

3R-1012

**Release Report/ General
Correspondence**

Enterprise RA

Date: Jan-Mar 2016

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

State of New Mexico
Energy Minerals and Natural
Resources

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

OIL CONS. DIV DIST. 3

JAN 11 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

☐ Initial Report ☒ Final Report

Name of Company: Enterprise Field Services LLC	Contact: Thomas Long
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599-2286
Facility Name: Lateral 2C-56	Facility Type: Natural Gas Gathering Pipeline

Surface Owner: Jicarilla Apache Tribe	Mineral Owner: Jicarilla Apache Tribe	API No.
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LOCATION OF RELEASE

Unit Letter B	Section 28	Township 26N	Range 5W	Feet from the 985	North South Line	Feet from the 1782	East West Line	County Rio Arriba
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Latitude 36.46294 Longitude -107.36083

NATURE OF RELEASE

Type of Release: Natural Gas and Natural Gas Liquids	Volume of Release 255 MCF Gas; 5-10 BBLs Liquids	Volume Recovered: None
Source of Release: Suspected Internal Corrosion	Date and Hour of Occurrence: 9/21/15 @ 12:15 p.m.	Date and Hour of Discovery: 9/21/15 @ 1:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Hobson Sandoval - JAEPO; Cory Smith - NMOCD	
By Whom? Thomas Long	Date and Time 9/21/15 3:01 p.m.	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse Estimated 2-3 Barrels of Fluids	

If a Watercourse was Impacted, Describe Fully.* An estimated 2-3 barrels of fluids from the release was observed on the ground surface and flowed into a small ephemeral wash.

Describe Cause of Problem and Remedial Action: On September 21, 2015, Enterprise technicians discovered a gas leak on the Lateral 2C-56 pipeline. An estimated 2-3 barrels of fluids from the release was observed on the ground surface and flowed into a small ephemeral wash. The pipeline was isolated, blown down, locked out and tagged out for safety and environmental concerns. On September 22, 2015, Enterprise excavated the impacted soil from the ephemeral wash in anticipation of a rain event. Repairs and additional remediation were completed on October 14, 2015.

Describe Area Affected and Cleanup Action: The contaminant mass was removed by mechanical excavation. The final excavation measured approximately 98 feet long by 38 feet wide ranging from 8 to 16 feet deep. Approximately 1,540 cubic yards of hydrocarbon impacted soil were excavated and transported to a New Mexico Oil Conservation approved land farm facility. A third party corrective action 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.

Signature: <i>Jon Fields</i>	OIL CONSERVATION DIVISION	
Printed Name: Jon E. Fields	Approved by Environmental Specialist: <i>Vanesa</i>	
Title: Director, Environmental	Approval Date: <u>1/13/2016</u>	Expiration Date:
E-mail Address: jefields@eprod.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>1-6-2016</u> Phone: (713)381-6684		

* Attach Additional Sheets If Necessary

NUF1601335253

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CORRECTIVE ACTION REPORT

Lateral 2C-56 Pipeline Release

NE 1/4, S28 T26N R5W
Rio Arriba County, New Mexico

Apex Project No. 7250415023

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 2C-56 pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 28 in Township 26 North and Range 5 West in rural Rio Arriba County, New Mexico (36.46294N, 107.36083W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land owned by the Jicarilla Apache Nation. The Site is located adjacent to a dirt road and is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

A natural gas leak on the Lateral 2C-56 pipeline was reported to Enterprise on September 21, 2015 by a third party. Enterprise immediately isolated, blew down, and locked out the line. On September 22, 2015, Enterprise preemptively excavated the impacted surficial soils from the flow path, in anticipation of a forecasted rain event. Beginning on September 30, 2015, Enterprise initiated excavation activities to facilitate the repair of the subsurface leak, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 10 feet of pipe. Enterprise also re-coated approximately 30 feet of the existing pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was characterized by surface fluids, soil discoloration, and distressed vegetation in the vicinity of the release.

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

1.2 Project Objective

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

2.0 SITE RANKING

The Site is under the jurisdiction of the Jicarilla Apache Nation Environmental Protection Office (JANEPO). In the absence of published JANEPO regulatory guidance, Apex TITAN Inc. (Apex) references the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of

the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

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

Based on Apex's evaluation of the scoring criteria, the Site would earn a maximum Total Ranking Score of "40". This ranking is based on the following:

- No nearby water wells were identified on the OSE water rights website, however based on the proximity to both an ephemeral wash and to Tapicito creek, groundwater is estimated to be less than 50 feet below grade surface (bgs), resulting in a ranking of "20" for depth to groundwater.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking of "0".
- The release point is located immediately adjacent to an ephemeral wash that is identified as a "blue line" on the United States Geological Society topographic map. This information supports a distance to surface water ranking of "20".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

A natural gas leak on the Lateral 2C-56 pipeline was reported to Enterprise on September 21, 2015 by a third party. Enterprise immediately isolated, blew down, and locked out the line. On September 22, 2015, Enterprise, utilizing O.F.T. Construction (OFT) for heavy equipment and labor, preemptively excavated the impacted surficial soils from the flow path, in anticipation of a forecasted rain event.

Beginning on September 30, 2015, Enterprise initiated excavation activities at the Site to repair the subsurface leak, and remediate potential hydrocarbon impact. The release was identified and subsequently repaired by replacing approximately 10 feet of pipe. Enterprise also re-coated approximately 30 feet of the existing pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was identified by surface fluids, soil discoloration, and distressed vegetation in the vicinity of the release. Foutz & Bursum Construction Co. Inc., provided heavy equipment and labor support during pipeline excavation and repair activities. Kyle Summers and Ranee Deechilly, Apex environmental professionals, provided environmental support during the removal of hydrocarbon-affected soils, and performed confirmation sampling.

On October 1 and 2, 2015, confirmation soil samples CS-1 through CS-4 were collected from the south and east sidewalls and base of the main release footprint of the excavation. Subsequent analytical results indicated that the east wall (CS-4) still exhibited evidence of hydrocarbon impact above OCD guidelines. Intermittent periods of excavation and pipeline repairs (to address external corrosion) continued at the Site through October 16, 2015. Confirmation samples CS-5 through CS-28 were collected from the enlarged excavation to complete the analytical profile of the remediated Site. In addition, one (1) stockpile soil sample (SP-1) was collected from apparently unaffected spoils to determine the potential to reuse a portion of the soils as backfill material.

The final excavation measured approximately 98 feet long by 38 feet wide at the maximum extents, with total depths ranging from approximately eight (8) feet bgs to 16 feet bgs. The floor of the excavation was relatively flat, with the variation in apparent depth stemming from the undulating surface terrain at the Site.

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

A small quantity of water was encountered during the early stages of the excavation and the excavation was left open for several days to allow recharge. However, the water never recharged, indicating that it was likely related to the recent rain events as opposed to constituting actual groundwater.

While awaiting final soil analytical results, significant rainfall events resulted in accumulated water in the open excavation. The rain water was removed from the open excavation. Subsequently, no water recharged into the excavation.

Approximately 1,494 cubic yards of hydrocarbon-affected soils and 25 barrels of potentially affected liquids were transported to the TNT landfarm in Rio Arriba County, New Mexico. In addition, approximately 46 cubic yards of hydrocarbon-affected soils were transported to the Envirotech Landfarm near Hilltop, NM. In total, approximately 1,540 cubic yards of hydrocarbon-affected soils and 25 barrels of potentially affected water were transported for treatment/disposal at OCD-approved facilities. The executed C-138 forms are provided in Appendix B. The excavation was backfilled with clean imported fill and laboratory-confirmed acceptable spoils, and then contoured to surrounding grade.

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

3.2 Soil Sampling Program

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

Apex's soil sampling program included the collection of twenty-eight (28) confirmation soil samples (CS-1 through CS-28) from the resulting excavation, and one (1) stockpile soil sample (SP-1) for laboratory analysis. Soil sample CS-4 was removed by excavation. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody

seal. The samples and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico, for analysis.

3.3 Laboratory Analytical Methods

The confirmation soil samples and stockpile sample 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. Additionally, soil sample CS-1 was analyzed for chlorides utilizing EPA Method 300.0.

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

4.0 DATA EVALUATION

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

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or laboratory reporting limits associated with the final confirmation samples (CS-1 through CS-28) collected from the excavated area, and the stockpile samples collected to verify reusable spoils, to the OCD RALs for sites having a total ranking score of "40". Soils associated with CS-4 were removed by excavation and are not included in the following discussion.

- The laboratory analyses of confirmation samples collected from soils remaining in place and the reused spoils indicate benzene concentrations ranging from below the laboratory limits to 0.034 mg/kg (CS-2), which are below the OCD RAL of 10 milligram per kilogram (mg/kg).
- The laboratory analyses of the confirmation samples collected from soils remaining in place and the reused spoils indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.28 mg/kg (CS-14), which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of the confirmation samples collected from soils remaining in place and the reused spoils indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 52 mg/kg (SP-1), which are below the OCD RAL of 100 mg/kg for a Site ranking of "40".
- Confirmation sample CS-1 was analyzed to determine the chloride concentration of the release area soils. Confirmation sample CS-1 did not indicate a chloride concentration above the laboratory reporting limit of 30 mg/Kg.

Confirmation sample results are provided in Table 1 in Appendix D.

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 2C-56 pipeline release site is located within the Enterprise ROW in the NE $\frac{1}{4}$ of Section 28 in Township 26 North and Range 5 West in rural Rio Arriba County, New Mexico. The Site is located on land owned by the Jicarilla Apache Nation. The Site is located adjacent to a dirt road and is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

Beginning on September 30, 2015, Enterprise initiated excavation activities to facilitate the repair of the subsurface leak, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 10 feet of new pipe. Enterprise also re-coated approximately 30 feet of the existing pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was characterized by surface fluids, soil discoloration, and distressed vegetation in the vicinity of the release.

- The primary objective of the corrective action was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD *RALs* using the New Mexico EMNRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand with clay.
- The final excavation measured approximately 98 feet long by 38 feet wide at the maximum extents, with total depths ranging from approximately eight (8) feet bgs to 16 feet bgs.
- A small quantity of water was encountered during the early stages of the excavation and the excavation was left open for several days to allow recharge. However, the water never recharged, indicating that it was likely related to the recent rain events as opposed to constituting actual groundwater.
- Prior to backfilling, twenty-eight (28) confirmation soil samples were collected from the resulting final excavation for laboratory analyses. Soil sample CS-4 was removed by excavation. In addition, one (1) stockpile sample was collected from apparently unaffected spoils to determine the potential to reuse a portion of the soils as backfill material. Based on analytical results, soils remaining in place do not exhibit BTEX or TPH GRO/DRO concentrations above the OCD *RALs* for a Site ranking of "40".
- A total of approximately 1,540 cubic yards of hydrocarbon-affected soils and 25 barrels of potentially affected water were transported to OCD-approved facilities for disposal/remediation. The excavation was backfilled with clean imported fill and laboratory-confirmed acceptable spoils, and then contoured to surrounding grade.

