3R-1046

Enterprise Lateral 6B-10 Release

10-26-2016

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

State of New Mexico Energy Minerals and Natural Resources

Revised August 8, 2011

Form C-141

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

		R	leleas	e Notifica	atic	on and C	orrective	Acti	on			
					0	PERATO	R		Initial	Report	\boxtimes	Final Report
Name of C	ompany: I	Enterprise F	ield Serv	rices LLC		Contact: T	homas Long					
		ve, Farming					No. 505-599-					
Facility Na	me: Latera	al 6B-10				Facility Ty	oe: Natural G	as Gat	hering P	ipeline		-
Surface Ov	vner Nava	io/NAPI		Mineral O	wne	er: Navajo			Serial	Number	· Ν/Δ	
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		Yes	□ No	☐ Not		Mike Freem	an - NAPI					
Required												
By Whom?							me October 28,	, 2016 @	2) 1:17 p.n	n.		
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OIL CONS. DIV DIST. 3 MAR 1 6 2017

CORRECTIVE ACTION REPORT

Property:

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

> February 22, 2017 Apex Project No. 725040112217

> > Prepared for:

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

Prepared by:

Chad D'Aponti Project Scientist

Kyle Summers, CPG

Branch Manager/Senior Project

Manager

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CORRECTIVE ACTION REPORT

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

Apex Project No. 725040112217

1.0 INTRODUCTION

1.1 Site Description & Background

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

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

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

1.2 Project Objective

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

2.0 SITE RANKING

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



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

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

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

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

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

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

Enterprise Field Services, LLC Corrective Action Report Lateral 6B-10 Pipeline Release (October 2016) February 22, 2017



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

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

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

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

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

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

3.2 Soil Sampling Program

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

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

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



3.3 Laboratory Analytical Methods

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

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

4.0 DATA EVALUATION

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

4.1 Confirmation Soil Samples

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

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

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 6B-10 pipeline release Site is located within the Enterprise pipeline ROW in the SE ¼ of Section 27, Township 28 North, Range 12 West, in San Juan County, New Mexico. The Site is located on Navajo Nation Trust Land. The Site is predominantly surrounded by agricultural land operated by Navajo Agriculture Products Industry (NAPI). Oil and gas production and gathering

Enterprise Field Services, LLC Corrective Action Report Lateral 6B-10 Pipeline Release (October 2016) February 22, 2017



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

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

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

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

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

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

Enterprise Field Services, LLC Corrective Action Report Lateral 6B-10 Pipeline Release (October 2016) February 22, 2017



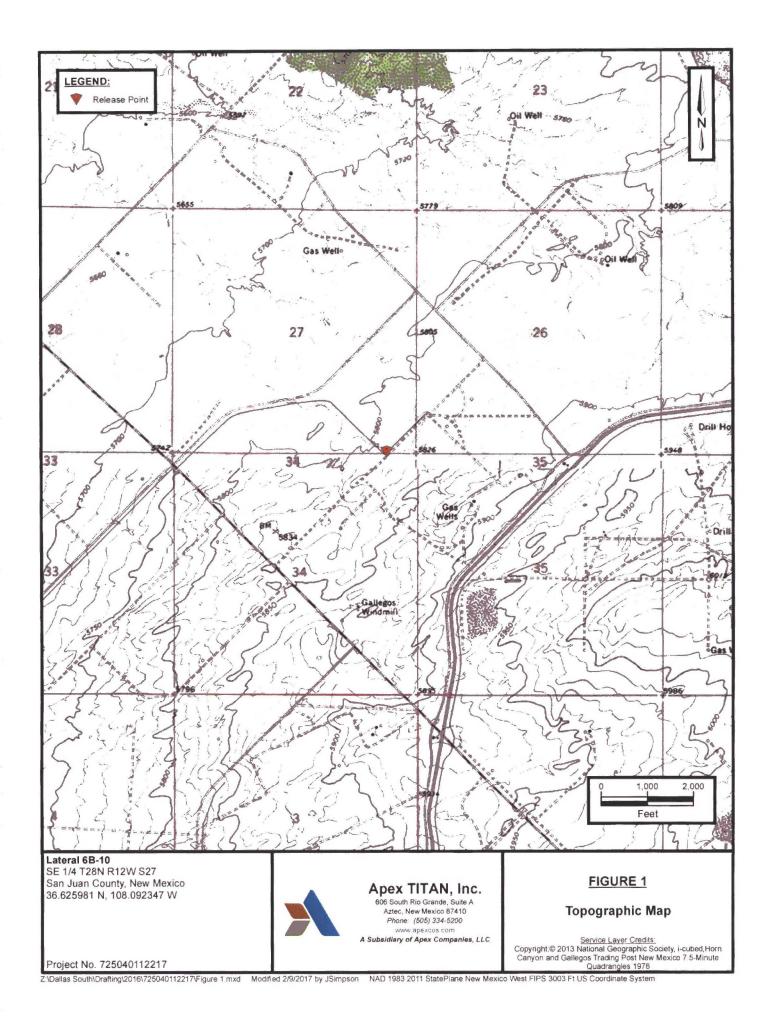
of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions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

