |
| Prep Date: 7/9/2015 | Analysis D | Date: 7/ | 10/2015 | S | SeqNo: 8 | 22778 | Units: mg/k | (g | | |
| 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 | | | | | | | | |
| Kylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.96 | | 1.000 | | 95.9 | 80 | 120 | | | |
| Sample ID LCS-20173 | Samp | Type: LC | s | Tes | tCode: E | PA Method | 8021B: Vola | tiles | | |
| Client ID: LCSS | Batc | h ID: 20 | 173 | F | RunNo: 2 | 7422 | | | | |
| Prep Date: 7/9/2015 | Analysis [| Date: 7/ | 10/2015 | S | SeqNo: 8 | 22779 | Units: mg/k | (g | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 76.6 | 128 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 97.6 | 75 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 101 | 79.5 | 126 | | | |
| Kylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 102 | 78.8 | 124 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |
| | | | | | | | | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits R
- S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Page 5 of 5

1507343

WO#: 13-Jul-15

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | | 4901 Hawki wrque, NM (X: 505-345 | ns NE 87109 Sam | ple Log-In Check I | _ist |
|---|----------------------|--|--------------------|---|----------|
| Client Name: APEX AZTEC | Nork Order Number: 1 | 507343 | | ReptNo: 1 | |
| Received by/date. | 100/15 | | ALAMAD | | |
| | | | | | |
| Completed By: Lindsay Mangin 7/9 Reviewed By: | 07/09/ | 15 | 0-5mgo | | |
| Chain of Custody | 1 1 | | | | |
| 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? | 1 | Courier | | | |
| Log In | | | | | |
| 4. Was an attempt made to cool the samples? | | Yes 🗹 | No 🗌 | NA | |
| 5. Were all samples received at a temperature of | >0° C to 6.0°C | res 🗹 | No | | |
| 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 pr | reserved? | Yes 🖌 | No | | |
| 9. Was preservative added to bottles? | , | Yes 🗌 | No 🖌 | NA | |
| 10. VOA vials have zero headspace? | , | Yes | No 🗌 | No VOA Vials | |
| 11. Were any sample containers received broken? | | Yes | No 🗹 | # of preserved | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | , | Yes 🖌 | No | for pH: <pre></pre> <pre></pre> <pre><td>s noted)</td></pre> | s noted) |
| 13. Are matrices correctly identified on Chain of Cus | tody? | Yes 🖌 | No 🗌 | Adjusted? | |
| 14. Is it clear what analyses were requested? | , | Yes 🖌 | No | | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | , | Yes 🗹 | No | Checked by: | |
| Special Handling (if applicable) | | | | | |
| 16. Was client notified of all discrepancies with this of | order? | res | No 🗌 | NA 🗹 | |
| Person Notified: | Date | | | | |
| By Whom: Regarding Client Instructions: | | eMail 🗌 | Phone 🗌 Fax | In Person | |

17. Additional remarks:

18. <u>Cooler Information</u> <u>Cooler No</u> Temp ^eC Condition Seal Intact Seal No Seal Date Signed By 1 3.3 Good Yes