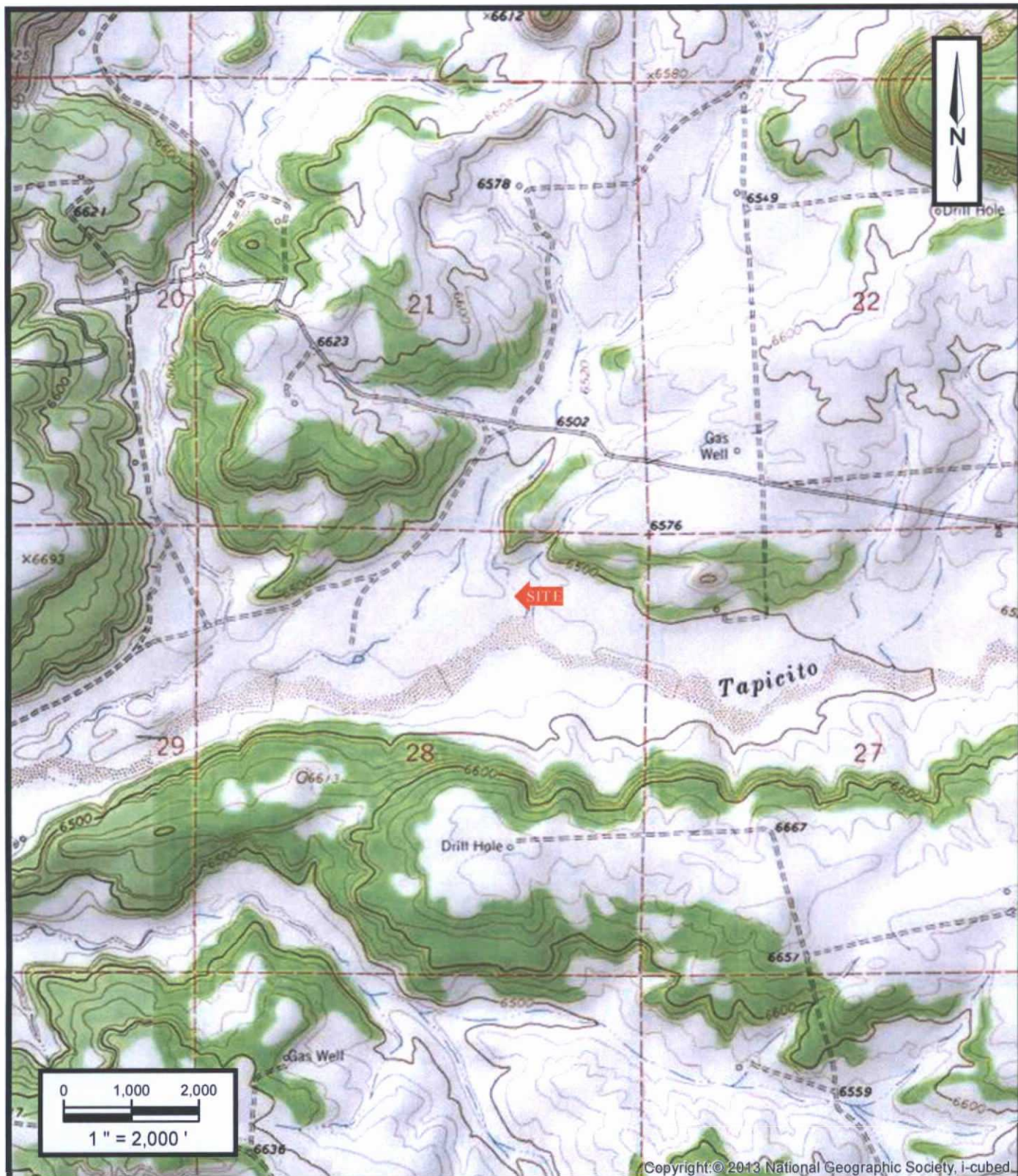
Based on field observations and laboratory analytical results, no additional investigation or corrective action with respect to soil impact appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

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



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Lateral 2C-56 Pipeline Release
 NE1/4 Sec28 T26N R5W
 Rio Arriba County, New Mexico
 36.46294N, 107.36083W

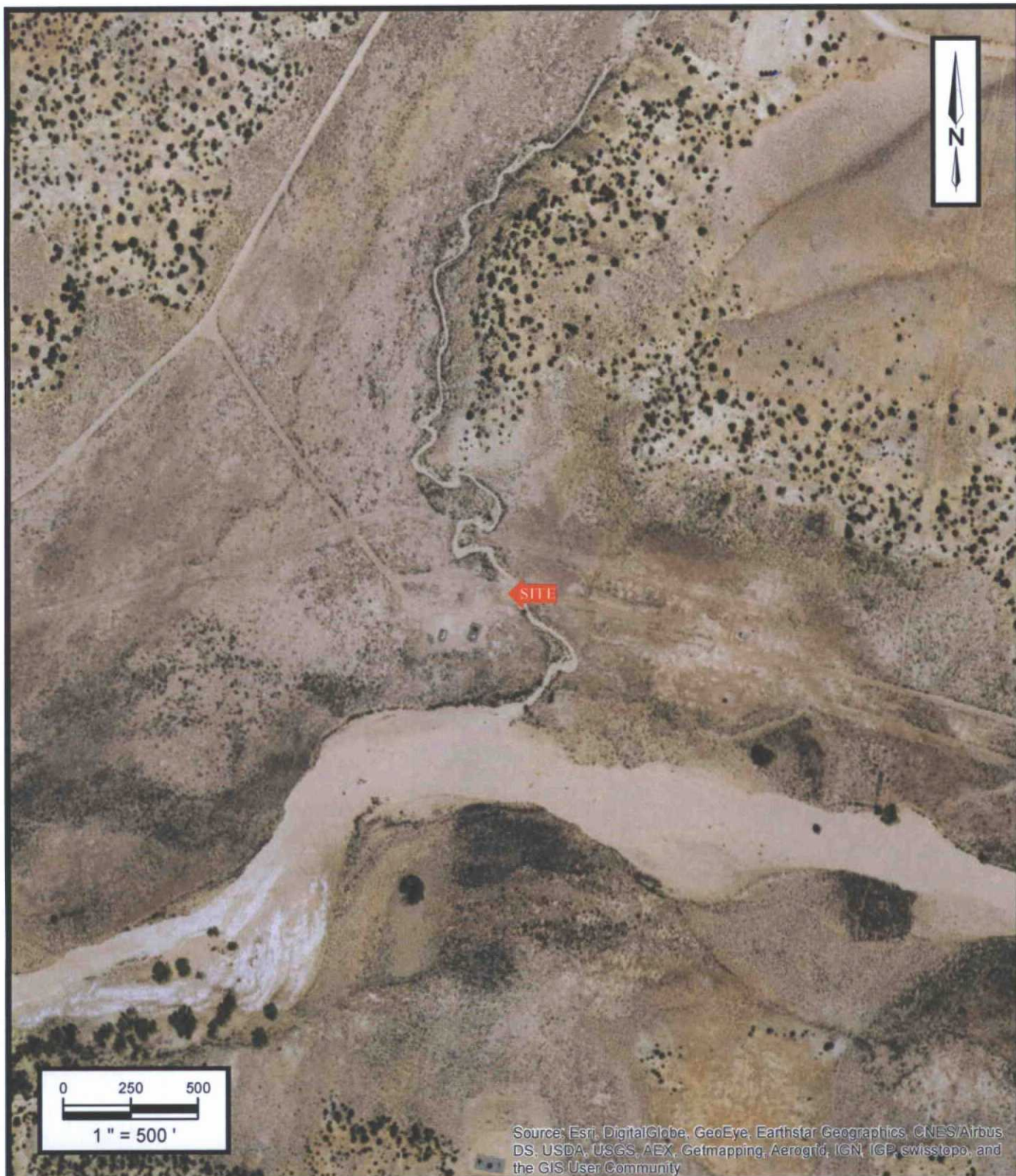
Project No. 7250415023



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 A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map
 Lapis Point, NM Quadrangle
 1963



Lateral 2C-56 Pipeline Release
 NE1/4 Sec28 T26N R5W
 Rio Arriba County, New Mexico
 36.46294N, 107.36083W





Project No. 7250415023



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FIGURE 2
Site Vicinity Map

LEGEND

-  APPROXIMATE PIPELINE LOCATION
-  SAMPLE LOCATION
-  RELEASE POINT
-  EXTENT OF SOIL REMOVAL DUE TO IMPACT

NOTE

All values are represented in mg/kg;
ND - Not Detected; NA - Not Analyzed



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Lateral 2C-56 Pipeline Release

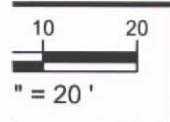
NE1/4 Sec28 T26N R5W
Rio Arriba County, New Mexico
36.46294N, 107.36083W

Project No. 7250415023

FIGURE 3

Site Map with
Soil Analytical Results

<p>CS-8 <u>10/5/2015</u> 1-8'</p> <p>Benzene: <0.045 Toluene: <0.045 Ethylbenzene: <0.045 Xylenes: <0.089 Total BTEX: ND GRO: <4.5 DRO: <9.4 Chloride: NA</p>	<p>CS-10 <u>10/7/2015</u> 1-11'</p> <p>Benzene: <0.045 Toluene: <0.045 Ethylbenzene: <0.045 Xylenes: <0.089 Total BTEX: ND GRO: <4.5 DRO: <9.4 Chloride: NA</p>
<p>CS-9 <u>10/5/2015</u> 8'</p> <p>Benzene: <0.040 Toluene: <0.040 Ethylbenzene: <0.040 Xylenes: <0.080 Total BTEX: ND GRO: <4.0 DRO: <9.7 Chloride: NA</p>	
<p>CS-7 <u>10/5/2015</u> 1-7'</p> <p>Benzene: <0.053 Toluene: <0.053 Ethylbenzene: <0.053 Xylenes: <0.11 Total BTEX: ND GRO: <5.3 DRO: 28 Chloride: NA</p>	
<p>CS-26 <u>10/14/2015</u> 8-11'</p> <p>Benzene: <0.037 Toluene: <0.037 Ethylbenzene: <0.037 Xylenes: <0.074 Total BTEX: ND GRO: <3.7 DRO: <9.6 Chloride: NA</p>	
<p>CS-6 <u>10/5/2015</u> 1-10'</p> <p>Benzene: <0.040 Toluene: <0.040 Ethylbenzene: <0.040 Xylenes: <0.080 Total BTEX: ND GRO: <4.0 DRO: <9.6 Chloride: NA</p>	<p>Benzene: <0.040 Toluene: <0.040 Ethylbenzene: <0.040 Xylenes: <0.080 Total BTEX: ND GRO: <4.0 DRO: <9.6 Chloride: NA</p>



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

Form C-138
Revised August 1, 2011

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. **Originating Site:**
Lateral 2C-56 Pipeline
3. **Location of Material (Street Address, City, State or ULSTR):**
Unit Letter D Section 28 T26N R5W; 36.46267, -107.36170, Rio Arriba County, NM
4. **Source and Description of Waste:** Hydro-excavated soil impacted with hydrocarbons associated with a pipeline release.
5. **Estimated Volume** 50 ^{yd³} bbls **Known Volume** (to be entered by the operator at the end of the haul) 1494 ^{yd³} bbls
25 bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long *Thomas Long* representative or authorized agent for Enterprise Field Services, LLC do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)

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

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

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

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long *Thomas Long* 9-30-15, representative for Enterprise Field Services, LLC authorize TNT Landfarm to
Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for TNT Land Farm do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: Oil Field Trash

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008
Address of Facility: 70 CR 405, Lindrieth NM
Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Lutisha Schmitz

TITLE: Office Admin

DATE: 9-30-15

SIGNATURE: *Lutisha Schmitz*
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 575-774-6524

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Santa Fe, NM 87505

97057-0744

Form C-138
Revised August 1, 2011

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401	
2. Originating Site: Lateral 2C-56 Pipeline	
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter D Section 28 T26N R5W; 36.46267, -107.36170, Rio Arriba County, NM	
4. Source and Description of Waste: Hydro-excavated soil impacted with hydrocarbons associated with a pipeline release.	
5. Estimated Volume <u>50</u> yd ³ bbls Known Volume (to be entered by the operator at the end of the haul) <u>46</u> yd ³ bbls	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS	
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <small>PRINT & SIGN NAME</small> <small>COMPANY NAME</small> certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)	
<input checked="" type="checkbox"/> RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. <i>Operator Use Only: Waste Acceptance Frequency</i> <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> Per Load	
<input type="checkbox"/> RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)	
<input type="checkbox"/> MSDS Information <input type="checkbox"/> RCRA Hazardous Waste Analysis <input type="checkbox"/> Process Knowledge <input type="checkbox"/> Other (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS	
I, <u>Thomas Long</u> <u>9-21-15</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification.	
I, <u>Eric Liese</u> , representative for <u>Envirotech, Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
6. Transporter: <u>Stan Horn Exc, HBL, Kelly</u>	

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011
Address of Facility: Hilltop, NM

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☒ APPROVED

☐ DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Eric Liese

TITLE: Land Farm Administrator DATE: 9-22-15

SIGNATURE: Eric Liese
Surface Waste Management Facility Authorized Agent

TELEPHONE NO.: 505-632-0615

Photograph 1

View of the initial stages of corrective action activities, facing northeast.