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

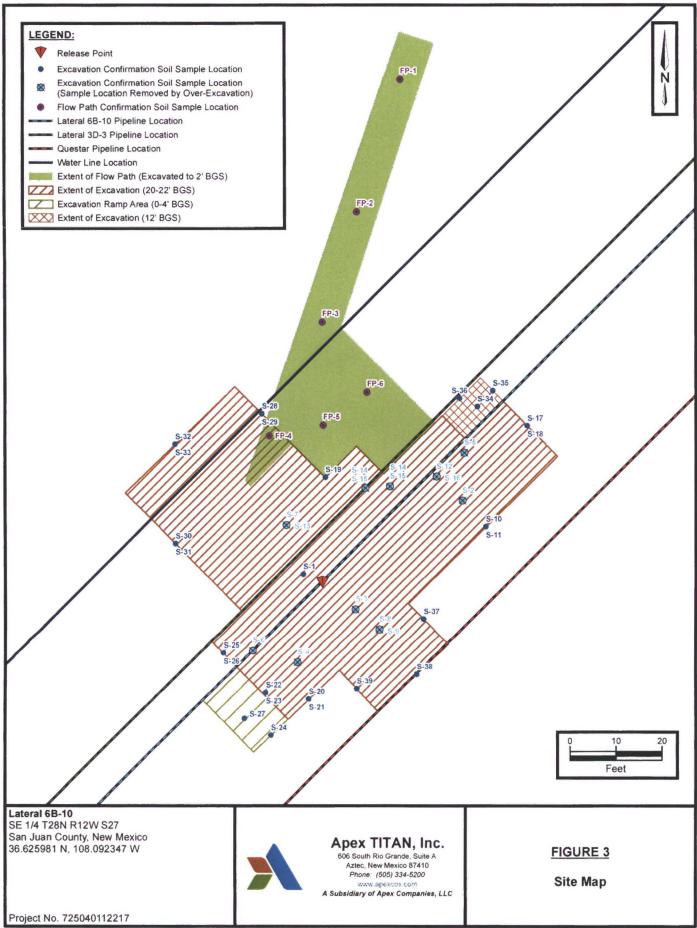


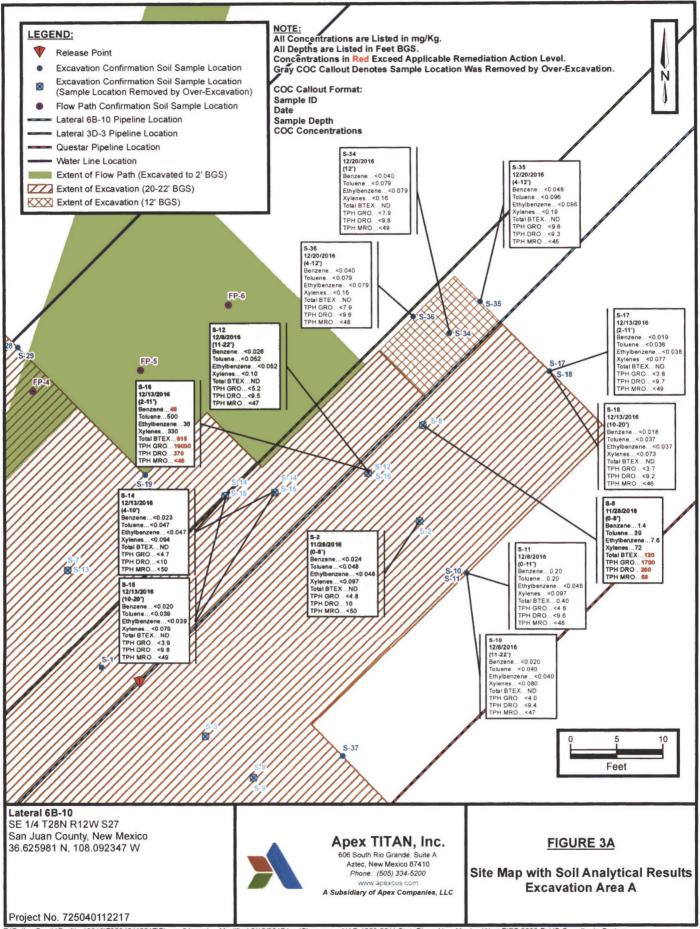
APPENDIX A

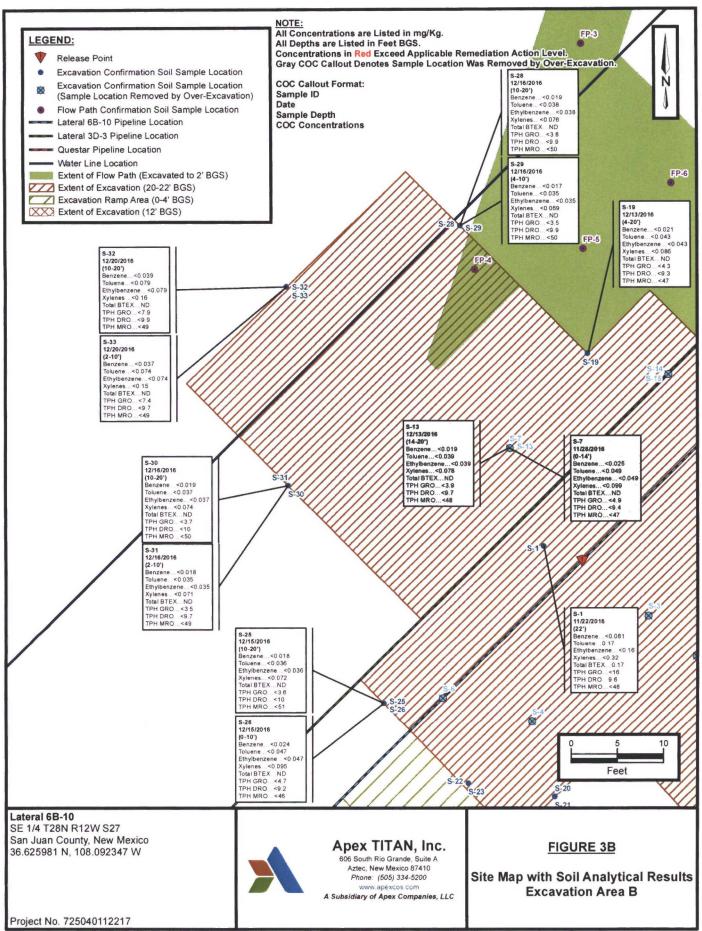
Figures

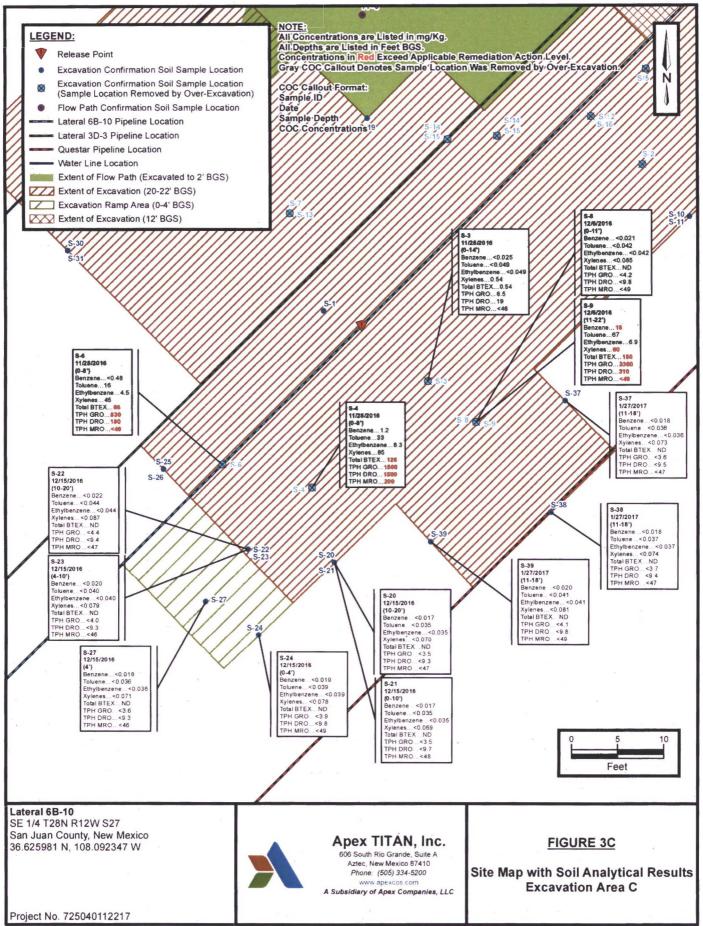


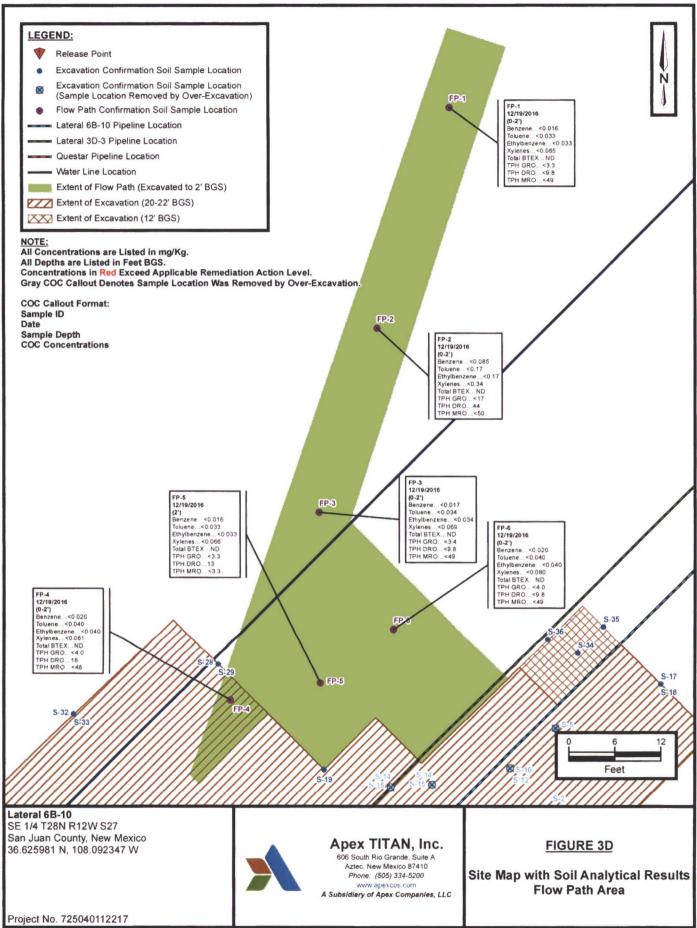














APPENDIX B

Executed C-138 Solid Waste Acceptance Forms

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

SIGNATURE:

Surface Waste Management Facility Authorized Agent

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

97257-0809

Form C-138 Revised 08/01/11

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

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NW 87505
REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Lateral 6B-10 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): UL P Section 27 T28N 12W; 36.625981 -108.092347 December 2014
4. Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume 50 yd3 bbls Known Volume (to be entered by the operator at the end of the haul) 2934 bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas Long representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load**
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I, Thomas Long 11-28-16, representative for Enterprise Products Operating authorize Envirotech, Inc. to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.
I,
5. Transporter: TBD Foutz + Butsum, Robert's Trucking
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal:
☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other Waste Acceptance Status:
☐ DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Grea Crabtree TITLE: Environmental Managar DATE: 12/6/16

TELEPHONE NO.: 505-632-0615

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

SIGNATURE:

Waste Management Facility Authorized Agent

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

97057-0609

Form C-138 Revised 08/01/11

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REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 Originating Site: Lateral 6B-10 Pipeline Location of Material (Street Address, City, State or ULSTR): UL P Section 27 T28N 12W; 36.625981-108.092347 Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume 50 (vd³) bbls Known Volume (to be entered by the operator at the end of the haul) 760/3 GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS 5. I, Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-Operator Use Only: Waste Acceptance Frequency \(\Bar{\cup} \) Monthly \(\Bar{\cup} \) Weekly \(\Bar{\cup} \) 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 10-28-16, representative for Enterprise Products Operating authorize <u>Frevirotech, Inc.</u> to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. , representative for Envirotech, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC. Transporter: TBD Foutz and Bursum, Ternco, Robert's OCD Permitted Surface Waste Management Facility Name and Facility Permit#: Envirotech, Inc. Soil Remediation Facility * Permit#: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal: □ Evaporation □ Injection □ Treating Plant ☒ Landfarm □ Landfill Waste Acceptance Status: ☑ APPROVED ☐ DENIED (Must Be Maintained As Permanent Record) TITLE: Environmental Manger DATE: 10/31/16 PRINT NAME: Greg

TELEPHONE NO.: 505-632-0615

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV

SIGNATURE:

Surface Waste Management Facility Authorized Agent

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
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4. Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. Estimated Volume 50 yd3 bbls Known Volume (to be entered by the operator at the end of the haul) 669 yd3 bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas Long , representative or authorized agent for Enterprise Products Operating do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load**
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I. Thomas Long 1-25-17, representative for Enterprise Products Operating authorize Envirotech, Inc. to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.
I,
5. Transporter: TBD Robert's Trucking, M-T-C, Foutz + Bursum
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal:
□ Evaporation □ Injection □ Treating Plant □ Landfarm □ Landfill □ Other
Waste Acceptance Status: ☐ DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Greg Craptree TITLE: Environmental Manager DATE: 1/26/1

TELEPHONE NO.: 505-632-0615



APPENDIX C Photographic Documentation





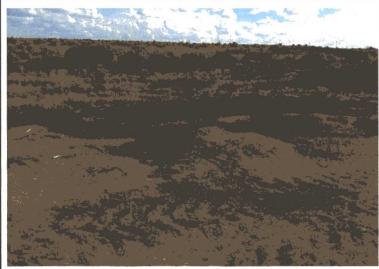
Photograph 1

View of flow path surface staining.



Photograph 2

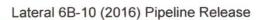
View of surface release.



Photograph 3

Removal of subsurface staining from the flow path.







Photograph 4

Removal of subsurface staining from the point of release.



Photograph 5

Start of the excavation.



Photograph 6

Apparent water table at approximately 20 feet.





Lateral 6B-10 (2016) Pipeline Release

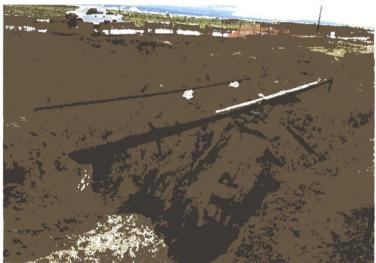
Photograph 7

View of excavation looking north.



Photograph 8

View of pipeline looking north.



Photograph 9

View of final part of excavation looking southeast.