Page 1 of 1

| | | | | | | | | | | | | | | | | | | | C | HAIN | OF (| CUSTODY RE | COF |
|------------------|------------------------|------------------------------|------|--------|--------------------------------------|---------------|---------|-----------|----------------|----------|----------|-------|-----|-----------------------------|-------------------|-------|-------|-----|------------|------|-------|--|-------|
| A | PEX | | | | | .aboratory: | | | | | | | | ANALYS | | // | | [] | | | [] | Lab use only Due Date: | |
| | e Locatio | | zhe. | - 1 | in | Address: | | 1100 | que | que | 114 | 101 | | | / | / | / / | / | / | / / | / | Temp. of coolers when received (C°) | 13,3 |
| JIIC | e Localio | 411 <u></u> | ene | C71 | | Contact: | | .An | dy | Fre | im | en | _ | | 10 | | // | // | // | // | | 1 2 3 4 Pageof | 1 5 |
| Proje | ct Mana | ger <u>H</u> . | No | cd | SF | PO/SO #: _ | | | | | | | _ | | 13 | : / | 11 | / | / | // | | | |
| Samp | ler's Name nee D | | | | Sa | ampler's Sign | | K | | | | | | À | Wall Pag Hat Sloo | / | | // | / / | // | | | |
| Proj. I | No. | | 1 | ect Na | | ofen | - | | No/Ty | pe of C | Contair | ners | | RUZI RICK | ILS I | // | // | / / | / | / | | | |
| Natrix | Date | Time | CoEo | Grab | Identifying Marks | of Sample(s) | Start | End | VOA | AG | 250 m | Glass | P/0 | 70 | 7/ | / | / / | / | 11 | / | Lab S | ample ID (Lab Use C | Dniy) |
| 5 | 718/15 | 1420 | | | SP-1 | | | | | | | | | XX | | | | T | | 1507 | 134 | 13-001 | |
| | 718/15 | | | | Sp-1 | | | | | _ | | | | XX | - | | | | | | | -002 | |
| | | | | | | | | | | | | | | | | | _ | | - | | | | |
| | | | | | | | | | | | | | | | - | | | | | | | | |
| | | | _ | | | | | | | | | | | | | | _ | | | | | | |
| | round time | D Nor | | | 25% Rush 🕅 5 | | 100% | | Ris | alt | 5 6 | | | 3/15 | | | | | | | | | |
| Re | uished by | (Signature) | | - | 18/15 191. | 5 Receiv | the | - W | 2 | - | 7 | Date | 115 | Time: 1915 Time: | | RES: | 11 to | En | the second | - | | | |
| Sinc | uished by uished by | (Signature) | | | Date: Tin 7/8/15 201 Date: 203 | Ane: Receiv | red by: | VS Northa | | - | 07 | | 15 | ZOIO Time: | | Alt | To | n 4 | ong | 150 | han | y Sandova | Q |
| telino | uished by | (Signature) | | | Date: Tin | ne: Receiv | red by: | (\$igna | iture) | k i | | Date | | Time: | | | | | | | | | |
| Matrix Contai | | W - Wastewa A - 40 ml via | | | W - Water S - A/G - Amber / Or G | Soil SD - So | lid V | - Liqui | d A Glass w | - Air Ba | ag | | | rcoal tube astic or othe | | ludge | 0- | Oil | | | | | |

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

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

October 07, 2015

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

OrderNo.: 1509C38

Dear Kyle Summers:

RE: Lateral K-31

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/25/2015 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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1509C38

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch |
|-----------------|--------------|---------|------|------|------------|-----------------------------|-------|
| Lab ID: | 1509C38-001 | Matrix: | SOIL | | Received | Date: 9/25/2015 7:30:00 AM | |
| Project: | Lateral K-31 | | | | Collection | Date: 9/18/2015 12:00:00 PM | |
| CLIENT: | APEX TITAN | | | C | lient Samp | le ID: S-1@7' | |

| EPA METHOD 8015M/D: DIESEL RANGE | ORGANIC | s | | | Analyst: | том |
|----------------------------------|---------|----------|-------|---|-----------------------|-------|
| Diesel Range Organics (DRO) | ND | 10 | mg/Kg | 1 | 9/30/2015 10:36:18 PM | 21554 |
| Surr: DNOP | 110 | 57.9-140 | %REC | 1 | 9/30/2015 10:36:18 PM | 21554 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 9/30/2015 12:04:24 PM | 21562 |
| Surr: BFB | 87.1 | 75.4-113 | %REC | 1 | 9/30/2015 12:04:24 PM | 21562 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 12:04:24 PM | 21562 |
| Toluene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 12:04:24 PM | 21562 |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 12:04:24 PM | 21562 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 9/30/2015 12:04:24 PM | 21562 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | %REC | 1 | 9/30/2015 12:04:24 PM | 21562 |

tion.

| Refer to the | QC Summary | report and | sample login | checklist for | · flagged QC | data and | preservation | informati |
|--------------|------------|------------|--------------|---------------|--------------|----------|--------------|-----------|
| | | | | | | | | |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
|-------------|----|--|
| | D | Sample Diluted Due to Matrix |
| | н | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |

- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 8 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**

Analytical Report Lab Order 1509C38

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/7/2015

| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch |
|----------|--------------|---------|------|------|------------|-----------------------------|-------|
| Lab ID: | 1509C38-002 | Matrix: | SOIL | | Received | Date: 9/25/2015 7:30:00 AM | l |
| Project: | Lateral K-31 | | | | Collection | Date: 9/18/2015 12:05:00 PN | Л |
| CLIENT: | APEX TITAN | | | C | lient Samp | le ID: S-2@7' | |

| EPA METHOD 8015M/D: DIESEL RANGE C | RGANIC | S | | | Analyst: | TOM |
|------------------------------------|--------|----------|-------|---|-----------------------|-------|
| Diesel Range Organics (DRO) | ND | 9.6 | mg/Kg | 1 | 9/30/2015 10:58:01 PM | 21554 |
| Surr: DNOP | 107 | 57.9-140 | %REC | 1 | 9/30/2015 10:58:01 PM | 21554 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | mg/Kg | 1 | 9/30/2015 1:13:55 PM | 21562 |
| Surr: BFB | 86.7 | 75.4-113 | %REC | 1 | 9/30/2015 1:13:55 PM | 21562 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 1:13:55 PM | 21562 |
| Toluene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 1:13:55 PM | 21562 |
| Ethylbenzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 1:13:55 PM | 21562 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 9/30/2015 1:13:55 PM | 21562 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | %REC | 1 | 9/30/2015 1:13:55 PM | 21562 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|--------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 2 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 2 01 0 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

| A | na | ly | tical | Report | |
|---|------|----|--------|--------|--|
| | 1221 | | 15 105 | | |