**Photograph 2**

View of the initial excavation and source area, facing northwest.

**Photograph 3**

View of the main release footprint and repaired pipeline, facing west.



Photograph 4

View of the repaired pipe and initial excavation, facing north.

**Photograph 5**

View of late stage of excavation, facing east.

**Photograph 6**

View of late stage of excavation, facing west.



TABLE 1
Lateral 2C-56 Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100		NE
Stockpile Samples										
SP-1	10.5.15	Stockpile	<0.048	<0.048	<0.048	<0.096	ND	<4.8	52	NA
Samples Removed by Excavation										
CS-4	10.2.15	1 to 16	<0.081	<0.16	<0.16	<0.32	ND	<16	240	NA
Excavation Confirmation Samples										
CS-1	10.1.15	16	<0.041	<0.041	<0.041	<0.083	ND	<4.1	<9.9	<30
CS-2	10.1.15	10 to 16	0.034	<0.032	<0.032	0.23	0.26	3.6	<10	NA
CS-3	10.1.15	1 to 10	<0.046	<0.046	<0.046	<0.092	ND	<4.6	<10	NA
CS-5	10.5.15	1 to 13	<0.034	<0.034	<0.034	0.073	0.073	4.0	<10	NA
CS-6	10.5.15	1 to 10	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<9.6	NA
CS-7	10.5.15	1 to 7	<0.053	<0.053	<0.053	<0.11	ND	<5.3	28	NA
CS-8	10.5.15	1 to 8	<0.045	<0.045	<0.045	<0.089	ND	<4.5	<9.4	NA
CS-9	10.5.15	8	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<9.7	NA
CS-10	10.7.15	1 to 11	<0.044	<0.044	<0.044	<0.088	ND	<4.4	15	NA
CS-11	10.7.15	1 to 11	<0.041	<0.041	<0.041	0.10	0.10	4.1	24	NA
CS-12	10.12.15	1 to 11	<0.031	<0.031	<0.031	<0.062	ND	<3.1	<10	NA
CS-13	10.12.15	1 to 11	<0.042	<0.042	<0.042	0.088	0.088	<4.2	<9.9	NA
CS-14	10.13.15	10 to 16	<0.032	<0.032	<0.032	0.28	0.28	<3.2	<9.9	NA
CS-15	10.13.15	1 to 10	<0.040	<0.040	<0.040	<0.081	ND	<4.0	<9.7	NA
CS-16	10.13.15	1 to 10	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<10	NA
CS-17	10.13.15	10 to 16	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<10	NA
CS-18	10.13.15	16	<0.032	<0.032	<0.032	<0.064	ND	<3.2	<9.6	NA
CS-19	10.14.15	10 to 16	<0.044	<0.044	<0.044	<0.089	ND	<4.4	<9.4	NA
CS-20	10.14.15	1 to 10	<0.042	<0.042	<0.042	<0.085	ND	<4.2	<9.8	NA
CS-21	10.14.15	1 to 16	<0.051	<0.051	<0.051	<0.10	ND	<5.1	<9.8	NA
CS-22	10.14.15	1 to 16	<0.038	<0.038	<0.038	<0.076	ND	<3.8	<10	NA
CS-23	10.14.15	16	<0.039	<0.039	<0.039	<0.078	ND	<3.9	<10	NA

TABLE 1
Lateral 2C-56 Pipeline Release
SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	Chloride (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level			10	NE	NE	NE	50	100		NE
CS-24	10.14.15	13	<0.034	<0.034	<0.034	<0.068	ND	<3.4	<10	NA
CS-25	10.14.15	16	<0.039	<0.039	<0.039	0.18	0.18	8.2	<9.5	NA
CS-26	10.14.15	8 to 11	<0.037	<0.037	<0.037	<0.074	ND	<3.7	<9.6	NA
CS-27	10.16.15	11	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<9.9	NA
CS-28	10.16.15	11	<0.035	<0.035	<0.035	<0.071	ND	<3.5	<9.5	NA

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

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established

NA = Not analyzed



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

October 13, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510208

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/6/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510208

Date Reported: 10/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-1

Project: Lateral 2C-56

Collection Date: 10/5/2015 12:40:00 PM

Lab ID: 1510208-001

Matrix: MEOH (SOIL)

Received Date: 10/6/2015 8:11:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	52	10		mg/Kg	1	10/8/2015 2:00:28 PM	21679
Surr: DNOP	103	57.9-140		%REC	1	10/8/2015 2:00:28 PM	21679
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/7/2015 9:35:57 PM	21694
Surr: BFB	100	75.4-113		%REC	1	10/7/2015 9:35:57 PM	21694
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/7/2015 9:35:57 PM	21694
Toluene	ND	0.048		mg/Kg	1	10/7/2015 9:35:57 PM	21694
Ethylbenzene	ND	0.048		mg/Kg	1	10/7/2015 9:35:57 PM	21694
Xylenes, Total	ND	0.096		mg/Kg	1	10/7/2015 9:35:57 PM	21694
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	10/7/2015 9:35:57 PM	21694

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510208

13-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21652		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	PBS		Batch ID:	21652		RunNo:	29273			
Prep Date:	10/5/2015		Analysis Date:	10/5/2015		SeqNo:	890900		Units: %REC	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		78.7	57.9	140			

Sample ID	LCS-21652		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	LCSS		Batch ID:	21652		RunNo:	29273			
Prep Date:	10/5/2015		Analysis Date:	10/5/2015		SeqNo:	890901		Units: %REC	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.7	57.9	140			

Sample ID	MB-21679		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	PBS		Batch ID:	21679		RunNo:	29273			
Prep Date:	10/6/2015		Analysis Date:	10/8/2015		SeqNo:	894236		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	10		10.00		105	57.9	140			

Sample ID	LCS-21679		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	LCSS		Batch ID:	21679		RunNo:	29273			
Prep Date:	10/6/2015		Analysis Date:	10/8/2015		SeqNo:	894238		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	50.00	0	104	57.4	139			
Surr: DNOP	5.6		5.000		112	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510208

13-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21694	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	21694	RunNo:	29364					
Prep Date:	10/6/2015	Analysis Date:	10/7/2015	SeqNo:	893258	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	880		1000		88.0	75.4	113			

Sample ID	LCS-21694	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	21694	RunNo:	29364					
Prep Date:	10/6/2015	Analysis Date:	10/7/2015	SeqNo:	893259	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	102	79.6	122			
Surr: BFB	960		1000		95.7	75.4	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510208

13-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21694	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	21694	RunNo:	29364					
Prep Date:	10/6/2015	Analysis Date:	10/7/2015	SeqNo:	893314	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID	LCS-21694	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	21694	RunNo:	29364					
Prep Date:	10/6/2015	Analysis Date:	10/7/2015	SeqNo:	893315	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	96.8	80	120			
Toluene	0.93	0.050	1.000	0	93.5	80	120			
Ethylbenzene	0.94	0.050	1.000	0	93.6	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		111	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



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: 1510206

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

10/6/2015 8:11:00 AM

Completed By: Lindsay Mangin

10/6/2015 10:07:54 AM

Reviewed By:

CS

10/06/15

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____


Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ Project Manager <u>K. Summers</u> PO/SO #: <u>7250415623</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); transform-origin: center;"> 8/21 BTEX 8/15 TP# 06/10/00 </div>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>2.4</u> <div style="display: flex; justify-content: space-around;"> 12345 </div> Page <u>1</u> of <u>1</u>								
		Sampler's Name <u>Ranee Deechilly</u> Sampler's Signature <u>Ranee Deechilly</u>												
Proj. No. <u>7250415023</u> Project Name <u>Lateral 2C-56</u> No/Type of Containers _____														
Matrix	Date	Time	Cool	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)	
<u>S</u>	<u>10/5/15</u>	<u>1240</u>			<u>SP-1</u>						<u>1</u>			
<div style="transform: rotate(-45deg); transform-origin: center; font-size: 2em; opacity: 0.5;"> AFS </div>														
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input type="checkbox"/> 100% Rush														
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:	NOTES: <u>Bill to Tom Long (EP&E)</u> <u>N 22593</u>						
<u>Ranee Deechilly</u>		<u>10/5/15</u>	<u>1624</u>	<u>[Signature]</u>		<u>10/5/15</u>	<u>1624</u>							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							
<u>[Signature]</u>		<u>10/5/15</u>	<u>1900</u>	<u>[Signature]</u>		<u>10/21/15</u>	<u>0811</u>							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							
Relinquished by (Signature)		Date:	Time:	Received by (Signature)		Date:	Time:							

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



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

October 07, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510195

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/6/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510195

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-5**Project:** Lateral 2C-56**Collection Date:** 10/5/2015 12:15:00 PM**Lab ID:** 1510195-001**Matrix:** MEOH (SOIL)**Received Date:** 10/6/2015 8:11:00 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	10/6/2015 10:54:08 AM	21680
Surr: DNOP	102	57.9-140		%REC	1	10/6/2015 10:54:08 AM	21680
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	4.0	3.4		mg/Kg	1	10/6/2015 10:42:29 AM	21666
Surr: BFB	126	75.4-113	S	%REC	1	10/6/2015 10:42:29 AM	21666
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.034		mg/Kg	1	10/6/2015 10:42:29 AM	21666
Toluene	ND	0.034		mg/Kg	1	10/6/2015 10:42:29 AM	21666
Ethylbenzene	ND	0.034		mg/Kg	1	10/6/2015 10:42:29 AM	21666
Xylenes, Total	0.073	0.068		mg/Kg	1	10/6/2015 10:42:29 AM	21666
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	10/6/2015 10:42:29 AM	21666

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

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

Analytical Report

Lab Order 1510195

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-6**Project:** Lateral 2C-56**Collection Date:** 10/5/2015 12:20:00 PM**Lab ID:** 1510195-002**Matrix:** MEOH (SOIL)**Received Date:** 10/6/2015 8:11:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/6/2015 11:21:14 AM	21680
Surr: DNOP	98.9	57.9-140		%REC	1	10/6/2015 11:21:14 AM	21680
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/6/2015 11:05:42 AM	21666
Surr: BFB	92.2	75.4-113		%REC	1	10/6/2015 11:05:42 AM	21666
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	1	10/6/2015 11:05:42 AM	21666
Toluene	ND	0.040		mg/Kg	1	10/6/2015 11:05:42 AM	21666
Ethylbenzene	ND	0.040		mg/Kg	1	10/6/2015 11:05:42 AM	21666
Xylenes, Total	ND	0.080		mg/Kg	1	10/6/2015 11:05:42 AM	21666
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	10/6/2015 11:05:42 AM	21666