APPENDIX D Table



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

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



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

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

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

ND = Not Detected above the Practical Quantitation Limits

NE = Not established

mg/kg = milligram per kilogram



Appendix E

Laboratory Analytical Reports & Chain of Custody Documentation



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

December 22, 2016

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

FAX

RE: Lateral 6B-10

OrderNo.: 1612B29

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612B29

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: S-32

 Project:
 Lateral 6B-10
 Collection Date: 12/20/2016 2:00:00 PM

 Lab ID:
 1612B29-001
 Matrix: SOIL
 Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S			Anal	yst: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/21/2016 10:50:22	2 AM 29323
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/21/2016 10:50:22	2 AM 29323
Surr: DNOP	83.4	70-130	%Rec	1	12/21/2016 10:50:22	2 AM 29323
EPA METHOD 8015D: GASOLINE RAN	GE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	7.9	mg/Kg	2	12/21/2016 10:55:15	5 AM G39562
Surr: BFB	90.1	68.3-144	%Rec	2	12/21/2016 10:55:15	5 AM G39562
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.039	mg/Kg	2	12/21/2016 10:55:15	5 AM B39562
Toluene	ND	0.079	mg/Kg	2	12/21/2016 10:55:15	5 AM B39562
Ethylbenzene	ND	0.079	mg/Kg	2	12/21/2016 10:55:15	5 AM B39562
Xylenes, Total	ND	0.16	mg/Kg	2	12/21/2016 10:55:15	5 AM B39562
Surr: 4-Bromofluorobenzene	97.9	80-120	%Rec	2	12/21/2016 10:55:15	5 AM B39562

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

- * 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612B29

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral 6B-10

Lab ID: 1612B29-002 Client Sample ID: S-33

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

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

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/21/2016 11:17:20	AM 29323
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/21/2016 11:17:20	AM 29323
Surr: DNOP	85.3	70-130	%Rec	1	12/21/2016 11:17:20	AM 29323
EPA METHOD 8015D: GASOLINE RANG	E				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	7.4	mg/Kg	2	12/21/2016 11:19:49	AM G39562
Surr: BFB	87.3	68.3-144	%Rec	2	12/21/2016 11:19:49	AM G39562
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.037	mg/Kg	2	12/21/2016 11:19:49	AM B39562
Toluene	ND	0.074	mg/Kg	2	12/21/2016 11:19:49	AM B39562
Ethylbenzene	ND	0.074	mg/Kg	2	12/21/2016 11:19:49	AM B39562
Xylenes, Total	ND	0.15	mg/Kg	2	12/21/2016 11:19:49	AM B39562
Surr: 4-Bromofluorobenzene	93.3	80-120	%Rec	2	12/21/2016 11:19:49	AM B39562

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 8
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612B29

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Lab ID: 1612B29-003

Lateral 6B-10

Matrix: SOIL

Client Sample ID: S-34

Collection Date: 12/20/2016 2:10:00 PM

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/21/2016 11:44:07	AM 29323
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/21/2016 11:44:07	AM 29323
Surr: DNOP	83.3	70-130	%Rec	1	12/21/2016 11:44:07	AM 29323
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	7.9	mg/Kg	2	12/21/2016 11:44:18	AM G39562
Surr: BFB	93.1	68.3-144	%Rec	2	12/21/2016 11:44:18	AM G39562
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.040	mg/Kg	2	12/21/2016 11:44:18	AM B39562
Toluene	ND	0.079	mg/Kg	2	12/21/2016 11:44:18	AM B39562
Ethylbenzene	ND	0.079	mg/Kg	2	12/21/2016 11:44:18	AM B39562
Xylenes, Total	ND	0.16	mg/Kg	2	12/21/2016 11:44:18	AM B39562
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	2	12/21/2016 11:44:18	AM B39562

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 8 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612B29

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-35

Project: Lateral 6B-10

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

Lab ID: 1612B29-004 Received Date: 12/21/2016 8:00:00 AM

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	. 1	12/21/2016 12:11:19 F	M 29323
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/21/2016 12:11:19 F	M 29323
Surr: DNOP	86.4	70-130	%Rec	1	12/21/2016 12:11:19 F	M 29323
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	9.6	mg/Kg	2	12/21/2016 12:08:53 F	M G39562
Surr: BFB	90.1	68.3-144	%Rec	2	12/21/2016 12:08:53 F	M G39562
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	2	12/21/2016 12:08:53 F	М В39562
Toluene	ND	0.096	mg/Kg	2	12/21/2016 12:08:53 F	РМ ВЗ9562
Ethylbenzene	ND	0.096	mg/Kg	2	12/21/2016 12:08:53 F	М В39562
Xylenes, Total	ND	0.19	mg/Kg	2	12/21/2016 12:08:53 F	М В39562
Surr: 4-Bromofluorobenzene	97.3	80-120	%Rec	2	12/21/2016 12:08:53 F	M B39562

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 8
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612B29

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lab ID:

Project:

1612B29-005

Lateral 6B-10

Matrix: SOIL

Client Sample ID: S-36

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

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/21/2016 12:38:37	PM 29323
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/21/2016 12:38:37	PM 29323
Surr: DNOP	87.0	70-130	%Rec	1	12/21/2016 12:38:37	PM 29323
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	7.9	mg/Kg	2	12/21/2016 12:33:27	PM G39562
Surr: BFB	86.6	68.3-144	%Rec	2	12/21/2016 12:33:27	PM G39562
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.040	mg/Kg	2	12/21/2016 12:33:27	PM B39562
Toluene	ND	0.079	mg/Kg	2	12/21/2016 12:33:27	PM B39562
Ethylbenzene	ND	0.079	mg/Kg	2	12/21/2016 12:33:27	PM B39562
Xylenes, Total	ND	0.16	mg/Kg	2	12/21/2016 12:33:27	PM B39562
Surr: 4-Bromofluorobenzene	92.0	80-120	%Rec	2	12/21/2016 12:33:27	PM B39562

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 8
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B29

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID LCS-29323	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID: LCSS	Batch ID: 29323	RunNo: 39554								
Prep Date: 12/21/2016	Analysis Date: 12/21/2016	SeqNo: 1238761	Units: mg/Kg	s: mg/Kg						
Analyte	Result PQL SPK valu	e SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit	Qual						
Diesel Range Organics (DRO)	45 10 50.0	0 0 89.8 63.8	116							
Surr: DNOP	4.2 5.00	0 83.8 70	130							
Sample ID MB-29323	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Range Organics							
Client ID: PBS	Batch ID: 29323	RunNo: 39554								
Prep Date: 12/21/2016	Analysis Date: 12/21/2016	SeqNo: 1238762 Units: mg/Kg								

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.8	70	130			
Sample ID 1612B29-001AMS	SampTy	/pe: MS		Test	tCode: El	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID: S-32	Batch	ID: 293	323	R	RunNo: 3	9554				

Client ID. 5-32	Batch	ID. 29	323	F	tunino: 3	9554					
Prep Date: 12/21/2016	Analysis D	ate: 12	2/21/2016	S	SeqNo: 1238921 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	45	9.4	46.90	0	96.0	51.6	130				
Surr: DNOP	4.0		4.690		84.8	70	130				

Sample ID 1612B29-0	01AMSD Samp	Type: MS	SD	TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: S-32	Client ID: S-32 Batch ID: 29323 RunNo: 39554												
Prep Date: 12/21/201	6 Analysis	Date: 12	2/21/2016	S	SeqNo: 1	238948	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Diesel Range Organics (DRC) 47	49.31	0	94.9	51.6	130	3.80	20					
Surr: DNOP	4.2		4.931		85.9	70	130	0	0				

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 6 of 8

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612B29 22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: G39562

RunNo: 39562

Analysis Date: 12/21/2016

SeqNo: 1239331

Units: mg/Kg

Analyte

Prep Date:

Result PQL 5.0 SPK value SPK Ref Val %REC LowLimit HighLimit

Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 900

1000

90.4

144

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

%RPD

Client ID:

LCSS

Batch ID: G39562

RunNo: 39562

74.6

68.3

61.3

68.3

LowLimit

68.3

Prep Date:

Analyte

Analysis Date: 12/21/2016

SeqNo: 1239332

Units: mg/Kg

%RPD

Gasoline Range Organics (GRO) Surr: BFB

29 930

Result

PQL SPK value SPK Ref Val 5.0 25.00 1000

%REC 116 93.0

HighLimit 123

144

RPDLimit

RPDLimit

Sample ID 1612B29-001AMS

Sample ID 1612B29-001AMSD

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: S-32 Prep Date:

Batch ID: G39562 Analysis Date: 12/21/2016

41

1500

39.31

1572

RunNo: 39562

Units: mg/Kg

150

144

%RPD

Analyte Gasoline Range Organics (GRO)

SPK value SPK Ref Val Result PQL

SeaNo: 1239333 %REC LowLimit

104

92.2

HighLimit

RPDLimit

Qual

Surr: BFB

SampType: MSD

7.9

7.9

TestCode: EPA Method 8015D: Gasoline Range

Client ID: Prep Date:

S-32

Batch ID: G39562

RunNo: 39562

Units: mg/Kg

144

Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

Result

46

1500

Analysis Date: 12/21/2016 SPK value SPK Ref Val

39.31

1572

SeqNo: 1239334 %REC 117

95.4

LowLimit 61.3

68.3

HighLimit 150

%RPD **RPDLimit** 11.9

0

20 0

- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Page 7 of 8

- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612B29

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID	RB	SampT	ype: ME	BLK	TestCode: EPA Method 8021B: Volatiles								
Client ID:	PBS	Batch	ID: B3	9562	F	RunNo: 3	9562						
Prep Date:		Analysis D	ate: 12	2/21/2016	5	SeqNo: 1	239369	Units: mg/K	ts: mg/Kg				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		ND	0.025										
Toluene		ND	0.050										
Ethylbenzene		ND	0.050										
Xylenes, Total		ND	0.10										
Surr: 4-Brom	nofluorobenzene	1.0		1.000		99.9	80	120					
Sample ID	100NG BTEX LCS	SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles								
Client ID:	LCSS	Batch	1D: B3	9562	F	RunNo: 3							
Prep Date:		Analysis D	ate: 12	2/21/2016	5	SeqNo: 1							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene		1.1	0.025	1.000	0	109	75.2	115					
Toluene		1.1	0.050	1.000	0	106	80.7	112					
Ethylbenzene		1.0	0.050	1.000	0	105	78.9	117					
Xylenes, Total		3.1	0.10	3.000	0	102	79.2	115					
Surr: 4-Brom	nofluorobenzene	1.0		1.000		101	80	120					
Sample ID	1612B29-002AMS	SampT	ype: MS	3	Tes	tCode: E	PA Method	8021B: Volat	tiles				
Client ID:	S-33	9562	F	RunNo: 3	9562								
Prep Date:		Analysis D	ate: 12	2/21/2016	5	SeqNo: 1	239371	Units: mg/K	a				