1

Lab Order 1509C38

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: S-3@7' Project: Lateral K-31 Collection Date: 9/18/2015 12:10:00 PM Lab ID: 1509C38-003 Matrix: SOIL Received Date: 9/25/2015 7:30:00 AM Analyses Result RL Qual Units DF Date Analyzed Batch

| | | - | | | | |
|------------------------------------|--------|----------|-------|---|-----------------------|-------|
| EPA METHOD 8015M/D: DIESEL RANGE O | RGANIC | S | | | Analyst: | том |
| Diesel Range Organics (DRO) | ND | 9.9 | mg/Kg | 1 | 9/30/2015 11:19:44 PM | 21554 |
| Surr: DNOP | 108 | 57.9-140 | %REC | 1 | 9/30/2015 11:19:44 PM | 21554 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: | NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | mg/Kg | 1 | 9/30/2015 2:23:38 PM | 21562 |
| Surr: BFB | 86.7 | 75.4-113 | %REC | 1 | 9/30/2015 2:23:38 PM | 21562 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst: | NSB |
| Benzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 2:23:38 PM | 21562 |
| Toluene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 2:23:38 PM | 21562 |
| Ethylbenzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 2:23:38 PM | 21562 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 9/30/2015 2:23:38 PM | 21562 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | %REC | 1 | 9/30/2015 2:23:38 PM | 21562 |
| | | | | | | |

| Qualifiers: | | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|-------------|
| Quantita | D | Sample Diluted Due to Matrix | E | Value above quantitation range | Dialik |
| | н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 3 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | rage 5 01 6 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |

Analytical Report

Lab Order 1509C38

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.

| | HOD 8015M/D: DIESEL | DANOS ODOANIO | | | | | Analyst: | TOM |
|----------|---------------------|---------------|------|------|------------|----------------------|----------|-------|
| Analyses | | Result | RL | Qual | Units | DF Date Anal | yzed 1 | Batcl |
| Lab ID: | 1509C38-004 | Matrix: | SOIL | | Received | Date: 9/25/2015 7:30 | 0:00 AM | |
| Project: | Lateral K-31 | | | | Collection | Date: 9/18/2015 12: | 15:00 PM | |
| CLIENT: | APEX TITAN | | | C | lient Samp | le ID: S-4@6' | | |

| Diesel Range Organics (DRO) | ND | 9.8 | mg/Kg | 1 | 9/30/2015 11:41:34 PM | 21554 |
|---------------------------------|------|----------|-------|---|-----------------------|-------|
| Surr: DNOP | 107 | 57.9-140 | %REC | 1 | 9/30/2015 11:41:34 PM | 21554 |
| EPA METHOD 8015D: GASOLINE RANG | E | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | mg/Kg | 1 | 9/30/2015 2:46:51 PM | 21562 |
| Surr: BFB | 85.8 | 75.4-113 | %REC | 1 | 9/30/2015 2:46:51 PM | 21562 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 2:46:51 PM | 21562 |
| Toluene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 2:46:51 PM | 21562 |
| Ethylbenzene | ND | 0.047 | mg/Kg | 1 | 9/30/2015 2:46:51 PM | 21562 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 9/30/2015 2:46:51 PM | 21562 |
| Surr: 4-Bromofluorobenzene | 101 | 80-120 | %REC | 1 | 9/30/2015 2:46:51 PM | 21562 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|--------------|
| | D | Sample Diluted Due to Matrix | Е | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 4 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 4 01 0 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |
| | | | | | |

Analytical Report Lab Order 1509C38

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.