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

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

Analytical Report

Lab Order 1510195

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-7**Project:** Lateral 2C-56**Collection Date:** 10/5/2015 12:25:00 PM**Lab ID:** 1510195-003**Matrix:** MEOH (SOIL)**Received Date:** 10/6/2015 8:11:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	28	9.8		mg/Kg	1	10/6/2015 11:48:15 AM	21680
Surr: DNOP	98.1	57.9-140		%REC	1	10/6/2015 11:48:15 AM	21680
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.3		mg/Kg	1	10/6/2015 11:28:52 AM	21666
Surr: BFB	89.2	75.4-113		%REC	1	10/6/2015 11:28:52 AM	21666
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.053		mg/Kg	1	10/6/2015 11:28:52 AM	21666
Toluene	ND	0.053		mg/Kg	1	10/6/2015 11:28:52 AM	21666
Ethylbenzene	ND	0.053		mg/Kg	1	10/6/2015 11:28:52 AM	21666
Xylenes, Total	ND	0.11		mg/Kg	1	10/6/2015 11:28:52 AM	21666
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	10/6/2015 11:28:52 AM	21666

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

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

Analytical Report

Lab Order 1510195

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-8**Project:** Lateral 2C-56**Collection Date:** 10/5/2015 12:30:00 PM**Lab ID:** 1510195-004**Matrix:** MEOH (SOIL)**Received Date:** 10/6/2015 8:11:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/6/2015 12:15:35 PM	21680
Surr: DNOP	99.1	57.9-140		%REC	1	10/6/2015 12:15:35 PM	21680
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.5		mg/Kg	1	10/6/2015 11:52:06 AM	21666
Surr: BFB	99.5	75.4-113		%REC	1	10/6/2015 11:52:06 AM	21666
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.045		mg/Kg	1	10/6/2015 11:52:06 AM	21666
Toluene	ND	0.045		mg/Kg	1	10/6/2015 11:52:06 AM	21666
Ethylbenzene	ND	0.045		mg/Kg	1	10/6/2015 11:52:06 AM	21666
Xylenes, Total	ND	0.089		mg/Kg	1	10/6/2015 11:52:06 AM	21666
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	10/6/2015 11:52:06 AM	21666

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

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

Analytical Report

Lab Order 1510195

Date Reported: 10/7/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-9

Project: Lateral 2C-56

Collection Date: 10/5/2015 12:35:00 PM

Lab ID: 1510195-005

Matrix: MEOH (SOIL)

Received Date: 10/6/2015 8:11:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/6/2015 12:43:14 PM	21680
Surr: DNOP	95.8	57.9-140		%REC	1	10/6/2015 12:43:14 PM	21680
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/6/2015 12:15:18 PM	21666
Surr: BFB	90.2	75.4-113		%REC	1	10/6/2015 12:15:18 PM	21666
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	1	10/6/2015 12:15:18 PM	21666
Toluene	ND	0.040		mg/Kg	1	10/6/2015 12:15:18 PM	21666
Ethylbenzene	ND	0.040		mg/Kg	1	10/6/2015 12:15:18 PM	21666
Xylenes, Total	ND	0.080		mg/Kg	1	10/6/2015 12:15:18 PM	21666
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	10/6/2015 12:15:18 PM	21666

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510195

07-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21648		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	21648		RunNo:	29273				
Prep Date:	10/4/2015		Analysis Date:	10/4/2015		SeqNo:	889464		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.7		10.00		97.2	57.9	140				

Sample ID	LCS-21648		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	21648		RunNo:	29273				
Prep Date:	10/4/2015		Analysis Date:	10/4/2015		SeqNo:	889466		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	5.0		5.000		100	57.9	140				

Sample ID	MB-21652		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21652		RunNo: 29273					
Prep Date:	10/5/2015		Analysis Date: 10/5/2015		SeqNo: 890900		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		78.7	57.9	140			

Sample ID	LCS-21652		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21652		RunNo: 29273					
Prep Date:	10/5/2015		Analysis Date: 10/5/2015		SeqNo: 890901		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.7	57.9	140			

Sample ID	MB-21629		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21629		RunNo: 29273					
Prep Date:	10/2/2015		Analysis Date: 10/6/2015		SeqNo: 892312		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	57.9	140			

Sample ID	MB-21680		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21680		RunNo: 29273					
Prep Date:	10/6/2015		Analysis Date: 10/6/2015		SeqNo: 892313		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.6		10.00		96.2	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510195

07-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	LCS-21629		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	LCSS		Batch ID:	21629		RunNo:	29273			
Prep Date:	10/2/2015		Analysis Date:	10/6/2015		SeqNo:	892314		Units: %REC	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		107	57.9	140			

Sample ID	LCS-21680		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	LCSS		Batch ID:	21680		RunNo:	29273			
Prep Date:	10/6/2015		Analysis Date:	10/6/2015		SeqNo:	892315		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.1	57.4	139			
Surr: DNOP	4.8		5.000		95.5	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510195

07-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21666	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	21666	RunNo:	29332					
Prep Date:	10/5/2015	Analysis Date:	10/6/2015	SeqNo:	892323	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		86.6	75.4	113			

Sample ID	LCS-21666	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	21666	RunNo:	29332					
Prep Date:	10/5/2015	Analysis Date:	10/6/2015	SeqNo:	892324	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	79.6	122			
Surr: BFB	940		1000		94.1	75.4	113			

Sample ID	MB-21665	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	21665	RunNo:	29332					
Prep Date:	10/5/2015	Analysis Date:	10/6/2015	SeqNo:	892336	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		88.5	75.4	113			

Sample ID	LCS-21665	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	21665	RunNo:	29332					
Prep Date:	10/5/2015	Analysis Date:	10/6/2015	SeqNo:	892337	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950		1000		95.5	75.4	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510195

07-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21666		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	21666		RunNo:	29332			
Prep Date:	10/5/2015		Analysis Date:	10/6/2015		SeqNo:	892366		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID	LCS-21666		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	21666		RunNo:	29332			
Prep Date:	10/5/2015		Analysis Date:	10/6/2015		SeqNo:	892368		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	96.7	80	120			
Toluene	0.94	0.050	1.000	0	94.3	80	120			
Ethylbenzene	0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.2	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	MB-21665		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	21665		RunNo:	29332			
Prep Date:	10/5/2015		Analysis Date:	10/6/2015		SeqNo:	892380		Units: %REC	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	LCS-21665		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	21665		RunNo:	29332			
Prep Date:	10/5/2015		Analysis Date:	10/6/2015		SeqNo:	892381		Units: %REC	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		113	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



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: 1510195

RcptNo: 1

Received by/date:

Logged By: Lindsay Mangin

10/6/2015 8:11:00 AM

Completed By: Lindsay Mangin

10/6/2015 8:18:32 AM

Reviewed By:

CS

10/06/15

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (If applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____


Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hill Environmental</u> Address: <u>Albuquerque, NM</u> Contact: <u>Andy Freeman</u> Phone: _____ Project Manager <u>K. Summers</u> PO/ISO #: <u>7250415023</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); transform-origin: center;"> 8021 BTX 8015 TPH (GULDED) </div>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>2.4</u> <div style="display: flex; justify-content: space-around;"> 12345 </div> Page <u>1</u> of <u>1</u>								
		Sampler's Name <u>Ranee Deechilly</u> Sampler's Signature <u>Ranee Deechilly</u>												
Proj. No. <u>7250415023</u> Project Name <u>Latral 2C5b</u> No/Type of Containers _____														
Matrix	Date	Time	COED	G	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)	
S ↓ ↓ ↓ ↓ ↓	10/5/15	1215			CS-5						1		X X	1510195-001
		1220			CS-6						1		X X	-002
		1225			CS-7						1		X X	-003
		1230			CS-8						1		X X	-004
		1235			CS-9						1		X X	-005
<div style="position: relative;"> NE </div>														
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same Day</u>														
Relinquished by (Signature) <u>Ranee Deechilly</u>		Date: <u>10/5/15</u>		Time: <u>1624</u>		Received by (Signature) <u>Chris W. [Signature]</u>		Date: <u>10/5/15</u>		Time: <u>1624</u>		NOTES: <u>Bill to Tom Long</u> <u>N 22593</u>		
Relinquished by (Signature) <u>Chris W. [Signature]</u>		Date: <u>10/5/15</u>		Time: <u>1900</u>		Received by (Signature) <u>[Signature]</u>		Date: <u>10/12/15</u>		Time: <u>0811</u>				
Relinquished by (Signature) _____		Date: _____		Time: _____		Received by (Signature) _____		Date: _____		Time: _____				
Relinquished by (Signature) _____		Date: _____		Time: _____		Received by (Signature) _____		Date: _____		Time: _____				
Matrix Container WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other _____														



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

October 06, 2015

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

RE: Lat 2C-56

OrderNo.: 1510096

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 10/3/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510096

Date Reported: 10/6/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-1

Project: Lat 2C-56

Collection Date: 10/1/2015 5:00:00 PM

Lab ID: 1510096-001

Matrix: MEOH (SOIL)

Received Date: 10/3/2015 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: SRM
Chloride	ND	30		mg/Kg	20	10/5/2015 11:05:26 AM	21662
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/4/2015 11:51:10 PM	21649
Surr: DNOP	105	57.9-140		%REC	1	10/4/2015 11:51:10 PM	21649
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	10/5/2015 1:04:28 PM	21639
Surr: BFB	89.0	75.4-113		%REC	1	10/5/2015 1:04:28 PM	21639
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.041		mg/Kg	1	10/5/2015 1:04:28 PM	21639
Toluene	ND	0.041		mg/Kg	1	10/5/2015 1:04:28 PM	21639
Ethylbenzene	ND	0.041		mg/Kg	1	10/5/2015 1:04:28 PM	21639
Xylenes, Total	ND	0.083		mg/Kg	1	10/5/2015 1:04:28 PM	21639
Surr: 4-Bromofluorobenzene	106	80-120		%REC	1	10/5/2015 1:04:28 PM	21639

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

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

Analytical Report

Lab Order 1510096

Date Reported: 10/6/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-2**Project:** Lat 2C-56**Collection Date:** 10/1/2015 5:15:00 PM**Lab ID:** 1510096-002**Matrix:** MEOH (SOIL)**Received Date:** 10/3/2015 9:25:00 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	10/5/2015 12:18:31 AM	21649
Surr: DNOP	99.5	57.9-140		%REC	1	10/5/2015 12:18:31 AM	21649
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3.6	3.2		mg/Kg	1	10/5/2015 1:27:40 PM	21639
Surr: BFB	105	75.4-113		%REC	1	10/5/2015 1:27:40 PM	21639
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	0.034	0.032		mg/Kg	1	10/5/2015 1:27:40 PM	21639
Toluene	ND	0.032		mg/Kg	1	10/5/2015 1:27:40 PM	21639
Ethylbenzene	ND	0.032		mg/Kg	1	10/5/2015 1:27:40 PM	21639
Xylenes, Total	0.23	0.064		mg/Kg	1	10/5/2015 1:27:40 PM	21639
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	10/5/2015 1:27:40 PM	21639

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

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

Analytical Report

Lab Order 1510096

Date Reported: 10/6/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-3

Project: Lat 2C-56

Collection Date: 10/1/2015 6:00:00 PM

Lab ID: 1510096-003

Matrix: MEOH (SOIL)