Client ID: S-33	Batcl	n ID: B3	9562	F	RunNo: 3	9562							
Prep Date:	Analysis [ate: 12	2/21/2016	S	SeqNo: 1	239371	Units: mg/K	mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	1.6	0.037	1.481	0	108	61.5	138						
Toluene	1.6	0.074	1.481	0	106	71.4	127						
Ethylbenzene	1.6	0.074	1.481	0	105	70.9	132						
Xylenes, Total	4.5	0.15	4.444	0	102	76.2	123						
Surr: 4-Bromofluorobenzene	1.5		1.481		101	80	120						

Sample ID 1612B29-002AM	ISD SampT	ype: MS	SD	TestCode: EPA Method 8021B: Volatiles								
Client ID: S-33	Batch	ID: B3	9562	R	RunNo: 3							
Prep Date:	Analysis D	ate: 12	2/21/2016	S	SeqNo: 1	(g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	1.6	0.037	1.481	0	107	61.5	138	1.20	20			
Toluene	1.5	0.074	1.481	0	98.8	71.4	127	7.50	20			
Ethylbenzene	1.4	0.074	1.481	0	95.9	70.9	132	9.48	20			
Xylenes, Total	0	93.5	76.2	123	9.04	20						
Surr: 4-Bromofluorobenzene 1.4 1.481					92.3	80	120	0	0			

Qualifiers:

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

Analyte detected in the associated Method Blank

Page 8 of 8



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	APEX AZTEC	W	ork Order Number	1612	329			RoptNo	o: 1
Received by/dat	te: A_	12/2/11	6	27 100	A AND MESSES TO PER			and the second s	
Logged By:	Anne Thome	12/2	1/2016 8:00:00 AM	М		ame -	Am	_	
Completed By:	Anne Thomas	12/2	1/2016 8:26:21 AM	VI.		Ame ,	1	_	The state of the s
Reviewed By:	A	17	121/14			Cine)	,,		
Chain of Cus	stody		,						
1. Custody sea	als intact on sam	ple bottles?		Yes		No		Not Present	
2. Is Chain of	Custody complete	a ?		Yes	Y	No		Not Present	
3. How was the	e sample delivere	ed?		Cour	ier				
Log In									
4. Was an atte	empt made to coo	ol the samples?		Yes	V	No		NA 🗆]
5. Were all sar	mples received a	t a temperature of >	0° C to 6.0°C	Yes	V	No		NA 🗆	
6. Sample(s) i	in proper containe	er(s)?		Yes	Y	No			
7. Sufficient sa	ample volume for	indicated test(s)?		Yes	V	No			
8. Are samples	s (except VOA ar	nd ONG) property pre	served?	Yes	V	No			
9. Was presen	vative added to b	ottles?		Yes		No	~	NA 🗆	
10.VOA vials h	ave zero headsp	ace?		Yes		No		No VOA Vials	
11. Were any s	ample containers	received broken?		Yes		No	V	# of preserved	
					f =)			bottles checked	
The second secon	work match bottle pancles on chair			Yes	V	No		for pH:	or >12 unless noted)
	-	ied on Chain of Custo	odv?	Yes	~	No		Adjusted?	
	hat analyses wen			Yes	~	No			
	Iding times able to			Yes	V	No		Checked by:	distribution plants and the second se
(11 110) 1101119		,							
Special Hand	dling (If appli	cable)							
16. Was client r	notified of all disc	repancies with this or	der?	Yes		No		NA 🗹	
Perso	n Notified:		Date				-	()	
By WI	hom:		Via:	☐ eMa	il 🔲	Phone	Fax	☐ In Person	
Regar	rding:								
Client	Instructions:				LANCE AND DESCRIPTION				
17. Additional r	remarks:								J
18. Cooler Info	ormation								
Cooler N		Condition Seal Int	act Seal No	Seal Da	ite	Signed B	sy		
1	1.0 G	Good Yes		9 194 N 300 M 40					

																CHAIN O	F CUSTODY RECORD
	-											- Charles		ANALYSIS //	7///	111	Lab use only
									21	211	6			REQUESTED	1. / / /	111	/ Due Date:
ΛΪ	DEV	•				Lat	oratory: dress: _		1	211	2.11	1		/ 4/	///	/ / /	
	>EX	11	. 1		11	Add	dress: _		H	134	N	m		/60/	/////	$^{\prime}$	Temp. of coolers when received (C°): \ . O
Office	e Locatio	on	2+2		N-W			1						INFO	1///		
	-		0			Co	ntact: _	H	HI	ten	rar	1					1 2 3 4 5
			_			Pho	one:				_	·		1/60/6	/-/-/	/ / /	Pageof
		ger_K	7	mm	reis		/SO#: _							1000		///	
Sampl	er's Name	10 1	7	,		Samp	oler's Sign	ature	1/2	September 1				1.0/	1-1-1-1	/ /	8 *
	Chio	DH	por	n+	r-		Jers Sign	10	11		•			78/			
Proj. N	lo.		Proje	ect Na	me					No/Ty	pe of C	ontainers	3	MEK MH ORO		//	
725	04011	2217	-	Lan	teral	63	-10	T _	1 _				1	5/21/		/ /	
Matrix	Date	Time	CoEp	Grab	Identifyi	ng Marks of	Sample(s)	Start	End	VOA	A'G	250 ml Glass	PS Sar		////	La	b Sample ID (Lab Use Only)
5	12/20/16	17:00			S	~ 32			-			1		ì		14	12B29-col
1		14:05			٤	-33						1					-202
		14:10			S	-34						1					-263
		14:15			٤	-35						1					-coy
		14:20			S	-36	(4)					1		1 1			745
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Reling	uished by	(Signature)		1	Date:	Time:	Regeiv	red by:	(Signa	ture)			ite:	Time: NOTES:			
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nempt q	uished by	(Signature)		- In	Date:	187 4	Hecen	red by	Asigna	lure			te:	Time: 131	11 70 /0	om Len	F
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Relinq	uished by	(Signature)		ı	Date:	Time:	Receiv	red by:	(Signa	iture)		Da	ite:	Time:	W NOG	819	Sary
Matrix	wv	V - Wastewa	ter	1	W - Water	S - Soi	SD - So	lid L	Liquid	A t	- Air Be	ıg _	C - Cha	rcoal tube 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

December 22, 2016

Kyle Summers APEX TITAN 606 S. Rio Grande Unit A Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Lateral 6B-10

OrderNo.: 1612A46

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral 6B-10

Lab ID: 1612A46-001

Client Sample ID: FP-1

Collection Date: 12/19/2016 11:30:00 AM

Matrix: MEOH (SOIL) Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/20/2016 12:09:45 PM	A 29291
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/20/2016 12:09:45 PM	A 29291
Surr: DNOP	73.4	70-130	%Rec	1	12/20/2016 12:09:45 PM	A 29291
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	12/20/2016 10:02:37 AM	И G39532
Surr: BFB	87.6	68.3-144	%Rec	1	12/20/2016 10:02:37 AM	и G39532
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.016	mg/Kg	1	12/20/2016 10:02:37 AM	и вз9532
Toluene	ND	0.033	mg/Kg	1	12/20/2016 10:02:37 AM	и B39532
Ethylbenzene	ND	0.033	mg/Kg	1	12/20/2016 10:02:37 AM	M B39532
Xylenes, Total	ND	0.065	mg/Kg	1	12/20/2016 10:02:37 AM	и В39532
Surr: 4-Bromofluorobenzene	94.9	80-120	%Rec	1	12/20/2016 10:02:37 AM	и вз9532

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-2

Project: Lateral 6B-10

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

Lab ID: 1612A46-002

Matrix: MEOH (SOIL) Received Date: 12/20/2016 8:10:00 AM

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-3

Project: Lateral 6B-10

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

Lab ID: 1612A46-003

Matrix: MEOH (SOIL) Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S	×			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/20/2016 12:52:43	PM 29291
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	12/20/2016 12:52:43	PM 29291
Surr: DNOP	93.3	70-130		%Rec	1	12/20/2016 12:52:43	PM 29291
EPA METHOD 8015D: GASOLINE RA	NGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	12/20/2016 10:51:19	AM G39532
Surr: BFB	92.3	68.3-144		%Rec	1	12/20/2016 10:51:19	AM G39532
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.017		mg/Kg	1	12/20/2016 10:51:19	AM B39532
Toluene	ND	0.034		mg/Kg	1	12/20/2016 10:51:19	AM B39532
Ethylbenzene	ND	0.034		mg/Kg	1	12/20/2016 10:51:19	AM B39532
Xylenes, Total	ND	0.069		mg/Kg	1	12/20/2016 10:51:19	AM B39532
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	12/20/2016 10:51:19	AM B39532

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 9
- P Sample pH Not In Range
- RL. Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Lateral 6B-10

Lab ID: 1612A46-004

Client Sample ID: FP-4

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

Matrix: MEOH (SOIL) Received Date: 12/20/2016 8:10:00 AM

Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S	34 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 -		Analyst	том
Diesel Range Organics (DRO)	18	9.7	mg/Kg	1	12/20/2016 1:14:07 PM	29291
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/20/2016 1:14:07 PM	29291
Surr: DNOP	90.7	70-130	%Rec	1	12/20/2016 1:14:07 PM	29291
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	12/20/2016 11:15:52 A	M G39532
Surr: BFB	105	68.3-144	%Rec	1	12/20/2016 11:15:52 A	M G39532
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.020	mg/Kg	1	12/20/2016 11:15:52 A	M B39532
Toluene	ND	0.040	mg/Kg	1	12/20/2016 11:15:52 A	M B39532
Ethylbenzene	ND	0.040	mg/Kg	1	12/20/2016 11:15:52 A	M B39532
Xylenes, Total	ND	0.081	mg/Kg	1	12/20/2016 11:15:52 A	M B39532
Surr: 4-Bromofluorobenzene	101	80-120	%Rec	1	12/20/2016 11:15:52 A	M B39532