| Analyses | | Result | RL | Qual | Units | DF Date Analyzed | Batch |
|-----------------|--------------|---------|------|------|------------|-----------------------------|-------|
| Lab ID: | 1509C38-005 | Matrix: | SOIL | | Received | Date: 9/25/2015 7:30:00 AM | |
| Project: | Lateral K-31 | | | | Collection | Date: 9/18/2015 12:20:00 PM | |
| CLIENT: | APEX TITAN | | | C | lient Samp | le ID: S-5@6' | |

| EPA METHOD 8015M/D: DIESEL RAN | GE ORGANIC | s | | | Analyst | том |
|--------------------------------|------------|----------|-------|---|-----------------------|-------|
| Diesel Range Organics (DRO) | ND | 9.9 | mg/Kg | 1 | 10/1/2015 12:03:16 AM | 21554 |
| Surr: DNOP | 110 | 57.9-140 | %REC | 1 | 10/1/2015 12:03:16 AM | 21554 |
| EPA METHOD 8015D: GASOLINE RAM | IGE | | | | Analyst | NSB |
| Gasoline Range Organics (GRO) | ND | 4.6 | mg/Kg | 1 | 9/30/2015 3:10:05 PM | 21562 |
| Surr: BFB | 86.5 | 75.4-113 | %REC | 1 | 9/30/2015 3:10:05 PM | 21562 |
| EPA METHOD 8021B: VOLATILES | | | | | Analyst | NSB |
| Benzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 3:10:05 PM | 21562 |
| Toluene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 3:10:05 PM | 21562 |
| Ethylbenzene | ND | 0.046 | mg/Kg | 1 | 9/30/2015 3:10:05 PM | 21562 |
| Xylenes, Total | ND | 0.093 | mg/Kg | 1 | 9/30/2015 3:10:05 PM | 21562 |
| Surr: 4-Bromofluorobenzene | 103 | 80-120 | %REC | 1 | 9/30/2015 3:10:05 PM | 21562 |

| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | В | Analyte detected in the associated Method | Blank |
|-------------|----|---|----|--|--------------|
| | D | Sample Diluted Due to Matrix | E | Value above quantitation range | |
| | Н | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | Page 5 of 8 |
| | ND | Not Detected at the Reporting Limit | Р | Sample pH Not In Range | 1 age 5 01 8 |
| | R | RPD outside accepted recovery limits | RL | Reporting Detection Limit | |
| | S | % Recovery outside of range due to dilution or matrix | | | |
| | | | | | |

Client: Project: Lateral K-31

APEX TITAN

| Sample ID MB-21554 | SampTy | pe: ME | BLK | Tes | tCode: El | PA Method | 8015M/D: Di | esel Rang | e Organics | |
|---|----------------------|---------|-----------|-------------|----------------------|-----------|---------------------------------|------------|------------|------|
| Client ID: PBS | Batch | ID: 21 | 554 | F | RunNo: 2 | 9205 | | | | |
| Prep Date: 9/29/2015 | Analysis Da | ate: 9/ | 30/2015 | 5 | SeqNo: 8 | 87145 | Units: mg/k | g | | |
| 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 | | 95.8 | 57.9 | 140 | | | |
| Sample ID LCS-21554 | SampTy | /pe: LC | s | Tes | tCode: El | PA Method | 8015M/D: Di | esel Range | e Organics | |
| | | | | | | | | | | |
| Client ID: LCSS | Batch | ID: 21 | 554 | F | RunNo: 2 | 9205 | | | | |
| Client ID: LCSS Prep Date: 9/29/2015 | Batch Analysis Da | | | | 8unNo: 2 8eqNo: 8 | | Units: mg/M | g | | |
| Prep Date: 9/29/2015 | | | 30/2015 | | | | Units: mg/k HighLimit | (g %RPD | RPDLimit | Qual |
| | Analysis Da | ate: 9/ | 30/2015 | s | SeqNo: 8 | 87161 | • | | RPDLimit | Qual |

Qualifiers:

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

Page 6 of 8

1509C38 07-Oct-15

WO#:

Client: Project:

APEX TITAN Lateral K-31

| Sample ID MB-21562 | SampTyp | De: MBLK | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | | | |
|---|--|--|---|--|--|--------------------------------|---------------|------|--|--|--|--|
| Client ID: PBS | Batch I | D: 21562 | R | RunNo: 29220 | | | | | | | | |
| Prep Date: 9/29/2015 | Analysis Dat | te: 9/30/2015 | S | GeqNo: 887525 | Units: mg/l | Kg | | | | | | |
| Analyte | Result | PQL SPK value | SPK Ref Val | %REC LowLimi | t HighLimit | %RPD | RPDLimit | Qual | | | | |
| Gasoline Range Organics (GR | 0) ND | 5.0 | | | | | | | | | | |
| Surr: BFB | 850 | 1000 | | 85.5 75.4 | 4 113 | | | | | | | |
| Sample ID LCS-21562 | SampTy | pe: LCS | Test | tCode: EPA Metho | d 8015D: Gas | oline Rang | e | | | | | |
| Client ID: LCSS | Batch I | D: 21562 | R | RunNo: 29220 | | | | | | | | |
| Prep Date: 9/29/2015 | Analysis Dat | te: 9/30/2015 | S | SeqNo: 887526 | Units: mg/l | Kg | | | | | | |
| Analyte | Result | PQL SPK value | SPK Ref Val | %REC LowLimi | t HighLimit | %RPD | RPDLimit | Qual | | | | |
| Gasoline Range Organics (GR | 0) 25 | 5.0 25.00 | 0 | 99.1 79.0 | 6 1 <mark>2</mark> 2 | | | | | | | |
| Surr: BFB | 920 | 1000 | | 92.4 75.4 | 4 113 | | | | | | | |
| | | | | | | | | | | | | |
| Sample ID 1509C38-00 | 1AMS SampTyp | pe: MS | Test | Code: EPA Metho | d 8015D: Gas | oline Rang | е | | | | | |
| Sample ID 1509C38-00 Client ID: S-1@7' | | pe: MS D: 21562 | | tCode: EPA Metho RunNo: 29220 | d 8015D: Gas | oline Rang | e | | | | | |
| Client ID: S-1@7' | Batch I | | R | | d 8015D: Gas | | e | | | | | |
| | Batch I Analysis Dat | D: 21562 te: 9/30/2015 | R | RunNo: 29220 SeqNo: 887529 | Units: mg/ I | | e RPDLimit | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte | Batch I Analysis Dal Result | D: 21562 te: 9/30/2015 | R S SPK Ref Val | RunNo: 29220 SeqNo: 887529 | Units: mg/ l t HighLimit | Kg | | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte | Batch I Analysis Dal Result | D: 21562 te: 9/30/2015 PQL SPK value | R S SPK Ref Val 0 | RunNo: 29220 SeqNo: 887529 %REC LowLimi | Units: mg/ I t HighLimit 5 151 | Kg | | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte Gasoline Range Organics (GR | Batch I Analysis Dat Result 0) 28 890 | D: 21562 te: 9/30/2015 PQL SPK value 4.7 23.26 930.2 | R S SPK Ref Val 0 | RunNo: 29220 SeqNo: 887529 <u>%REC LowLimi</u> 119 62.5 | Units: mg/ I t HighLimit 5 151 4 113 | Kg %RPD | RPDLimit | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte Basoline Range Organics (GRe Surr: BFB | Batch I Analysis Dat Result 0) 28 890 1AMSD SampTy | D: 21562 te: 9/30/2015 PQL SPK value 4.7 23.26 930.2 | R SPK Ref Val 0 Test | RunNo: 29220 SeqNo: 887529 <u>%REC LowLimi</u> 119 62.4 95.4 75.4 | Units: mg/ I t HighLimit 5 151 4 113 | Kg %RPD | RPDLimit | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte Basoline Range Organics (GR Surr: BFB Sample ID 1509C38-00 Client ID: S-1@7' | Batch I Analysis Dat Result 0) 28 890 1AMSD SampTy Batch I | D: 21562 te: 9/30/2015 PQL SPK value 4.7 23.26 930.2 pe: MSD | R SPK Ref Val 0 Test R | RunNo: 29220 SeqNo: 887529 <u>%REC LowLimi</u> 119 62. 95.4 75. tCode: EPA Metho | Units: mg/ I t HighLimit 5 151 4 113 | Kg %RPD oline Rang | RPDLimit | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte Basoline Range Organics (GR Surr: BFB Sample ID 1509C38-00 | Batch I Analysis Dat Result 0) 28 890 1AMSD SampTyp Batch I Analysis Dat | D: 21562 te: 9/30/2015 PQL SPK value 4.7 23.26 930.2 pe: MSD D: 21562 te: 9/30/2015 | R SPK Ref Val 0 Test R S | RunNo: 29220 SeqNo: 887529 <u>%REC LowLimi</u> 119 62. 95.4 75. tCode: EPA Metho RunNo: 29220 | Units: mg/l t HighLimit 5 151 4 113 d 8015D: Gas Units: mg/l | Kg %RPD oline Rang | RPDLimit | Qual | | | | |
| Client ID: S-1@7' Prep Date: 9/29/2015 Analyte Basoline Range Organics (GR Surr: BFB Sample ID 1509C38-00 Client ID: S-1@7' Prep Date: 9/29/2015 | Batch I Analysis Dat Result 0) 28 890 1AMSD SampTy Batch I Analysis Dat Result | D: 21562 te: 9/30/2015 PQL SPK value 4.7 23.26 930.2 pe: MSD D: 21562 te: 9/30/2015 | R SPK Ref Val 0 Test R SPK Ref Val | RunNo: 29220 SeqNo: 887529 %REC LowLimit 119 62.3 95.4 75.4 tCode: EPA Methor RunNo: 29220 SeqNo: 887530 | Units: mg/l t HighLimit 5 151 4 113 d 8015D: Gas Units: mg/l t HighLimit | Kg %RPD oline Rang Kg | RPDLimit e | | | | | |