Received Date: 10/3/2015 9:25:00 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	10/5/2015 12:45:49 AM	21649
Surr: DNOP	99.1	57.9-140		%REC	1	10/5/2015 12:45:49 AM	21649
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/5/2015 1:51:01 PM	21639
Surr: BFB	90.3	75.4-113		%REC	1	10/5/2015 1:51:01 PM	21639
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.046		mg/Kg	1	10/5/2015 1:51:01 PM	21639
Toluene	ND	0.046		mg/Kg	1	10/5/2015 1:51:01 PM	21639
Ethylbenzene	ND	0.046		mg/Kg	1	10/5/2015 1:51:01 PM	21639
Xylenes, Total	ND	0.092		mg/Kg	1	10/5/2015 1:51:01 PM	21639
Surr: 4-Bromofluorobenzene	107	80-120		%REC	1	10/5/2015 1:51:01 PM	21639

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

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

Analytical Report

Lab Order 1510096

Date Reported: 10/6/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-4

Project: Lat 2C-56

Collection Date: 10/2/2015 10:45:00 AM

Lab ID: 1510096-004

Matrix: MEOH (SOIL)

Received Date: 10/3/2015 9:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	240	9.2		mg/Kg	1	10/5/2015 1:13:08 AM	21649
Surr: DNOP	99.2	57.9-140		%REC	1	10/5/2015 1:13:08 AM	21649
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	16	D	mg/Kg	5	10/5/2015 2:14:14 PM	21639
Surr: BFB	98.9	75.4-113	D	%REC	5	10/5/2015 2:14:14 PM	21639
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.081	D	mg/Kg	5	10/5/2015 2:14:14 PM	21639
Toluene	ND	0.16	D	mg/Kg	5	10/5/2015 2:14:14 PM	21639
Ethylbenzene	ND	0.16	D	mg/Kg	5	10/5/2015 2:14:14 PM	21639
Xylenes, Total	ND	0.32	D	mg/Kg	5	10/5/2015 2:14:14 PM	21639
Surr: 4-Bromofluorobenzene	108	80-120	D	%REC	5	10/5/2015 2:14:14 PM	21639

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510096

06-Oct-15

Client: APEX TITAN

Project: Lat 2C-56

Sample ID	MB-21662	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	21662	RunNo:	29327					
Prep Date:	10/5/2015	Analysis Date:	10/5/2015	SeqNo:	891486	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-21662	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	21662	RunNo:	29327					
Prep Date:	10/5/2015	Analysis Date:	10/5/2015	SeqNo:	891487	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.3	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510096

06-Oct-15

Client: APEX TITAN

Project: Lat 2C-56

Sample ID	MB-21648		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	21648		RunNo:	29273				
Prep Date:	10/4/2015		Analysis Date:	10/4/2015		SeqNo:	889464		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.7		10.00		97.2	57.9	140				

Sample ID	MB-21649		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	21649		RunNo:	29273				
Prep Date:	10/4/2015		Analysis Date:	10/4/2015		SeqNo:	889465		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	9.7		10.00		97.2	57.9	140				

Sample ID	LCS-21648		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21648		RunNo: 29273					
Prep Date:	10/4/2015		Analysis Date: 10/4/2015		SeqNo: 889466		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	57.9	140			

Sample ID	LCS-21649		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21649		RunNo: 29273					
Prep Date:	10/4/2015		Analysis Date: 10/4/2015		SeqNo: 889467		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.5	57.4	139			
Surr: DNOP	5.0		5.000		99.4	57.9	140			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510096

06-Oct-15

Client: APEX TITAN

Project: Lat 2C-56

Sample ID	MB-21639	SampType	MBLK	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	PBS	Batch ID	21639	RunNo	29302					
Prep Date	10/2/2015	Analysis Date	10/5/2015	SeqNo	890915	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.4	75.4	113			

Sample ID	LCS-21639	SampType	LCS	TestCode	EPA Method 8015D: Gasoline Range					
Client ID	LCSS	Batch ID	21639	RunNo	29302					
Prep Date	10/2/2015	Analysis Date	10/5/2015	SeqNo	890916	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.7	79.6	122			
Surr: BFB	930		1000		92.9	75.4	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510096

06-Oct-15

Client: APEX TITAN

Project: Lat 2C-56

Sample ID	MB-21639	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	21639	RunNo:	29302					
Prep Date:	10/2/2015	Analysis Date:	10/5/2015	SeqNo:	890952	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	LCS-21639	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID: 21639			RunNo: 29302					
Prep Date:	10/2/2015	Analysis Date: 10/5/2015			SeqNo: 890953		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	95.9	80	120			
Toluene	0.92	0.050	1.000	0	92.3	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.6	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1510096

RcptNo: 1

Received by/date:	<i>[Signature]</i> 10/03/15
Logged By:	Lindsay Mangin 10/3/2015 9:25:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin 10/3/2015 9:36:41 AM <i>[Signature]</i>
Reviewed By:	dam 10/4/15

Chain of Custody

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

Log In

- Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
- Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
- Sample(s) in proper container(s)? Yes ☒ No ☐
- Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
- Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
- Was preservative added to bottles? Yes ☐ No ☒ NA ☐
- VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
- Were any sample containers received broken? Yes ☐ No ☒
- Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
- Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
- Is it clear what analyses were requested? Yes ☒ No ☐
- Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

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

Special Handling (if applicable)

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


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

- Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec</u>		Laboratory: <u>Hall</u> Address: <u>ABQ</u> Contact: <u>Freeman</u> Phone: _____ PO/SO #: _____		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); transform-origin: center;"> BTX 8021 TTH GAD/DRO 8015 C-12/12/15 </div>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>2.6</u>								
		Project Manager <u>Summers</u> Sampler's Name <u>Nyle Summers</u> Sampler's Signature <u>[Signature]</u>				Page <u>1</u> of <u>1</u>								
Proj. No. _____		Project Name <u>Lat 2C-56</u>		No/Type of Containers _____										
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)	
S	10/1/15	1700	X		CS-1						1		X X X	1510096-001
		1715			CS-2						1		X X	-002
		1800			CS-3						1			-003
	10/2/15	1045			CS-4						1			-004
<div style="transform: rotate(-45deg); transform-origin: center;"> NYS N.S. </div>														
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same Day</u>														
Relinquished by (Signature) <u>[Signature]</u>		Date: <u>10/2</u>	Time: <u>1405</u>	Received by (Signature) <u>[Signature]</u>		Date: <u>10/2/15</u>	Time: <u>1405</u>	NOTES: <u>Bill Tom Long</u> <u>N225953 & 14/5</u> <u>100% Rush</u>						
Relinquished by (Signature) <u>[Signature]</u>		Date: <u>10/2/15</u>	Time: <u>2020</u>	Received by (Signature) <u>[Signature]</u>		Date: <u>10/2/15</u>	Time: <u>1405</u>							
Relinquished by (Signature) _____		Date: _____	Time: _____	Received by (Signature) _____		Date: _____	Time: _____							
Relinquished by (Signature) _____		Date: _____	Time: _____	Received by (Signature) _____		Date: _____	Time: _____							
Matrix Container		WW - Wastewater VOA - 40 ml vial		W - Water A/G - Amber / Or Glass 1 Liter		S - Soil SD - Solid		L - Liquid 250 ml - Glass wide mouth		A - Air Bag		C - Charcoal tube P/O - Plastic or other		SL - sludge O - Oil



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

October 22, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510832

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/17/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510832

Date Reported: 10/22/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-27

Project: Lateral 2C-56

Collection Date: 10/16/2015 12:30:00 PM

Lab ID: 1510832-001

Matrix: MEOH (SOIL)

Received Date: 10/17/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/19/2015 11:24:30 AM	21890
Surr: BFB	97.0	70-130		%REC	1	10/19/2015 11:24:30 AM	21890
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/19/2015 2:27:53 PM	21901
Surr: DNOP	123	70-130		%REC	1	10/19/2015 2:27:53 PM	21901
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.040		mg/Kg	1	10/19/2015 11:24:30 AM	21890
Toluene	ND	0.040		mg/Kg	1	10/19/2015 11:24:30 AM	21890
Ethylbenzene	ND	0.040		mg/Kg	1	10/19/2015 11:24:30 AM	21890
Xylenes, Total	ND	0.080		mg/Kg	1	10/19/2015 11:24:30 AM	21890
Surr: 1,2-Dichloroethane-d4	95.0	70-130		%REC	1	10/19/2015 11:24:30 AM	21890
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	10/19/2015 11:24:30 AM	21890
Surr: Dibromofluoromethane	115	70-130		%REC	1	10/19/2015 11:24:30 AM	21890
Surr: Toluene-d8	95.1	70-130		%REC	1	10/19/2015 11:24:30 AM	21890

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

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

Analytical Report

Lab Order 1510832

Date Reported: 10/22/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-28

Project: Lateral 2C-56

Collection Date: 10/16/2015 12:35:00 PM

Lab ID: 1510832-002

Matrix: MEOH (SOIL)

Received Date: 10/17/2015 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOLINE RANGE							Analyst: DJF
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	10/19/2015 11:51:59 AM	21890
Surr: BFB	101	70-130		%REC	1	10/19/2015 11:51:59 AM	21890
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/19/2015 2:49:22 PM	21901
Surr: DNOP	124	70-130		%REC	1	10/19/2015 2:49:22 PM	21901
EPA METHOD 8260B: VOLATILES SHORT LIST							Analyst: DJF
Benzene	ND	0.035		mg/Kg	1	10/19/2015 11:51:59 AM	21890
Toluene	ND	0.035		mg/Kg	1	10/19/2015 11:51:59 AM	21890
Ethylbenzene	ND	0.035		mg/Kg	1	10/19/2015 11:51:59 AM	21890
Xylenes, Total	ND	0.071		mg/Kg	1	10/19/2015 11:51:59 AM	21890
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%REC	1	10/19/2015 11:51:59 AM	21890
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	10/19/2015 11:51:59 AM	21890
Surr: Dibromofluoromethane	112	70-130		%REC	1	10/19/2015 11:51:59 AM	21890
Surr: Toluene-d8	95.0	70-130		%REC	1	10/19/2015 11:51:59 AM	21890

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510832

22-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21901		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21901		RunNo: 29641					
Prep Date:	10/19/2015		Analysis Date: 10/19/2015		SeqNo: 902525		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	12		10.00		122	70	130			

Sample ID	MB-21923		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	21923		RunNo:	29662				
Prep Date:	10/20/2015		Analysis Date:	10/20/2015		SeqNo:	903291		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP	9.8		10.00		97.7	70	130				

Sample ID	LCS-21923		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21923		RunNo: 29662					
Prep Date:	10/20/2015		Analysis Date: 10/20/2015		SeqNo: 903292		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.1	70	130			

Sample ID	LCS-21901		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21901		RunNo: 29662					
Prep Date:	10/19/2015		Analysis Date: 10/20/2015		SeqNo: 903563		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	57.4	139			
Surr: DNOP	4.7		5.000		94.2	70	130			

Sample ID	1510832-001AMS		SampType: MS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	CS-27		Batch ID: 21901		RunNo: 29662					
Prep Date:	10/19/2015		Analysis Date: 10/20/2015		SeqNo: 903564		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	52	10	49.90	0	103	42.3	146			
Surr: DNOP	4.8		4.990		95.2	70	130			

Sample ID	1510832-001AMSD			SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics			
Client ID:	CS-27			Batch ID:	21901		RunNo:	29662			
Prep Date:	10/19/2015			Analysis Date:	10/20/2015		SeqNo:	903624		Units:	mg/Kg
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	51	9.9	49.46	0	102	42.3	146	1.87	28.9		
Surr: DNOP	4.7		4.946		95.0	70	130	0	0		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510832