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

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

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-5

Project: Lat

Lateral 6B-10 Collection Date: 12/19/2016 11:50:00 AM

Lab ID: 1612A46-005

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S		27	Analys	: TOM
Diesel Range Organics (DRO)	13	9.5	mg/Kg	1	12/20/2016 1:35:44 PM	29291
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/20/2016 1:35:44 PM	29291
Surr: DNOP	94.7	70-130	%Rec	1	12/20/2016 1:35:44 PM	29291
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	12/20/2016 11:40:20 A	M G3953
Surr: BFB	93.0	68.3-144	%Rec	1	12/20/2016 11:40:20 A	M G3953
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.016	mg/Kg	1	12/20/2016 11:40:20 A	M B39532
Toluene	ND	0.033	mg/Kg	1	12/20/2016 11:40:20 A	M B39532
Ethylbenzene	ND	0.033	mg/Kg	1	12/20/2016 11:40:20 A	M B39532
Xylenes, Total	ND	0.066	mg/Kg	1	12/20/2016 11:40:20 A	M B39532
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	12/20/2016 11:40:20 A	M B39532

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612A46

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: FP-6

Project: Lateral 6B-10 Collection Date: 12/19/2016 11:55:00 AM

Lab ID: 1612A46-006

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S			Analys	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/20/2016 1:57:13 PM	29291
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/20/2016 1:57:13 PM	29291
Surr: DNOP	93.4	70-130	%Rec	1	12/20/2016 1:57:13 PM	29291
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	12/20/2016 12:04:47 P	M G39532
Surr: BFB	93.8	68.3-144	%Rec	1	12/20/2016 12:04:47 P	M G39532
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.020	mg/Kg	1	12/20/2016 12:04:47 P	M B39532
Toluene	ND	0.040	mg/Kg	1	12/20/2016 12:04:47 P	M B39532
Ethylbenzene	ND	0.040	mg/Kg	1	12/20/2016 12:04:47 P	M B39532
Xylenes, Total	ND	0.080	mg/Kg	1	12/20/2016 12:04:47 P	M B39532
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	1	12/20/2016 12:04:47 P	M B39532

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 9 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

RPDLimit

1612A46 22-Dec-16

Qual

Qual

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID	LCS-29291
-----------	-----------

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS

Batch ID: 29291

RunNo: 39526

Prep Date: 12/20/2016 Analysis Date: 12/20/2016

SeqNo: 1237875

Units: mg/Kg

116

130

%RPD

%RPD

HighLimit Analyte Result PQL SPK value SPK Ref Val %REC LowLimit Diesel Range Organics (DRO) 44 10 50.00 88.0 63.8 Surr: DNOP

4.5 5.000 90.9 70

Sample ID MB-29291

SampType: MBLK Batch ID: 29291

TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 39526

Client ID: Prep Date: 12/20/2016

PBS

HighLimit

Analysis Date: 12/20/2016 SeqNo: 1237877 Units: mg/Kg

Analyte Result PQL Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO)

Surr: DNOP

ND 50 9.2

10.00

SPK value SPK Ref Val

91.9

%REC

LowLimit

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

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Value above quantitation range E

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 7 of 9

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612A46

22-Dec-16

Client: Project: APEX TITAN Lateral 6B-10

Sample ID RB

Result

ND

830

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: G39532

RunNo: 39532

LowLimit

Prep Date: Analyte

Analysis Date: 12/20/2016 PQL

SeqNo: 1238355

Units: mg/Kg HighLimit

144

Qual

Gasoline Range Organics (GRO)

5.0

SPK value SPK Ref Val

SPK value SPK Ref Val

1000

25.00

1000

83.3

%REC

68.3

%RPD **RPDLimit**

Surr: BFB

Sample ID 2.5UG GRO LCS

SampType: LCS

5.0

TestCode: EPA Method 8015D: Gasoline Range

%RPD

%RPD

Client ID: Prep Date:

LCSS

Batch ID: G39532

RunNo: 39532

%REC

113

94.4

Analyte Gasoline Range Organics (GRO) Result 28

940

Result

Analysis Date: 12/20/2016

SeqNo: 1238356

Units: mg/Kg HighLimit

RPDLimit Qual

Surr: BFB

Client ID:

Prep Date:

Sample ID 1612A46-001AMS

FP-1

SampType: MS

TestCode: EPA Method 8015D: Gasoline Range

68.3

74.6

68.3

LowLimit

150

144

123

144

16.35

16.35

654.0

SegNo: 1238357 %REC LowLimit

RunNo: 39532

Units: mg/Kg HighLimit

Qual

Analyte Gasoline Range Organics (GRO)

PQL 16 3.3 600 654.0

Batch ID: G39532

Analysis Date: 12/20/2016

SPK value SPK Ref Val

0

95.5 61.3 92.0

RPDLimit

Surr: BFB

Sample ID 1612A46-001AMSD

SampType: MSD

TestCode: EPA Method 8015D: Gasoline Range

Client ID: FP-1 Prep Date:

Batch ID: G39532 Analysis Date: 12/20/2016

22

620

RunNo: 39532

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Sum: BFB

Result PQL SPK value SPK Ref Val

3.3

SeqNo: 1238358 %REC

132

94.4

LowLimit

61.3

68.3

HighLimit 150

144

%RPD 32.3 0

RPDLimit Qual 20 R 0

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits % Recovery outside of range due to dilution or matrix B Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 8 of 9

P Sample pH Not In Range

RI. Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612A46

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID RB	SampT	ype: ME	BLK	Test	Code: El	e: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch	Batch ID: B39532			RunNo: 39532						
Prep Date:	Analysis D	ate: 12	2/20/2016	S	SeqNo: 1238384			g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	0.89		1.000		88.6	80	120				

Sample ID 100NG BTEX LC	S Samp	Type: LC	S	Tes	PA Method	8021B: Volat	tiles			
Client ID: LCSS	Batc	Batch ID: B39532 RunNo: 39532								
Prep Date:	Analysis [Date: 12	2/20/2016	5	SeqNo: 1	238385	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	106	75.2	115			
Toluene	0.98	0.050	1.000	0	98.2	80.7	112			
Ethylbenzene	0.94	0.050	1.000	0	93.8	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	92.5	79.2	115			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.8	80	120			

Sample ID 1612A46-003AM	S Samp	SampType: MS TestCode: EPA Method 8021B: Volatiles												
Client ID: FP-3	Batc	h ID: B3	9532	7532 RunNo: 39562										
Prep Date:	Analysis [Date: 12	2/21/2016	8	SeqNo: 1	239367	Units: mg/K	(g						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene	0.75	0.017	0.6897	0	109	61.5	138							
Toluene	0.73	0.034	0.6897	0	106	71.4	127							
Ethylbenzene	0.71	0.034	0.6897	0.003380	103	70.9	132							
Xylenes, Total	2.0	0.069	2.069	0.01910	98.0	76.2	123							
Surr: 4-Bromofluorobenzene	0.64		0.6897		92.6	80	120							

Sample ID 1612A46-003AM	ISD SampT	ype: MS	SD	Tes	tCode: E	PA Method	8021B: Volat	tiles		
Client ID: FP-3	Batch	Batch ID: B39532 RunNo: 39562								
Prep Date: Analysis Date: 12/21/2016 SeqNo: 1239368 Units: mg/Kg										
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.76	0.017	0.6897	0	110	61.5	138	0.639	20	
Toluene	0.73	0.034	0.6897	0	107	71.4	127	0.593	20	
Ethylbenzene	0.71	0.034	0.6897	0.003380	103	70.9	132	0.213	20	
Xylenes, Total	0.01910	97.1	76.2	123	0.978	20				
Surr: 4-Bromofluorobenzene	0.65		0.6897		93.8	80	120	0	0	

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

- P Sample pH Not In Range
- RI. Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	APEX AZTEC	Work Order Number	1612A46		RcptNo:	1
Received by/dat	e UP	12/20/	16		And the Capital and and the April 1879 1878 18 18 18 18 18 18	CONTRACTOR OF STATE O
Logged By:	Ashley Gallegos	12/20/2016 8:10:00 AM	M	A		
Completed By:	Ashley Gallegos	12/20/2016 8:20:45 Al	М	AZ		
Reviewed By:	as	12/20/16		V		
Chain of Cus	stody					
1. Custody sea	als intact on sample bottles?		Yes [No []	Not Present	
2. Is Chain of (Custody complete?		Yes 🗸	No []	Not Present	
3. How was the	e sample delivered?		Courier			
Log In						
4. Was an atte	empt made to cool the samples	?	Yes 🗸	No []	NA [.	
5. Were all sai	mples received at a temperatur	e of >0° C to 6.0°C	Yes 🗹	No 🗌	NA []	
6. Sample(s)	In proper container(s)?		Yes 🗹	No 🗆		
7. Sufficient sa	ample volume for indicated test	(s)?	Yes 🗸	No 🖂		
8. Are sample:	s (except VOA and ONG) prope	erly preserved?	Yes 🗸	No 🗌		
9. Was preser	vative added to bottles?		Yes [No 🗸	NA 🗀	
10. VOA vials h	nave zero headspace?		Yes [No 🗔	No VOA Vials	
11. Were any s	sample containers received brok	ken?	Yes	No 🗸	# of preserved	
				🗀	bottles checked	
	work match bottle labels? epancies on chain of custody)		Yes 🗹	No 🗔	for pH: (<2 c	or >12 unless noted)
	s correctly identified on Chain of	of Custody?	Yes 🗸	No []	Adjusted?	to entropy speciment of the se
14. Is it clear w	hat analyses were requested?		Yes 🗸	No 🗌		
	olding times able to be met? y customer for authorization.)		Yes 🗹	No []	Checked by:	V TO THE WORLD CO. S. P. S.
Special Hand	dling (if applicable)					
16. Was client	notified of all discrepancies with	this order?	Yes 🗌	No []	NA 🗹	1
By W Rega	on Notified: /hom: rding: I Instructions:	Date Via:	_ eMail _	Phone Fa	In Person	
17. Additional	remarks:	CONTRACTOR STANDARD CONTRA				.1
18. Cooler Info	ormation		Seal Date	Signed By	_	