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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iits

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Client: Project: APEX TITAN Lateral K-31

| Project: | Lateral K | | | | | | | | | | |
|---|--|--|---|---|---|---|--|--|---|----------------------|------|
| Sample ID | MB-21562 | SampT | ype: ME | BLK | Tes | tCode: El | PA Method | 8021B: Vola | tiles | | |
| Client ID: | PBS | Batch | D: 21 | 562 | F | | | | | | |
| Prep Date: | 9/29/2015 | Analysis D | ate: 9/ | 30/2015 | s | SeqNo: 8 | 87599 | Units: mg/k | ٢g | | |
| 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-Brom | ofluorobenzene | 1.0 | | 1.000 | | 102 | 80 | 120 | | | |
| Sample ID | LCS-21562 | SampT | ype: LC | S | Tes | tCode: El | PA Method | 8021B: Vola | tiles | - | |
| Client ID: | Client ID: LCSS Batch ID: 21562 | | | | F | RunNo: 2 | 9220 | | | | |
| Prep Date: | 9/29/2015 | Analysis D | ate: 9/ | 30/2015 | 5 | SeqNo: 8 | 87600 | Units: mg/k | (g | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | | 1.0 | 0.050 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Toluene | | 0.98 | 0.050 | 1.000 | 0 | 97.8 | 80 | 120 | | | |
| | | 1.0 | 0.050 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Ethylbenzene | | | | | 0 | 101 | 80 | 120 | | | |
| and a constant of the second | | 3.0 | 0.10 | 3.000 | 0 | 101 | 00 | 120 | | | |
| Ethylbenzene Xylenes, Total Surr: 4-Brome | ofluorobenzene | 3.0 1.1 | 0.10 | 3.000 | 0 | 110 | 80 | 120 | | | |
| Xylenes, Total Surr: 4-Brom | ofluorobenzene 1509C38-002AMS | 1.1 | 0.10 ype: MS | 1.000 | | 110 | 80 | | tiles | | _ |
| Xylenes, Total Surr: 4-Brome Sample ID | | 1.1 SampT | | 1.000 | Tes | 110 | 80 PA Method | 120 | tiles | | |
| Xylenes, Total Surr: 4-Brome Sample ID | 1509C38-002AMS | 1.1 SampT | ype: MS | 1.000 562 | Tes | 110 tCode: Ef | 80 PA Method 9220 | 120 | | | |
| Xylenes, Total Surr: 4-Brome Sample ID Client ID: | 1509C38-002AMS S-2@7' | 1.1 SampT Batch | ype: MS | 1.000 562 30/2015 | Tes | 110 tCode: El RunNo: 2 | 80 PA Method 9220 | 120 8021B: Vola | | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte | 1509C38-002AMS S-2@7' | 1.1 SampT Batch Analysis D | ype: MS 1D: 21! ate: 9/ | 1.000 562 30/2015 | Tes F | 110 tCode: Ef RunNo: 29 SeqNo: 8 | 80 PA Method 9220 87604 | 120 8021B: Vola Units: mg/M | (g | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene | 1509C38-002AMS S-2@7' | 1.1 SampT Batch Analysis D Result | ype: MS 1D: 21! ate: 9/ PQL | 1.000 562 30/2015 SPK value | Tes F S SPK Ref Val | 110 tCode: El RunNo: 2 SeqNo: 8 %REC | 80 PA Method 9220 87604 LowLimit | 120 8021B: Volar Units: mg/K HighLimit | (g | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene | 1509C38-002AMS S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 | ype: MS 1D: 21 ate: 9/ PQL 0.046 | 1.000 562 30/2015 SPK value 0.9285 | Tes F S SPK Ref Val 0 | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 | 80 PA Method 9220 87604 LowLimit 69.6 | 120 8021B: Volar Units: mg/k HighLimit 136 | (g | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene | 1509C38-002AMS S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 | ype: MS 1D: 21! ate: 9/ PQL 0.046 0.046 | 1.000 562 30/2015 SPK value 0.9285 0.9285 | Tes F SPK Ref Val 0 0 | 110 tCode: Ef RunNo: 29 SeqNo: 8 %REC 96.6 98.1 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 | 120 8021B: Vola Units: mg/M HighLimit 136 134 | (g | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total | 1509C38-002AMS S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 | ype: MS 1D: 21 pate: 9/ PQL 0.046 0.046 0.046 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 | Tes F SPK Ref Val 0 0 0 | 110 tCode: Ef RunNo: 29 SeqNo: 81 %REC 96.6 98.1 103 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 | 120 8021B: Volat Units: mg/M HighLimit 136 134 137 | (g | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brome Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brome | 1509C38-002AMS S-2@7' 9/29/2015 | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 | ype: MS 1D: 21 