22-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21912	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21912	RunNo:	29662					
Prep Date:	10/19/2015	Analysis Date:	10/20/2015	SeqNo:	903701	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		101	70	130			

Sample ID	LCS-21912	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	21912	RunNo:	29662					
Prep Date:	10/19/2015	Analysis Date:	10/20/2015	SeqNo:	903702	Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.9		5.000		97.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510832

22-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	mb-21890		SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles Short List			
Client ID:	PBS		Batch ID:	21890		RunNo:	29634			
Prep Date:	10/16/2015		Analysis Date:	10/20/2015		SeqNo:	903025		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		119	70	130			
Surr: Toluene-d8	0.46		0.5000		92.9	70	130			

Sample ID	lcs-21890		SampType:	LCS		TestCode:	EPA Method 8260B: Volatiles Short List			
Client ID:	LCSS		Batch ID:	21890		RunNo:	29634			
Prep Date:	10/16/2015		Analysis Date:	10/19/2015		SeqNo:	903026		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.050	1.000	0	96.4	70	130			
Toluene	0.96	0.050	1.000	0	96.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		93.6	70	130			
Surr: 4-Bromofluorobenzene	0.53		0.5000		106	70	130			
Surr: Dibromofluoromethane	0.60		0.5000		120	70	130			
Surr: Toluene-d8	0.48		0.5000		96.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510832

22-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

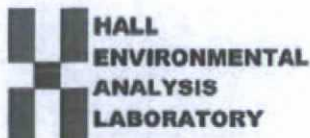
Sample ID	mb-21890	SampType:	MBLK	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	PBS	Batch ID:	21890	RunNo:	29634					
Prep Date:	10/16/2015	Analysis Date:	10/20/2015	SeqNo:	903149	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	530		500.0		107	70	130			

Sample ID	lcs-21890	SampType:	LCS	TestCode:	EPA Method 8015D Mod: Gasoline Range					
Client ID:	LCSS	Batch ID:	21890	RunNo:	29634					
Prep Date:	10/16/2015	Analysis Date:	10/19/2015	SeqNo:	903150	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.1	70	123			
Surr: BFB	500		500.0		99.4	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit



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: 1510832

RcptNo: 1

Received by/date: AT 10/17/15

Logged By: Lindsay Mangin

10/17/2015 12:10:00 PM

Completed By: Lindsay Mangin

10/19/2015 7:49:54 AM

Reviewed By: AT

10/19/15

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____



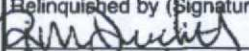

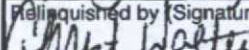
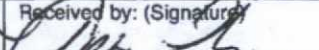
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall</u> Address: <u>ABQ, NM</u> Contact: <u>A. Freeman</u> Phone: _____		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); display: inline-block;"> 802L BTEX 8015 TPH GED/DED </div>		Lab use only Due Date: _____								
		Project Manager <u>K. Summers</u> PO/ISO #: <u>7250415023</u>				Temp. of coolers when received (C°): <table border="1" style="width:100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td> </tr> </table> Page <u>1</u> of <u>1</u>		1	2	3	4	5		
1	2	3	4	5										
Sampler's Name <u>Rancee Deechilly</u>		Sampler's Signature 		<div style="font-size: 2em;">1.7</div>		Lab Sample ID (Lab Use Only)								
Proj. No. <u>7250415023</u>		Project Name <u>Lateral 2C-56</u>						No. Type of Containers						
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L	250 ml	Glass Jar	P/O		
S	10/16/15	1230			CS-27						1		X	<div style="font-size: 1.5em;">1510832 -001</div> <div style="font-size: 1.5em;">-002</div>
S	10/16/15	1235			CS-28						1		X	
<div style="font-size: 2em; transform: rotate(-30deg); display: inline-block;">NFS</div>														
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same day</u>														
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:	NOTES: <div style="font-size: 1.2em;">Bill to Tam Long (EPR00)</div> <div style="font-size: 1.2em;">W 22593</div>						
		10/16/15	1545			10/16/15	1545							
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:							
		10/17/15	1000			10/17/15	1210							
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:							
Relinquished by (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:							

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



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

October 19, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510717

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 10/15/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-19

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:00:00 PM

Lab ID: 1510717-001

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	10/15/2015 3:44:10 PM	21863
Surr: DNOP	111	57.9-140		%REC	1	10/15/2015 3:44:10 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	10/15/2015 11:14:50 PM	21853
Surr: BFB	87.2	75.4-113		%REC	1	10/15/2015 11:14:50 PM	21853
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.044		mg/Kg	1	10/15/2015 11:14:50 PM	21853
Toluene	ND	0.044		mg/Kg	1	10/15/2015 11:14:50 PM	21853
Ethylbenzene	ND	0.044		mg/Kg	1	10/15/2015 11:14:50 PM	21853
Xylenes, Total	ND	0.089		mg/Kg	1	10/15/2015 11:14:50 PM	21853
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/15/2015 11:14:50 PM	21853

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-20

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:05:00 PM

Lab ID: 1510717-002

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/15/2015 4:05:36 PM	21863
Surr: DNOP	113	57.9-140		%REC	1	10/15/2015 4:05:36 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	10/15/2015 11:37:52 PM	21853
Surr: BFB	85.7	75.4-113		%REC	1	10/15/2015 11:37:52 PM	21853
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.042		mg/Kg	1	10/15/2015 11:37:52 PM	21853
Toluene	ND	0.042		mg/Kg	1	10/15/2015 11:37:52 PM	21853
Ethylbenzene	ND	0.042		mg/Kg	1	10/15/2015 11:37:52 PM	21853
Xylenes, Total	ND	0.085		mg/Kg	1	10/15/2015 11:37:52 PM	21853
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	10/15/2015 11:37:52 PM	21853

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-21

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:10:00 PM

Lab ID: 1510717-003

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	10/15/2015 4:27:00 PM	21863
Surr: DNOP	113	57.9-140		%REC	1	10/15/2015 4:27:00 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.1		mg/Kg	1	10/16/2015 12:00:57 AM	21853
Surr: BFB	86.9	75.4-113		%REC	1	10/16/2015 12:00:57 AM	21853
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.051		mg/Kg	1	10/16/2015 12:00:57 AM	21853
Toluene	ND	0.051		mg/Kg	1	10/16/2015 12:00:57 AM	21853
Ethylbenzene	ND	0.051		mg/Kg	1	10/16/2015 12:00:57 AM	21853
Xylenes, Total	ND	0.10		mg/Kg	1	10/16/2015 12:00:57 AM	21853
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	10/16/2015 12:00:57 AM	21853

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-22**Project:** Lateral 2C-56**Collection Date:** 10/14/2015 1:15:00 PM**Lab ID:** 1510717-004**Matrix:** MEOH (SOIL)**Received Date:** 10/15/2015 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	10/15/2015 4:48:27 PM	21863
Surr: DNOP	117	57.9-140		%REC	1	10/15/2015 4:48:27 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	10/16/2015 1:33:19 AM	21853
Surr: BFB	87.6	75.4-113		%REC	1	10/16/2015 1:33:19 AM	21853
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.038		mg/Kg	1	10/16/2015 1:33:19 AM	21853
Toluene	ND	0.038		mg/Kg	1	10/16/2015 1:33:19 AM	21853
Ethylbenzene	ND	0.038		mg/Kg	1	10/16/2015 1:33:19 AM	21853
Xylenes, Total	ND	0.076		mg/Kg	1	10/16/2015 1:33:19 AM	21853
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/16/2015 1:33:19 AM	21853

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-23

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:20:00 PM

Lab ID: 1510717-005

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 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	10/15/2015 5:09:52 PM	21863
Surr: DNOP	116	57.9-140		%REC	1	10/15/2015 5:09:52 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.9		mg/Kg	1	10/16/2015 1:56:23 AM	21853
Surr: BFB	87.4	75.4-113		%REC	1	10/16/2015 1:56:23 AM	21853
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.039		mg/Kg	1	10/16/2015 1:56:23 AM	21853
Toluene	ND	0.039		mg/Kg	1	10/16/2015 1:56:23 AM	21853
Ethylbenzene	ND	0.039		mg/Kg	1	10/16/2015 1:56:23 AM	21853
Xylenes, Total	ND	0.078		mg/Kg	1	10/16/2015 1:56:23 AM	21853
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	10/16/2015 1:56:23 AM	21853

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-24

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:25:00 PM

Lab ID: 1510717-006

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 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	10/15/2015 5:31:23 PM	21863
Surr: DNOP	113	57.9-140		%REC	1	10/15/2015 5:31:23 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	10/15/2015 3:07:54 PM	R29562
Surr: BFB	88.4	75.4-113		%REC	1	10/15/2015 3:07:54 PM	R29562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.034		mg/Kg	1	10/15/2015 3:07:54 PM	A29562
Toluene	ND	0.034		mg/Kg	1	10/15/2015 3:07:54 PM	A29562
Ethylbenzene	ND	0.034		mg/Kg	1	10/15/2015 3:07:54 PM	A29562
Xylenes, Total	ND	0.068		mg/Kg	1	10/15/2015 3:07:54 PM	A29562
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	10/15/2015 3:07:54 PM	A29562

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-25

Project: Lateral 2C-56

Collection Date: 10/14/2015 1:30:00 PM

Lab ID: 1510717-007

Matrix: MEOH (SOIL)

Received Date: 10/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	10/15/2015 5:52:48 PM	21863
Surr: DNOP	111	57.9-140		%REC	1	10/15/2015 5:52:48 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	8.2	3.9		mg/Kg	1	10/15/2015 4:17:45 PM	R29562
Surr: BFB	103	75.4-113		%REC	1	10/15/2015 4:17:45 PM	R29562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.039		mg/Kg	1	10/15/2015 4:17:45 PM	A29562
Toluene	ND	0.039		mg/Kg	1	10/15/2015 4:17:45 PM	A29562
Ethylbenzene	ND	0.039		mg/Kg	1	10/15/2015 4:17:45 PM	A29562
Xylenes, Total	0.18	0.079		mg/Kg	1	10/15/2015 4:17:45 PM	A29562
Surr: 4-Bromofluorobenzene	110	80-120		%REC	1	10/15/2015 4:17:45 PM	A29562

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

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

Analytical Report

Lab Order 1510717

Date Reported: 10/19/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-26**Project:** Lateral 2C-56**Collection Date:** 10/14/2015 1:35:00 PM**Lab ID:** 1510717-008**Matrix:** MEOH (SOIL)**Received Date:** 10/15/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/15/2015 6:14:20 PM	21863
Surr: DNOP	105	57.9-140		%REC	1	10/15/2015 6:14:20 PM	21863
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.7		mg/Kg	1	10/16/2015 2:19:29 AM	R29562
Surr: BFB	88.4	75.4-113		%REC	1	10/16/2015 2:19:29 AM	R29562
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.037		mg/Kg	1	10/16/2015 2:19:29 AM	A29562
Toluene	ND	0.037		mg/Kg	1	10/16/2015 2:19:29 AM	A29562
Ethylbenzene	ND	0.037		mg/Kg	1	10/16/2015 2:19:29 AM	A29562
Xylenes, Total	ND	0.074		mg/Kg	1	10/16/2015 2:19:29 AM	A29562
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	10/16/2015 2:19:29 AM	A29562

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510717

19-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21863	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21863	RunNo:	29559					
Prep Date:	10/15/2015	Analysis Date:	10/15/2015	SeqNo:	899654	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	11		10.00		107	57.9	140			

Sample ID	LCS-21863	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	21863	RunNo:	29559					
Prep Date:	10/15/2015	Analysis Date:	10/15/2015	SeqNo:	899655	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.3	57.4	139			
Surr: DNOP	5.5		5.000		110	57.9	140			