																CHAIN OF	CUSTODY RECORD
Ι,														ANALYSIS / 4 /			Lab use only
	36					Laboratory:		1 1	1011	4				REQUESTED L	//		Due Date:
Λ	DEV	,				1							—	1 9	/ /	1 / 1 /	/
	PEX	//	1		ol aa	Address: _	-	H	150	2	N.or	1			/ / /	'	Temp. of coolers
Offic	e Locatio	n#	27.	lc_	N.M		٨	***						1 / 1/	//		when received (C°):
						Contact:	H	1/4	tin	150			_		1 1	1 / /	1 2 3 4 5
						Phone:							_	1 60/	//		Page of
Proje	ect Mana	ger	. 5,	in	mers	PO/SO#: _									/ / /		u W
Samp	npler's Name Sampler's Signature										-//						
	CIVAL TO ADOM TO Project Name District Of G I Identifying Marks of Sample(s) No/Type of Containers No/Type of Containers No/Type of Containers No/Type of Containers									11							
Proj. I	No.		Proje	ect Na	ame .						Containe	ers		7///		//	*
725	-04011	2017	1	int	eral b	13-10								03/27 / /	/ / /	/ /	
Matrix	Date	Time	COED	G r a b	Identifying Ma	rks of Sample(s)	Start	End	VOA	A/G	250 ml	Glass	P/0	17////	///	Lab	Sample ID (Lab Use Only)
5	0/19/16	11:30			F9-1							1				1013	146-001
		11:35			FP-	2						J					-002
		11:40			FP-	3						1		V			- 003
		11:45			F7-4	1						1		7			-004
		1150			FAL	5						i				,	-005
		11:55			FP.							i		44		-	-00(D
		11.00											_		1-1-		
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Turn	round time	☐ Non	mal		25% Rush 🗆	50% Rush 2	7100%	Dueb								1	
Relino	uished by	Signature)		T	Date: 1	Time: Receiv	ed by:	(Signa	ture)	į.	1	Date:	, 1	Time: NOTES:	- Amonton		
K	uished by	£-			2-19-16 154	UIN	in t	- 1 1/2	A.F		12	Date:	16	Time: NOTES:		2	
101	bill	Wae)	t	_ 1	Date: Ugil 19 Date:	Time: Received Receiv	41)	10	1		12/3	Date:		Time:	TC	om long	Swin
Heimo	uished by	oignature)			Date:	inne: necety	eu by:	(Signa	iure)		'	Date:		Time: Non AFE #	11:01	819	200
Relino	uished by	Signature)			Date:	Time; Receiv	ed by:	(Signa	ture)	~	E	Date:	1	Time: Non HI-L- P	1000		- Control of the Cont
Matrix	WV	V - Wastewal	er		W - Water	S - Soil SD - Soi	id L	- Liquid	i A	- Air Ba	ag	C-	Chai	coal tube 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

January 31, 2017

Kyle Summers APEX TITAN 606 S. Rio Grande Unit A Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: 6B-10

OrderNo.: 1701B78

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/28/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1701B78

Date Reported: 1/31/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

6B-10

Lab ID:

1701B78-001

Client Sample ID: S-37

Collection Date: 1/27/2017 9:30:00 AM

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

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

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 7
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1701B78

Date Reported: 1/31/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lab ID:

Project: 6B-10

6B-10 1701B78-002 Client Sample ID: S-38

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

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

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

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1701B78

Date Reported: 1/31/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: 6B-10

Lab ID:

1701B78-003

Client Sample ID: S-39

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

Received Date: 1/28/2017 9:40:00 AM

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	1/30/2017 10:51:57 AM	R40362
Surr: BFB	104	70-130	%Rec	1	1/30/2017 10:51:57 AM	R40362
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	1/30/2017 11:06:19 AM	29938
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/30/2017 11:06:19 AM	29938
Surr: DNOP	117	70-130	%Rec	1	1/30/2017 11:06:19 AM	29938
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene	ND	0.020	mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Toluene	ND	0.041	mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Ethylbenzene	ND	0.041	mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Xylenes, Total	ND	0.081	mg/Kg	1	1/30/2017 10:51:57 AM	A40362
Surr: 1,2-Dichloroethane-d4	82.6	70-130	%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: 4-Bromofluorobenzene	89.3	70-130	%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: Dibromofluoromethane	112	70-130	%Rec	1	1/30/2017 10:51:57 AM	A40362
Surr: Toluene-d8	96.6	70-130	%Rec	1	1/30/2017 10:51:57 AM	A40362

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1701B78

31-Jan-17

Client:

APEX TITAN

Project:

6B-10

Client ID: LCSS		ID: 29	A 70.7		RunNo: 4		1.1-14			
Prep Date: 1/30/2017	Analysis D	ate: 1/	30/2017	5	SeqNo: 1	265214	Units: mg/K	.g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.7	63.8	116			
Surr: DNOP	5.1		5.000		101	70	130			
Sample ID MB-29938	SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: PBS	Batch	ID: 29	938	RunNo: 40363						
	Analysis D	ate: 1/	30/2017	S	SeqNo: 1	265215	Units: mg/K	(g		
Prep Date: 1/30/2017										
Prep Date: 1/30/2017 Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Result ND	PQL 10	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte			SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sample ID 1701B78-001AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: S-37	Batch	1D: 29	938	F	RunNo: 4	0363				
Prep Date: 1/30/2017	Analysis D	ate: 1/	30/2017	S	SeqNo: 1	265236	Units: mg/F	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.3	46.69	3.017	88.6	51.6	130			
Surr: DNOP	5.1		4.669		109	70	130			

Sample ID 1701B78-001AMS	D SampTy	pe: MS	SD	Test	Code: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: S-37	Batch	ID: 29	938	R	lunNo: 4	0363				
Prep Date: 1/30/2017	0/2017 Analysis Date: 1/30/2017 SeqNo: 1265237 Units: mg/Kg									
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	9.7	48.73	3.017	90.1	51.6	130	5.54	20	
Surr: DNOP	5.3		4.873		108	70	130	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 4 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1701B78

31-Jan-17

Client: APEX T Project: 6B-10	ITAN ·		0	,			in the second se			
Sample ID rb	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: PBS	Batch	ID: A4	0362	F	RunNo: 40	0362				
Prep Date:	Analysis D	ate: 1/	30/2017		SeqNo: 1:	265201	Units: mg/K	(g		
	_								DDDI :it	Ovel
Analyte	Result	PQL 0.025	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene Toluene	ND	0.025								
Ethylbenzene	ND	0.050						• .		
Xylenes, Total	ND	0.10		9						
Surr: 1,2-Dichloroethane-d4	0.49	0.10	0.5000		97.9	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.8	70	130			
Surr: Dibromofluoromethane	0.56		0.5000		112	70	130			
Surr: Toluene-d8	0.50		0.5000		100	70	130			
Sample ID 100ng Ics	SampT	ype: LC	s.	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: LCSS		n ID: A4			RunNo: 4					
Prep Date:	Analysis D)ate: 1/	30/2017		SeqNo: 1:	265823	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	. 0	110	70	130			
Toluene	0.98	0.050	1.000	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.8	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.1	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.49		0.5000		98.2	70	130			
Sample ID 1701b78-001ams	SampT	ype: MS	S	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: S-37	Batcl	n ID: A4	0362	F	RunNo: 4	0362				
Prep Date:	Analysis D)ate: 1/	30/2017		SeqNo: 1	265872	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	.107	61.9	146			
Toluene	0.93	0.050	1.000	0.01132	91.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		93.0	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.8	70	130	ı		
Surr: Dibromofluoromethane	0.58		0.5000		117	70	130			
Surr: Toluene-d8	0.48		0.5000		95.6	70	130	-		
Sample ID 1701b78-001ams	d Samp1	ype: MS	SD	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: S-37		n ID: A4		F	RunNo: 4	0362				
Prep Date:	Analysis D)ate: 1/	30/2017		SeqNo: 1	265873	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.025	1.000	0	96.5	61.9	146	10.6	20	
Toluene	0.89	0.050	1.000	0.01132	88.3	70	130	3.70	20	

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 5 of 7

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1701B78

31-Jan-17

Client:

APEX TITAN

Project:

6B-10

Sample ID 1701b78-001ams	SampT	SampType: MSD			TestCode: EPA Method 8260B: Volatiles Short List					
Client ID: S-37	Batch	ID: A4	0362	R	RunNo: 40362					
Prep Date:	Analysis D	ate: 1/	30/2017	S	SeqNo: 1	265873	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.40		0.5000		80.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.46		0.5000		92.2	70	130	0	0	
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130	0	0	
Surr: Toluene-d8	0.47		0.5000		94.2	70	130	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- 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
 - le nH Not In Range
- P Sample pH Not In Range
- Rl. Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1701B78 31-Jan-17

Client:

APEX TITAN

Project:

6B-10

Sample ID rb

SampType: MBLK

TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID:

Batch ID: R40362

RunNo: 40362

Prep Date:

Analysis Date: 1/30/2017

SeqNo: 1265206

Units: mg/Kg

Analyte

Result **PQL**

Gasoline Range Organics (GRO)

ND 5.0 SPK value SPK Ref Val %REC LowLimit **HighLimit**

500

500.0

99.7

130

Surr: BFB

18.20

363.9

0.6623

0.6623

70

52.3

52.3

70

70

RPDLimit

Sample ID 1701b78-001ams

SampType: MS

TestCode: EPA Method 8015D Mod: Gasoline Range

%RPD

%RPD

Client ID: S-37

Batch ID: R40362

RunNo: 40362

Units: mg/Kg

Prep Date:

Analysis Date: 1/30/2017

18

360

SeqNo: 1265788

132

130

Analyte Gasoline Range Organics (GRO)

Result PQL SPK value SPK Ref Val 3.6

%REC LowLimit 95.0

100

HighLimit

RPDLimit Qual

Surr: BFB

Sample ID 1701b78-001amsd

SampType: MSD

TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: S-37 Prep Date:

Batch ID: R40362

Analysis Date: 1/30/2017

RunNo: 40362

Units: mg/Kg

132

130

9.96

0

Analyte Gasoline Range Organics (GRO) Result PQL 16

370

SPK value SPK Ref Val

18.20

363.9

%REC LowLimit 85.6

SeqNo: 1265789

HighLimit

%RPD

RPDLimit Qual 20

0

Surr: BFB

Sample ID 2.5ug gro Ics

SampType: LCS

TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: LCSS

Batch ID: R40362

3.6

RunNo: 40362

101

Prep Date: Analyte

Analysis Date: 1/30/2017 Result PQL

SPK value SPK Ref Val %REC

0

SeqNo: 1265794 I owl imit Units: mg/Kg

RPDLimit Qual

Gasoline Range Organics (GRO) Surr: BFB

26 5.0 25.00 500 500.0 104 100 62.9 70

130

HighLimit %RPD 123

Oualifiers:

- Value exceeds Maximum Contaminant Level
- 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
- % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- I Analyte detected below quantitation limits
- P Sample pH Not In Range

W

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 7 of 7



Haii Environmentai Anatysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 F.AX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

1/28/2017 9:00:00 AM	NA A AMERICA	TO CONCURRENCE A CHARACTERIS		
1/28/2017 9:00:00 AM				
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1/30/2017 7:34:59 AM		ann Il.		
130/17				
	Yes	No 🗌	Not Present	
	Yes 🗸	No 🗌	Not Present	
	Courier			
	Yes 🗹	No 🗌	na 🗌	
of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆	
	Yes 🗸	No 🗆		
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ly preserved?	Yes 🗸	No 🗌		
	Yes 🗌	No 🗹	NA 🗌	
	Yes	No 🗌	No VOA Vials 🗹	
en?	Yes	No 🗸	# of preserved	The second secon
	Yes 🗸	No 🗆	for pH:	
Custody?	Van V	No 🗆	Adjusted?	or >12 unless noted)
Custody?	- 14.04			
	Yes 🗹	No 🗆	Checked by:	
				• •
this order?	Yes 🗌	No 🗆	NA 🗹	
Date				
Via:	eMail	Phone Fax	☐ In Person	
		NAME OF THE OWNER	* * ***	
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8				
	of >0° C to 6.0°C s)? by preserved? custody? Custody? Date Via:	Yes V Courier Yes V courier Yes V Yes V	Yes	Yes No Not Present ✓ Yes No Not Present ✓ Courier Yes No NA of >0° C to 6.0°C Yes No NA Yes No NA NA 30? Yes No NO No Yes No NA Yes No No NO Yes No No No Yes No No Adjusted? Yes No Checked by: this order? Yes No Na Via: eMail Phone Fax In Person

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Matrix Contai		W - Wastewa		W - Water A/G - Amber	S · Soil SD · So / Or Glass 1 Liter	olid L · Liq 250 mi	uid A	4 - Air Bi		harcoal tube 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

November 28, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A

Aztec, NM 87410 TEL: (903) 821-5603

FAX

RE: Lateral 6B-10

OrderNo.: 1611C32

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611C32

Date Reported: 11/28/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-1

Project: Lateral 6B-10

teral 6B-10

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

Lab ID: 1611C32-001

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S	-		Analyst	TOM
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	. 1	11/23/2016 12:04:40 PM	M 28837
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/23/2016 12:04:40 PM	M 28837
Surr: DNOP	88.8	70-130	%Rec	1	11/23/2016 12:04:40 PM	M 28837
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	16	mg/Kg	5	11/23/2016 10:59:11 AM	M 28824
Surr: BFB	90.5	68.3-144	%Rec	. 5	11/23/2016 10:59:11 Al	M 28824
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.081	mg/Kg	5	11/23/2016 10:59:11 Al	M 28824
Toluene	0.17	0.16	mg/Kg	5	11/23/2016 10:59:11 Al	M 28824
Ethylbenzene	ND	0.16	mg/Kg	5	11/23/2016 10:59:11 Al	M 28824
Xylenes, Total	ND	0.32	mg/Kg	5	11/23/2016 10:59:11 Al	M 28824
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	5	11/23/2016 10:59:11 A	M 28824

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

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

Hall Environmental Analysis Laboratory, Inc.

Result

9.6

WO#:

1611C32

28-Nov-16

Client:

APEX TITAN

Project:

Analyte

Surr: DNOP

Lateral 6B-10

Sample ID LCS-28807	SampType: LCS	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: LCSS	Batch ID: 28807	RunNo: 38942
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1217667 Units: %Rec
Analyte	Result PQL SPK value S	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: DNOP	4.4 5.000	88.8 70 130
Sample ID MB-28807	SampType: MBLK	TestCode: EPA Method 8015M/D: Diesel Range Organics
Client ID: PBS	Batch ID: 28807	RunNo: 38942
Prep Date: 11/22/2016	Analysis Date: 11/23/2016	SeqNo: 1217668 Units: %Rec

Sample ID LCS-28	816 SampType	LCS	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch ID	28816	F	RunNo: 3	38942				
Prep Date: 11/22/	2016 Analysis Date	11/23/2016	S	SeqNo: '	1217831	Units: %Red	С		
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4	5 000		87.4	70	130			

%REC

96.4

LowLimit

70

HighLimit

130

%RPD

RPDLimit

Page 2 of 4

Qual

SPK value SPK Ref Val

10.00

Sample ID MB-28837	SampT	ype: ME	BLK	Test	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch ID: 28837			R	RunNo: 3	8942					
Prep Date: 11/23/2016	Analysis D	ate: 11	/23/2016	S	SeqNo: 1	217836	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11		10.00		107	70	130				

Sample ID LCS-28837	SampTyp	e: LC	S	Test	Code: El	A Method 8015M/D: Diesel Range Organics				
Client ID: LCSS	Batch I	D: 28	837	R	unNo: 3	8942				
Prep Date: 11/23/2016	Analysis Dat	e: 11	23/2016 SeqNo: 1217847 Units: mg/Kg							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.9	62.6	124	200-200		
Surr: DNOP	4.3		5.000		86.0	70	130			

- 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
 - haryte detected below quantitation mints
- P Sample pH Not In Range
- RI. Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Result

840

WO#:

1611C32 28-Nov-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID MB-28824

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 28824

RunNo: 38948

Client ID:

Prep Date:

Prep Date: 11/22/2016

Analysis Date: 11/23/2016

SeqNo: 1218275

Units: mg/Kg

SPK value SPK Ref Val %REC

HighLimit %RPD

Qual

Gasoline Range Organics (GRO)

PQL ND 5.0

83.5

LowLimit

68.3

144

RPDLimit

Qual

Surr: BFB

SampType: LCS

5.0

TestCode: EPA Method 8015D: Gasoline Range

Sample ID LCS-28824

LCSS

Batch ID: 28824

RunNo: 38948

%REC

Units: mg/Kg

RPDLimit

Result PQL

Analysis Date: 11/23/2016

SeqNo: 1218276

HighLimit %RPD 123

Gasoline Range Organics (GRO) Surr: BFB

11/22/2016

24 890 25.00 1000

SPK value SPK Ref Val

1000

94.8 89.3 74.6 68.3

LowLimit

144

Qualifiers:

Value exceeds Maximum Contaminant Level

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

% Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 4

Sample pH Not In Range

RI. Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611C32

28-Nov-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID MB-28824	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 28824			RunNo: 38948						
Prep Date: 11/22/2016	Analysis D	Date: 11	/23/2016	S	SeqNo: 1:	218290	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID LCS-28824	SampT	ype: LC	S	Tes	tCode: El					
Client ID: LCSS	Batch	n ID: 28	824	F	RunNo: 3					
Prep Date: 11/22/2016	Analysis D	Date: 11/23/2016 SeqNo: 1218291					Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	95.3	75.2	115			
Toluene	0.88	0.050	1.000	0	88.4	80.7	112			
Ethylbenzene	0.86	0.050	1.000	0	85.8	78.9	117			
Xylenes, Total	2.6	0.10	3.000	0	86.0	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

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

Page 4 of 4



Hali Environmental Analysis Laboratory 4901 Hawkins NE Altoquetyis, NM 87189

TEL: 505-345-3975 FAX: 505-345-4107 Wenzite: www.halleurironmental.com

Sample Log-In Check List

Client Name: APEX AZTEC	Work Order Number:	1611C3	32		ReptNo	1
Received by/date:	11/23/16					
Logged By: Lindsay Mangin	11/23/2016 7:40:00 AM		03	Mago		
Completed By: Lindsay Mangin	11/23/2016 7:55:05 AM		09	Mac		
Reviewed By:	11/23/16		<i>V</i> -	Ü		
Chain of Custody						
1. Custody seals intact on sample bottles?		Yes	No		Not Present	
2. Is Chain of Custody complete?		Yes '	✓ No	NAME OF THE PERSON	Not Present	
3. How was the sample delivered?		Courie	1			
Log In						
4. Was an attempt made to boot the samples	?	Yes	✓ N		NA L	
5. Were all samples received at a temperatur	c of >0° C to 6.0°C	Yes \	Z No		NA 🗆	
6 Sample(s) in proper container(s)?		Yes	✓ N	o 🗀		
7 Sufficient sample volume for indicated test	(s)?	Yes	V No	· []		
8. Are samples (except VOA and ONG) prope	orly preserved?	Yes !	V No			
9. Was preservative added to bottles?		Yes	No	V	NA .	
10.VOA vials have zero headspace?		Yes	No		No VOA Vials	
11. Were any sample containers received broken	ren?	Yes	N	0 🗸	# of preserved	
12. Does paperwork match bottle labels?		Yes	✓ No) []	bottles checked for pH:	
(Note discrepancies on chain of custody)	26.		·		(<2 Adjusted?	or >12 unless noted)
13. Are matrices correctly identified on Chain of 14, is it clear what analyses were requested?	of Custody?	Yes Yes			rigidited.	
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes			Checked by:	
Special Handling (if applicable)						
16 Was client notified of all discrepancies with	this order?	Yes	_ No	I	NA V	
Person Notified	Date					
By Whom:	Vie:	elAail	Phone	Fax	In Person	
Regarding	The state of the s	-				
Client Instructions	The second secon	Y. Colonia Colonia Colonia				
17. Additional remarks:						
	Seal Intact Seal No Seas	eal Dat	e Signed	Ву		