pate: 9/ PQL 0.046 0.046 0.046 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 | Tes F SPK Ref Val 0 0 0 0 | 110 tCode: Ef RunNo: 29 SeqNo: 8 %REC 96.6 98.1 103 103 103 110 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 | %g %RPD | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brome Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brome Sample ID | 1509C38-002AMS S-2@7' 9/29/2015 | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT | ype: MS ID: 219 ate: 97 PQL 0.046 0.046 0.046 0.093 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 5D | Tes F SPK Ref Val 0 0 0 0 0 0 Tes | 110 tCode: Ef RunNo: 29 SeqNo: 8 %REC 96.6 98.1 103 103 103 110 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 120 | %g %RPD | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT | ype: MS D: 214 ate: 9/2 PQL 0.046 0.046 0.046 0.046 0.093 ype: MS D: 214 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 2.786 0.9285 | Tes SPK Ref Val 0 0 0 0 0 0 Tes R | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 103 110 tCode: Ef | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 120 | (g %RPD | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT Batch | ype: MS D: 214 ate: 9/2 PQL 0.046 0.046 0.046 0.046 0.093 ype: MS D: 214 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 562 30/2015 | Tes SPK Ref Val 0 0 0 0 0 0 Tes R | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 103 110 tCode: Ef RunNo: 2 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 | 120 8021B: Volat Units: mg/H HighLimit 136 134 137 133 120 8021B: Volat | (g %RPD | RPDLimit | Qual |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT Batch Analysis D | ype: MS a ID: 219 ate: 9/ PQL 0.046 0.046 0.046 0.093 ype: MS a ID: 219 ate: 9/ | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 562 30/2015 | Tes SPK Ref Val 0 0 0 0 0 0 Tes R S | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 110 tCode: Ef RunNo: 2 SeqNo: 8 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 87605 | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 120 8021B: Volat Units: mg/k | Kg %RPD tiles | | |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT Batch Analysis D Result | ype: MS a ID: 219 ate: 9/ PQL 0.046 0.046 0.046 0.046 0.093 ype: MS a ID: 219 ate: 9/ PQL | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 2.786 0.9285 562 30/2015 SPK value | Tes SPK Ref Val 0 0 0 0 Tes SPK Ref Val | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 87605 LowLimit | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 120 8021B: Volat Units: mg/k HighLimit | Kg %RPD tiles Kg %RPD | RPDLimit | |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT Batch Analysis D Result 0.99 | ype: MS D: 219 ate: 9/2 PQL 0.046 0.046 0.046 0.093 ype: MS D: 219 ate: 9/2 PQL 0.046 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 562 30/2015 SPK value 0.9294 | Tes SPK Ref Val 0 0 0 0 0 Tes SPK Ref Val 0 | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 106 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 87605 LowLimit 69.6 | 120 8021B: Volat Units: mg/k HighLimit 136 134 137 133 120 8021B: Volat Units: mg/k HighLimit 136 | Kg %RPD tiles Kg %RPD 9.80 | RPDLimit 20 | |
| Xylenes, Total Surr: 4-Brom Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene | 1509C38-002AMS S-2@7' 9/29/2015 ofluorobenzene 1509C38-002AMSE S-2@7' | 1.1 SampT Batch Analysis D Result 0.90 0.91 0.95 2.9 1.0 SampT Batch Analysis D Result 0.99 1.0 | ype: MS D: 214 ate: 9/2 PQL 0.046 0.046 0.093 ype: MS 1D: 214 0.046 0.093 PQL 0.046 0.046 0.046 | 1.000 562 30/2015 SPK value 0.9285 0.9285 0.9285 2.786 0.9285 30/2015 SPK value 0.9294 0.9294 | Tes SPK Ref Val 0 0 0 0 0 Tes SPK Ref Val 0 0 | 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 96.6 98.1 103 103 103 110 tCode: Ef RunNo: 2 SeqNo: 8 %REC 106 108 | 80 PA Method 9220 87604 LowLimit 69.6 76.2 75.8 78.9 80 PA Method 9220 87605 LowLimit 69.6 76.2 | 120 8021B: Volat Units: mg/K HighLimit 136 134 137 133 120 8021B: Volat Units: mg/K HighLimit 136 134 | (g %RPD tiles (g %RPD 9.80 9.23 | RPDLimit 20 20 | |

Qualifiers:

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

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WO#:

| HALL ENVIRONMENTAL ANALYSIS LABORATORY | | l Hawkins NE we, NM 87109 505-345-4107 | Sam | ple Log-In Check List |
|--|-------------------------|--|---------|---|
| Client Name: APEX AZTEC W | ork Order Number: 150 | 9C38 | | RcptNo: 1 |
| Received by/date: LM 09 | 25 15 | | | |
| Logged By: Celina Sessa 9/25/ | 2015 7:30:00 AM | 6 | clim & | from |
| Completed By: Celina Sessa 9/25/ | 2015 12:55:46 PM | / | chin (| - |
| Reviewed By: 09 | 15 | | | |
| Chain of Custody | | | | |
| 1. Custody seals intact on sample bottles? | Yes | | No 🗌 | Not Present |
| 2. Is Chain of Custody complete? | Yes | 1 | No 🗌 | Not Present |
| 3. How was the sample delivered? | Cou | rier | | |
| Log In | | | | |
| 4. Was an attempt made to cool the samples? | Ye | | No | NA |
| 5. Were all samples received at a temperature of >0 | ° C to 6.0°C Yes | | No | NA 🗌 |
| 6. Sample(s) in proper container(s)? | Ye | | No 🗌 | |
| 7. Sufficient sample volume for indicated test(s)? | Yes | 1 | No | |
| 8. Are samples (except VOA and ONG) properly pre- | erved? Yes | × | No | |
| 9. Was preservative added to bottles? | Yes | C | No 🖌 | NA |
| 0.VOA vials have zero headspace? | Yes | | No 📃 | No VOA Vials 🗹 |
| 1. Were any sample containers received broken? | Yes | | No 🗸 | # of preserved |
| 2. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes | | No 🗌 | bottles checked for pH: (<2 or >12 unless noted |
| 3. Are matrices correctly identified on Chain of Custo | iy? Yes | | No 🗌 | Adjusted? |
| 4. 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 | Checked by: |
| pecial Handling (if applicable) | | | | |
| 6. Was client not/fied of all discrepancies with this or | er? Yes | | No 🗍 | NA 🗹 |
| Person Notified: | Date | | | |
| By Whom: | Via: eM | ail 🗌 Phon | e 🗌 Fax | in Person |
| Regarding. | | | | |
| Client Instructions. | I I maintained I attack | | | |
| | cl Seel No Scal D | ato Sig | ned By | |
| 1 2.8 Good Yes | | | | |

| | | | | | | | | | | | | | | | | CHAIN OF CUSTODY RECORD |
|--|-------------|-------|--------|--|--|----------------|--|------------------|-----------|-----------|------------------------------------|-----|-----|-------------------------------------|-----|---|
| APEX Office Location Project Manae Sampler's Name Raviel | ger K | Su | mm | ws | Laboratory Address: Contact: Phone: PO/SO #: Sampler's Sigr | AU | bugue | rqu | ep N | M | rta | | Re | ALYSIS QUESTED Hall STOR | | Lab use only Due Date: Temp. of coolers 3, %-1,0 when received (C°):= 2,% 1 2 3 4 5 Pageof |
| roj. No. | D (CC. | Proje | ect Na | | | | | No/T | ype of C | Contai | ners | | 1 | BULZ | /// | |
| atrix Date | Time | CoEn | Grab | Identifying Marl | ks of Sample(s) | Start Depth | End | VOA | AG 1LL | 250 ml | Glass Jar | P/O | | 99/// | /// | Lab Sample ID (Lab Use Only) |
| 5 9/18/15 | | | | S-1 | 07 | | | | | | 1 | | x | X | | 1509038-001 |
| 5 9/18/15 | 1205 | | | 52 | 207) | | | | | | 1 | | X | X | | -002 |
| 5 1 | 1210 | | | 5- | 3 071 | | | | | | 1 | | X | X | | -203 |
| S | 1215 | | | 5- | 4 86' | | | | | | 1 | | X | X | | -004 |
| s 🔻 | 1220 | | | 5- | 500 | - | | | | | 1 | | X | X | _ | -005 |
| | | | | | | | | | | | | | | | | |
| | | | | | - | | | | | | | | | | | |
| | | - | | | | | | - | | - | - | | - | | ++ | |
| urn around time | Nor | mai | 02 | 5% Rush | 50% Rush | 100% | Rush | | | | + | - | | | | |
| elinquished by | (Signature) | | 19 19 | Date: T Valus 74 Date: T ZV/IS 20 | ime: Recei | ved by | : (Signa : (Signa : (Signa : (Signa | ature) ature) | - | | Date 9/2 Date 9/2 Date | | 7 1 | me: NOTES: me: K30 ime: | | n AFEEN22228 |

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