Sample ID	MB-21874	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21874	RunNo:	29559					
Prep Date:	10/15/2015	Analysis Date:	10/16/2015	SeqNo:	900607	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	12		10.00		124	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510717

19-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21853		SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS		Batch ID:	21853		RunNo:	29562				
Prep Date:	10/14/2015		Analysis Date:	10/15/2015		SeqNo:	900211		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	850		1000		84.9	75.4	113				

Sample ID	LCS-21853		SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS		Batch ID:	21853		RunNo:	29562				
Prep Date:	10/14/2015		Analysis Date:	10/15/2015		SeqNo:	900212		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	79.6	122				
Surr: BFB	930		1000		92.6	75.4	113				

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	R29562	RunNo:	29562					
Prep Date:		Analysis Date:	10/15/2015	SeqNo:	900231	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	870		1000		86.8	75.4	113			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	R29562	RunNo:	29562					
Prep Date:		Analysis Date:	10/15/2015	SeqNo:	900232	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	97.9	79.6	122			
Surr: BFB	930		1000		92.8	75.4	113			

Sample ID	1510717-006AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	CS-24		Batch ID: R29562		RunNo: 29562					
Prep Date:			Analysis Date: 10/15/2015		SeqNo: 900234		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.4	17.12	1.034	95.6	62.5	151			
Surr: BFB	650		684.9		95.1	75.4	113			

Sample ID	1510717-006AMSD			SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range			
Client ID:	CS-24			Batch ID:	R29562		RunNo:	29562			
Prep Date:				Analysis Date:	10/15/2015		SeqNo:	900235		Units:	mg/Kg
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
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510717

19-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	1510717-006AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	CS-24	Batch ID:	R29562	RunNo:	29562					
Prep Date:		Analysis Date:	10/15/2015	SeqNo:	900235	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.4	17.12	1.034	95.9	62.5	151	0.314	22.1	
Surr: BFB	650		684.9		95.0	75.4	113	0	0	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510717

19-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21853		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	21853		RunNo:	29562			
Prep Date:	10/14/2015		Analysis Date:	10/15/2015		SeqNo:	900274		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	LCS-21853		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	21853		RunNo:	29562			
Prep Date:	10/14/2015		Analysis Date:	10/15/2015		SeqNo:	900279		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	94.5	80	120			
Toluene	0.93	0.050	1.000	0	92.6	80	120			
Ethylbenzene	0.94	0.050	1.000	0	94.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	95.0	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	80	120			

Sample ID	5ML RB		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	A29562		RunNo:	29562			
Prep Date:			Analysis Date:	10/15/2015		SeqNo:	900302		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Sample ID	100NG BTEX LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	A29562		RunNo:	29562			
Prep Date:			Analysis Date:	10/15/2015		SeqNo:	900303		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	98.1	80	120			
Toluene	0.96	0.050	1.000	0	96.4	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.9	80	120			
Xylenes, Total	2.9	0.10	3.000	0	95.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510717

19-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	1510717-007AMS	SampType:	MS	TestCode: EPA Method 8021B: Volatiles						
Client ID:	CS-25	Batch ID:	A29562	RunNo: 29562						
Prep Date:		Analysis Date:	10/15/2015	SeqNo: 900306			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.039	0.7893	0.01006	95.8	69.6	136			
Toluene	0.75	0.039	0.7893	0.02075	92.8	76.2	134			
Ethylbenzene	0.78	0.039	0.7893	0.03085	95.4	75.8	137			
Xylenes, Total	2.4	0.079	2.368	0.1794	95.6	78.9	133			
Surr: 4-Bromofluorobenzene	0.88		0.7893		111	80	120			

Sample ID	1510717-007AMSD	SampType:	MSD	TestCode: EPA Method 8021B: Volatiles						
Client ID:	CS-25	Batch ID:	A29562	RunNo: 29562						
Prep Date:		Analysis Date:	10/15/2015	SeqNo: 900307			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.039	0.7893	0.01006	99.3	69.6	136	3.56	20	
Toluene	0.79	0.039	0.7893	0.02075	96.9	76.2	134	4.15	20	
Ethylbenzene	0.81	0.039	0.7893	0.03085	98.6	75.8	137	3.18	20	
Xylenes, Total	2.5	0.079	2.368	0.1794	98.5	78.9	133	2.76	20	
Surr: 4-Bromofluorobenzene	0.90		0.7893		113	80	120	0	0	

Qualifiers:

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



Hall Environmental Analysis Laboratory
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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: 1510717

RcptNo: 1

Received by/date:

[Signature] 10/15/15

Logged By: Lindsay Mangin

10/15/2015 7:00:00 AM

[Signature]

Completed By: Lindsay Mangin

10/15/2015 7:20:09 AM

[Signature]

Reviewed By:

[Signature] 10/15/15

Chain of Custody

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

Log In

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

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____


Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>hall</u>		ANALYSIS REQUESTED <div style="transform: rotate(-90deg); position: absolute; left: 50%; top: 50%;">8021 BTX 8015 TPH GRI/DEO</div>										Lab use only Due Date:			
		Address: <u>Atx, NM</u>												Temp. of coolers when received (C°): <u>3.6</u>			
Contact: <u>A. Freeman</u>		Phone: _____												Page <u>1</u> of <u>1</u>			
Project Manager <u>K. Summers</u>		PO/SO #: <u>7250415023</u>															
Sampler's Name <u>Ranee Deechilly</u>		Sampler's Signature <u>R. Deechilly</u>															
Proj. No. <u>7250415023</u>		Project Name <u>Latral 2C-56</u>												No/Type of Containers			
Matrix	Date	Time	Coed	G	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)				
S	10/14/15	1300			CS-19						1		X X	1510717-001			
		1305			CS-20						1		X X	-002			
		1310			CS-21						1		X X	-003			
		1315			CS-22						1		X X	-004			
		1320			CS-23						1		X X	-005			
		1325			CS-24						1		X X	-006			
		1330			CS-25						1		X X	-007			
V	↓	1335			CS-26						1		X X	-008			
NPS																	
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>2 day rush</u>																	
Relinquished by (Signature) <u>R. Deechilly</u>		Date: <u>10/14/15</u> Time: <u>1825</u>		Received by (Signature) <u>Christa Wack</u>		Date: <u>10/14/15</u> Time: <u>1825</u>		NOTES: Bill to Tom Long (EPRD) W 22593 2-day rush (10/16/15)									
Relinquished by (Signature) <u>Christa Wack</u>		Date: <u>10/14/15</u> Time: <u>1847</u>		Received by (Signature) <u>[Signature]</u>		Date: <u>10/15/15</u> Time: <u>0700</u>											
Relinquished by (Signature)		Date: _____ Time: _____		Received by (Signature)		Date: _____ Time: _____											
Relinquished by (Signature)		Date: _____ Time: _____		Received by (Signature)		Date: _____ Time: _____											
Matrix Container		WW - Wastewater VOA - 40 ml vial		W - Water A/G - Amber / Or Glass 1 Liter		S - Soil SD - Solid		L - Liquid 250 ml - Glass wide mouth		A - Air Bag		C - Charcoal tube P/O - Plastic or other		SL - sludge O - Oil			



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

October 15, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510647

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/14/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510647

Date Reported: 10/15/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-14

Project: Lateral 2C-56

Collection Date: 10/13/2015 2:00:00 PM

Lab ID: 1510647-001

Matrix: MEOH (SOIL)

Received Date: 10/14/2015 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/14/2015 10:23:33 AM	21843
Surr: DNOP	117	57.9-140		%REC	1	10/14/2015 10:23:33 AM	21843
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/14/2015 9:32:40 AM	21815
Surr: BFB	102	75.4-113		%REC	1	10/14/2015 9:32:40 AM	21815
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.032		mg/Kg	1	10/14/2015 9:32:40 AM	21815
Toluene	ND	0.032		mg/Kg	1	10/14/2015 9:32:40 AM	21815
Ethylbenzene	ND	0.032		mg/Kg	1	10/14/2015 9:32:40 AM	21815
Xylenes, Total	0.28	0.064		mg/Kg	1	10/14/2015 9:32:40 AM	21815
Surr: 4-Bromofluorobenzene	119	80-120		%REC	1	10/14/2015 9:32:40 AM	21815

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

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

Analytical Report

Lab Order 1510647

Date Reported: 10/15/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-15

Project: Lateral 2C-56

Collection Date: 10/13/2015 2:05:00 PM

Lab ID: 1510647-002

Matrix: MEOH (SOIL)

Received Date: 10/14/2015 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	10/14/2015 10:44:47 AM	21843
Surr: DNOP	108	57.9-140		%REC	1	10/14/2015 10:44:47 AM	21843
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	10/14/2015 9:59:06 AM	21815
Surr: BFB	88.2	75.4-113		%REC	1	10/14/2015 9:59:06 AM	21815
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.040		mg/Kg	1	10/14/2015 9:59:06 AM	21815
Toluene	ND	0.040		mg/Kg	1	10/14/2015 9:59:06 AM	21815
Ethylbenzene	ND	0.040		mg/Kg	1	10/14/2015 9:59:06 AM	21815
Xylenes, Total	ND	0.081		mg/Kg	1	10/14/2015 9:59:06 AM	21815
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	10/14/2015 9:59:06 AM	21815

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

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

Analytical ReportLab Order **1510647**Date Reported: **10/15/2015****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** APEX TITAN**Client Sample ID:** CS-16**Project:** Lateral 2C-56**Collection Date:** 10/13/2015 2:10:00 PM**Lab ID:** 1510647-003**Matrix:** MEOH (SOIL)**Received Date:** 10/14/2015 6:55:00 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	10/14/2015 11:06:07 AM	21843
Surr: DNOP	114	57.9-140		%REC	1	10/14/2015 11:06:07 AM	21843
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	10/14/2015 10:22:19 AM	21815
Surr: BFB	92.3	75.4-113		%REC	1	10/14/2015 10:22:19 AM	21815
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.047		mg/Kg	1	10/14/2015 10:22:19 AM	21815
Toluene	ND	0.047		mg/Kg	1	10/14/2015 10:22:19 AM	21815
Ethylbenzene	ND	0.047		mg/Kg	1	10/14/2015 10:22:19 AM	21815
Xylenes, Total	ND	0.093		mg/Kg	1	10/14/2015 10:22:19 AM	21815
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	10/14/2015 10:22:19 AM	21815

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

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

Analytical Report

Lab Order 1510647

Date Reported: 10/15/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-17

Project: Lateral 2C-56

Collection Date: 10/13/2015 2:15:00 PM

Lab ID: 1510647-004

Matrix: MEOH (SOIL)

Received Date: 10/14/2015 6:55:00 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	10/14/2015 11:27:24 AM	21843
Surr: DNOP	108	57.9-140		%REC	1	10/14/2015 11:27:24 AM	21843
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/14/2015 10:45:35 AM	21815
Surr: BFB	85.7	75.4-113		%REC	1	10/14/2015 10:45:35 AM	21815
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.048		mg/Kg	1	10/14/2015 10:45:35 AM	21815
Toluene	ND	0.048		mg/Kg	1	10/14/2015 10:45:35 AM	21815
Ethylbenzene	ND	0.048		mg/Kg	1	10/14/2015 10:45:35 AM	21815
Xylenes, Total	ND	0.095		mg/Kg	1	10/14/2015 10:45:35 AM	21815
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	10/14/2015 10:45:35 AM	21815

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

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

Analytical Report

Lab Order 1510647

Date Reported: 10/15/2015

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** APEX TITAN**Client Sample ID:** CS-18**Project:** Lateral 2C-56**Collection Date:** 10/13/2015 2:20:00 PM**Lab ID:** 1510647-005**Matrix:** MEOH (SOIL)**Received Date:** 10/14/2015 6:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	10/14/2015 11:55:29 AM	21843
Surr: DNOP	108	57.9-140		%REC	1	10/14/2015 11:55:29 AM	21843
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/14/2015 11:08:56 AM	21815
Surr: BFB	85.1	75.4-113		%REC	1	10/14/2015 11:08:56 AM	21815
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.032		mg/Kg	1	10/14/2015 11:08:56 AM	21815
Toluene	ND	0.032		mg/Kg	1	10/14/2015 11:08:56 AM	21815
Ethylbenzene	ND	0.032		mg/Kg	1	10/14/2015 11:08:56 AM	21815
Xylenes, Total	ND	0.064		mg/Kg	1	10/14/2015 11:08:56 AM	21815
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/14/2015 11:08:56 AM	21815

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510647

15-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21843	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21843	RunNo:	29523					
Prep Date:	10/14/2015	Analysis Date:	10/14/2015	SeqNo:	898178	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	10		10.00		104	57.9	140			

Sample ID	LCS-21843	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	21843	RunNo:	29523					
Prep Date:	10/14/2015	Analysis Date:	10/14/2015	SeqNo:	898199	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.2	57.4	139			
Surr: DNOP	5.0		5.000		101	57.9	140			

Sample ID	1510647-001AMS	SampType:	MS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	CS-14	Batch ID:	21843	RunNo:	29524					
Prep Date:	10/14/2015	Analysis Date:	10/14/2015	SeqNo:	898525	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.2	46.17	0	92.6	42.3	146			
Surr: DNOP	4.8		4.617		104	57.9	140			

Sample ID	1510647-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	CS-14	Batch ID:	21843	RunNo:	29524					
Prep Date:	10/14/2015	Analysis Date:	10/14/2015	SeqNo:	898526	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	51.18	0	94.9	42.3	146	12.7	28.9	
Surr: DNOP	5.5		5.118		107	57.9	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510647

15-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21815	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	21815		RunNo:	29531				
Prep Date:	10/13/2015	Analysis Date:	10/14/2015		SeqNo:	898959		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	910		1000		90.9	75.4	113			

Sample ID	LCS-21815		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 21815		RunNo: 29531					
Prep Date:	10/13/2015		Analysis Date: 10/14/2015		SeqNo: 898960		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.9	79.6	122			
Surr: BFB	980		1000		97.6	75.4	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510647

15-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21815	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	21815	RunNo:	29531					
Prep Date:	10/13/2015	Analysis Date:	10/14/2015	SeqNo:	898976	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120			

Sample ID	LCS-21815	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	21815	RunNo:	29531					
Prep Date:	10/13/2015	Analysis Date:	10/14/2015	SeqNo:	898977	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.4	80	120			
Toluene	0.96	0.050	1.000	0	96.1	80	120			
Ethylbenzene	0.97	0.050	1.000	0	97.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.4	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		120	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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1510647

RcptNo: 1

Received by/date:	<i>[Signature]</i>	10/14/15
Logged By:	Lindsay Mangin	10/14/2015 6:55:00 AM <i>[Signature]</i>
Completed By:	Lindsay Mangin	10/14/2015 7:12:35 AM <i>[Signature]</i>
Reviewed By:	TO	10/14/15

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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


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

- Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

CHAIN OF CUSTODY RECORD

 APEX Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall</u> Address: <u>AGB, NM</u> Contact: <u>A. Freeman</u> Phone: _____ Project Manager _____ PO/SO #: <u>7250415023</u>		ANALYSIS REQUESTED <div style="transform: rotate(-45deg); transform-origin: center;"> EULI BTEX SULFIDE GROUPED </div>		Lab use only Due Date: _____ Temp. of coolers when received (C°): <u>14</u> <table border="1" style="width:100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </table> Page <u>1</u> of <u>1</u>		1	2	3	4	5	
		1	2			3	4	5					
Sampler's Name <u>Ranee Deechilly</u> Sampler's Signature <u>[Signature]</u>													
Proj. No. <u>7250415023</u> Project Name <u>Lateral AC-56</u> No/Type of Containers _____													
Matrix	Date	Time	Coed	G bag	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L.	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)
S	10/13/15	1400			CS-14						1		1510647-001
S	↓	1405			CS-15						1		-002
S	↓	1410			CS-16						1		-003
S	↓	1415			CS-17						1		-004
S	↓	1420			CS-18						1		-005
NFS													
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>Same DC</u>													
Relinquished by (Signature) <u>[Signature]</u>		Date: <u>10/13/15</u> Time: <u>1920</u>		Received by (Signature) <u>[Signature]</u>		Date: <u>10/13/15</u> Time: <u>1920</u>		NOTES: <u>Bill to Tom Long</u> <u>N 22593</u>					
Relinquished by (Signature) <u>[Signature]</u>		Date: <u>10/13/15</u> Time: <u>2029</u>		Received by (Signature) <u>[Signature]</u>		Date: <u>10/14/15</u> Time: <u>0615</u>							
Relinquished by (Signature) _____		Date: _____ Time: _____		Received by (Signature) _____		Date: _____ Time: _____							
Relinquished by (Signature) _____		Date: _____ Time: _____		Received by (Signature) _____		Date: _____ Time: _____							
Matrix Container WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other													



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

October 14, 2015

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

RE: Lateral 2C-56

OrderNo.: 1510572

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/13/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1510572

Date Reported: 10/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-12

Project: Lateral 2C-56

Collection Date: 10/12/2015 1:00:00 PM

Lab ID: 1510572-001

Matrix: SOIL

Received Date: 10/13/2015 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	10/13/2015 9:34:42 AM	21813
Surr: DNOP	111	57.9-140		%REC	1	10/13/2015 9:34:42 AM	21813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/13/2015 12:16:57 PM	21799
Surr: BFB	98.8	75.4-113		%REC	1	10/13/2015 12:16:57 PM	21799
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.031		mg/Kg	1	10/13/2015 12:16:57 PM	21799
Toluene	ND	0.031		mg/Kg	1	10/13/2015 12:16:57 PM	21799
Ethylbenzene	ND	0.031		mg/Kg	1	10/13/2015 12:16:57 PM	21799
Xylenes, Total	ND	0.062		mg/Kg	1	10/13/2015 12:16:57 PM	21799
Surr: 4-Bromofluorobenzene	114	80-120		%REC	1	10/13/2015 12:16:57 PM	21799

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

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

Analytical Report

Lab Order 1510572

Date Reported: 10/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: CS-13

Project: Lateral 2C-56

Collection Date: 10/12/2015 1:05:00 PM

Lab ID: 1510572-002

Matrix: SOIL

Received Date: 10/13/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/13/2015 9:57:05 AM	21813
Surr: DNOP	111	57.9-140		%REC	1	10/13/2015 9:57:05 AM	21813
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.2		mg/Kg	1	10/13/2015 12:40:08 PM	21799
Surr: BFB	106	75.4-113		%REC	1	10/13/2015 12:40:08 PM	21799
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.042		mg/Kg	1	10/13/2015 12:40:08 PM	21799
Toluene	ND	0.042		mg/Kg	1	10/13/2015 12:40:08 PM	21799
Ethylbenzene	ND	0.042		mg/Kg	1	10/13/2015 12:40:08 PM	21799
Xylenes, Total	0.088	0.083		mg/Kg	1	10/13/2015 12:40:08 PM	21799
Surr: 4-Bromofluorobenzene	115	80-120		%REC	1	10/13/2015 12:40:08 PM	21799

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510572

14-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21813	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	21813	RunNo:	29494					
Prep Date:	10/13/2015	Analysis Date:	10/13/2015	SeqNo:	897104	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	10		10.00		104	57.9	140			

Sample ID	LCS-21813	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	21813	RunNo:	29494					
Prep Date:	10/13/2015	Analysis Date:	10/13/2015	SeqNo:	897105	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	94.4	57.4	139			
Surr: DNOP	5.2		5.000		103	57.9	140			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510572

14-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21799		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 21799		RunNo: 29502					
Prep Date:	10/12/2015		Analysis Date: 10/13/2015		SeqNo: 897743		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.8	75.4	113			

Sample ID	LCS-21799		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 21799		RunNo: 29502					
Prep Date:	10/12/2015		Analysis Date: 10/13/2015		SeqNo: 897744		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	79.6	122			
Surr: BFB	970		1000		96.8	75.4	113			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510572

14-Oct-15

Client: APEX TITAN

Project: Lateral 2C-56

Sample ID	MB-21799	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	21799	RunNo:	29502					
Prep Date:	10/12/2015	Analysis Date:	10/13/2015	SeqNo:	897775	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		110	80	120			

Sample ID	LCS-21799	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	21799	RunNo:	29502					
Prep Date:	10/12/2015	Analysis Date:	10/13/2015	SeqNo:	897776	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.5	80	120			
Toluene	0.98	0.050	1.000	0	98.2	80	120			
Ethylbenzene	0.96	0.050	1.000	0	95.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.8	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		116	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

Sample Log-In Check List

Client Name: APEX AZTEC

Work Order Number: 1510572

RcptNo: 1

Received by/date: AT 10/13/15

Logged By: Anne Thorne 10/13/2015 7:00:00 AM Anne Thorne

Completed By: Anne Thorne 10/13/2015 Anne Thorne

Reviewed By: [Signature] 10/13/15

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____


Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

CHAIN OF CUSTODY RECORD

 Office Location <u>Aztec, NM</u>		Laboratory: <u>Hall Environmental</u>		ANALYSIS REQUESTED										Lab use only Due Date:			
		Address: <u>ABQ, NM</u>												Temp. of coolers when received (C°): <u>1.4</u>			
Project Manager <u>K. Summers</u>		Contact: <u>A. Freeman</u>		<u>821 BTX</u> <u>815 TPH</u> <u>GRYDRE</u>										Page <u>1</u> of <u>1</u>			
PO/SO #: <u>7250415023</u>		Phone: _____															
Sampler's Name <u>Ranee Deechilly</u>		Sampler's Signature <u>R. Deechilly</u>															
Proj. No. <u>7250415023</u>		Project Name <u>Lateral 2C-56</u>		No/Type of Containers													
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	AG 1 L	250 ml	Glass Jar	P/O	Lab Sample ID (Lab Use Only)				
S	10/12/15	1300			CS-12						1		XY	1510572-001			
S	10/12/15	1305			CS-13						1		XX	702			
NFS																	
Turn around time <input type="checkbox"/> Normal <input type="checkbox"/> 25% Rush <input checked="" type="checkbox"/> 50% Rush <input checked="" type="checkbox"/> 100% Rush <u>same day</u>																	
Relinquished by (Signature) <u>R. Deechilly</u>		Date: 10/12/15		Time: 1715		Received by (Signature) <u>Bill Vane</u>		Date: 10/12/15		Time: 1715		NOTES: <u>2 day Rush 10/14</u> <u>Bill to Tom Long</u> <u>N 22593</u>					
Relinquished by (Signature) <u>Misty Weetman</u>		Date: 10/12/15		Time: 1821		Received by (Signature) <u>Chris Jones</u>		Date: 10/13/15		Time: 0700							
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:							
Relinquished by (Signature)		Date:		Time:		Received by (Signature)		Date:		Time:							

Matrix
ContainerWW - Wastewater
VOA - 40 ml vialW - Water
AVG - Amber / Or Glass 1 LiterS - Soil
SD - SolidL - Liquid
250 ml - Glass wide mouth

A - Air Bag

C - Charcoal tube
P/O - Plastic or other

SL - sludge

O - Oil