				CHAIN OF CUSTODY RECORD
			ANALYSIS / / / /	/ / Lab use only
				/ / Due Date:
ADEV	Laboratory: Hal			
APEX	Address: ABQ N	M	(3/////	Temp. of coolers
Office Location Aztec, NM				when received (C°): / 4
	Contact: A. Free	man		1 2 3 4 5
	Phone:		1 /2/ / / /	Page of 1
Project Manager K.Summers	PO/SO #:		REQUESTED ON	/ / /
	Sampler's Signature			/ /
Chad Capont:	Sampler's digitature		SUS) BIEY	
Proj. No. Project Name		No/Type of Containers		/ /
Luteral 6B-	10		1 Con 3 / / / / /	/ /
CG	rks of Sample(s) Start Depth Depth	VOA A/G 1Lt. 250 ml Glass Jar P/O	1//////////////////////////////////////	Lab Sample ID (Lab Use Only)
5 11-2016 11-30 5-	,			1611C3Z-001
				101135-001
			W.	
			475	
			+ + + + + + + + + + + + + + + + + + + +	_
	50% Rush 100% Rush			
	Time: Received by (Signa	ature) Date:	Time: NOTES:	
Relinquished by (Signature) Date:	Time: Received by: (Signa	ature) Date:	Time: RILL to Tom L	ona (EPROD)
, , , , , ,			Directo tons b	ong (EPROD)
Relinquished by (Signature) Date:	Time: Received by: (Signa	ature) Date:	Time: Non-AFE N	136819
Relinquished by (Signature) Date:	Fime: Received by: (Signature)	ature) Date:	Time:	126819 Same DAY
Matrix WW - Wastewater W - Water	S - Soil SD - Solid L - Liqui	d A - Air Bag C - Cha	arcoal tube SL - sludge O - Oil	
Matrix WW - Wastewater W - Water S Container VOA - 40 ml vial A/G - Amber / O			lastic or other	



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

December 02, 2016

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

FAX

RE: 6B-10

OrderNo.: 1611D40

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-2

Project: 6B-10

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

Lab ID: 1611D40-001

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

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

6B-10

Project: Lab ID:

1611D40-002

Client Sample ID: S-3

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

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

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

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

- Value exceeds Maximum Contaminant Level.
- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 9
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-4

Project: 6B-10

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

Lab ID: 1611D40-003

Matrix: SOIL

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

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

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

- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 9 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lab ID:

6B-10 Project:

1611D40-004

Client Sample ID: S-5

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

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

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

Matrix: SOIL

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 9
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-6

Project: 6B-10

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

Lab ID: 1611D40-005

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

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

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1611D40

Date Reported: 12/2/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Lab ID:

AFEA III

6B-10

1611D40-006

Client Sample ID: S-7

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

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

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

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 9
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1611D40 02-Dec-16

Client:

APEX TITAN

Project:

6B-10

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Sample ID LCS-28923

Batch ID: 28923

RunNo: 39081

Client ID: LCSS Prep Date: 11/30/2016

Analysis Date: 12/1/2016

Result 48

Result

SPK value SPK Ref Val %REC 50.00

SeqNo: 1222603 LowLimit Units: mg/Kg

124

130

RPDLimit Qual

PQL HighLimit Diesel Range Organics (DRO) 10 96.8 62.6 Surr: DNOP 4.8 5.000 95.5 70

Sample ID MB-28923

SampType: MBLK Batch ID: 28923

RunNo: 39081

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

Client ID: **PBS** Prep Date: 11/30/2016

Analysis Date: 12/1/2016

SeqNo: 1222604

Units: mg/Kg

HighLimit

%RPD **RPDLimit** Qual

Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

Surr: DNOP

PQL ND 10 ND 50 10

10.00

99.8

SPK value SPK Ref Val %REC LowLimit

70

130

Qualifiers:

Value exceeds Maximum Contaminant Level

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Sample pH Not In Range P

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 7 of 9

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

1611D40 02-Dec-16

Qual

Client:

APEX TITAN

Project:

6B-10

Sample ID MB-28895 SampType: MBLK Client ID: RunNo: 39050

TestCode: EPA Method 8015D: Gasoline Range

PBS Batch ID: 28895

Prep Date: 11/29/2016 Analysis Date: 11/30/2016 SeqNo: 1221833 Units: mg/Kg

Result **PQL** SPK value SPK Ref Val %REC HighLimit %RPD LowLimit

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 970 1000 97.5 68.3 144

Sample ID LCS-28895 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 28895 RunNo: 39050 Prep Date: 11/29/2016 Analysis Date: 11/30/2016 SeqNo: 1221834 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Gasoline Range Organics (GRO) 28 5.0 25.00 0 110 74.6 123 Surr: BFB 1000 1000 101 68.3 144

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- 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
- В 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 container temperature is out of limit as specified

Page 8 of 9

Hall Environmental Analysis Laboratory, Inc.

WO#: **1611D40**

02-Dec-16

Client:

APEX TITAN

Project:

6B-10

Sample ID MB-28895	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batch	1D: 28	895	R	RunNo: 3	9050				
Prep Date: 11/29/2016	Analysis D	ate: 11	/30/2016	S	SeqNo: 1	221863	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Sample ID LCS-28895	SampT	ype: LC	S	TestCode: EPA Method			8021B: Volat	iles		
Client ID: LCSS	Batch	ID: 288	395	R	tunNo: 3	9050				
Prep Date: 11/29/2016	Analysis D	ate: 11	/30/2016	S	SeqNo: 1	221864	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.025	1.000	0	94.5	75.2	115			
Toluene	0.94	0.050	1.000	0	94.3	80.7	112			
Ethylbenzene	0.89	0.050	1.000	0	89.4	78.9	117			
Xylenes, Total	2.7	0.10	3.000	0	88.6	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120			

Qualifiers:

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

Page 9 of 9



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: APEX AZTEC	Work Order Number: 1611	040	RcptNo:	1
Received by/date: A) ///2	9/16		AMERICAN PROPERTY AND ADDRESS OF THE PERSON	THE CHARGE PROPERTY AND ADDRESS OF THE CONTRACT OF THE CONTRAC
Logged By: Anne Thorne 1	1/29/2016 8:35:00 AM	aone A	2	*
Completed By: Anne Thorne	1/29/2016	anne A	Y	4
Reviewed By:	1 29 16			
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	□ No □	Not Present 🗹	
2. Is Chain of Custody complete?	Yes	✓ No □	Not Present	
3. How was the sample delivered?	Cour	ier		
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes	✓ No [NA 🗆	
5. Were all samples received at a temperature of	of >0° C to 6.0°C Yes	✓ No [NA 🗆	
6. Sample(s) in proper container(s)?	Yes	☑ No [
7. Sufficient sample volume for indicated test(s)	? Yes	✓ No [
8. Are samples (except VOA and ONG) properly	y 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 broker	n? Yes	No S	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes	⊻ No □	for pH:	or >12 unless noted)
13, Are matrices correctly identified on Chain of C	Custody? Yes	Y No □	Adjusted?	
14. Is it clear what analyses were requested?	Yes			
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes	✓ No L	Checked by:	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with the	nis order? Yes	□ No □	NA 🗹	
Person Notified:	Date	The second second		
By Whom:	Via: eM	ail Phone F	ax 📋 In Person	
Regarding:				
Client Instructions:	and and the			
17. Additional remarks:				
18. Cooler Information				
Cooler No Temp °C Condition Se	al Intact Seal No Seal D	ate Signed By		
1 1.7 Good res	garadi y biyo kabada sada ka ka ka ka	an or southern	1 2-2	r who so worth be

CHAIN OF CUSTODY RECORD Lab use only ANALYSIS Due Date: REQUESTED HE! Env Laboratory: Address Temp, of pociers Office Location Contact: Phone. Project Manager PO/SO#: Sampler's Name Sampler's Signature Pro No. Project Name No/Type of Containers 125000112317 AvG 111 250 250 ml Glass Jar PrO Lab Sample ID Lab Use Only 1011146-cci 5 640 ZCY 0 45 25 13 55 Tolo 207 Turn around time 1 Norma _1 25% Rush ☐ 50% Rush ⊒ 100% Rush 271.3 his sur - 5 bu Time: NOTES: Helinguished by (Signature) Date Time. Received by: (Signature) Date: ハールーノセ Time: Time: Relinquished by (Signature) Date: Received by: (Signature) Date: Museul Le 0435 1128/16 55. التعال Relinquished by (Signature) Date Time: Received by: (Signature) Date: Time:

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

A - Air Bac

250 ml - Glass wide mouth

Date:

Time

SL - sludge

C - Charcoal tube

P/O - Plastic or other

0.0

Relinquished by (Signature)

WW - Wastewater

VOA - 40 mi vial

Matrix

Container

Date

W - Water

Time:

5 - 501

A'G - Amber / Or Glass 1 Liter

Received by: (Signature)

L - Liquid

SD - Solid



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

December 08, 2016

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

FAX

RE: Lateral 6B-10

OrderNo.: 1612296

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612296

Date Reported: 12/8/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lateral 6B-10

Client Sample ID: S-8

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

Lab ID:

Project:

1612296-001

Matrix: MEOH (SOIL)

Received Date: 12/7/2016 8:25:00 AM

Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/7/2016 10:20:32 AM	29043
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/7/2016 10:20:32 AM	29043
Surr: DNOP	88.9	70-130	%Rec	1	12/7/2016 10:20:32 AM	29043
EPA METHOD 8015D: GASOLINE RAN	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	12/7/2016 10:36:01 AM	29014
Surr: BFB	90.7	68.3-144	%Rec	1	12/7/2016 10:36:01 AM	29014
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.021	mg/Kg	1	12/7/2016 10:36:01 AM	29014
Toluene	ND	0.042	mg/Kg	1	12/7/2016 10:36:01 AM	29014
Ethylbenzene	ND	0.042	mg/Kg	1	12/7/2016 10:36:01 AM	29014
Xylenes, Total	ND	0.085	mg/Kg	1	12/7/2016 10:36:01 AM	29014
Surr: 4-Bromofluorobenzene	97.1	80-120	%Rec	1	12/7/2016 10:36:01 AM	29014

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

- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 5 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612296

Date Reported: 12/8/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-9

Project: Lateral 6B-10

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

Lab ID:

1612296-002

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

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

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612296

08-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID LCS-29043

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS

Batch ID: 29043

RunNo: 39207

Prep Date:

124

130

Analyte

12/7/2016

Analysis Date: 12/7/2016

SeqNo: 1226819

Units: mg/Kg

HighLimit

RPDLimit Qual

Result PQL SPK value SPK Ref Val %REC LowLimit Diesel Range Organics (DRO) 45 10 50.00 90.0 62.6 Surr: DNOP 3.8 5.000 76.4

Sample ID MB-29043

SampType: MBLK

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

Prep Date: 12/7/2016

Surr: DNOP

Client ID:

PBS

Batch ID: 29043 Analysis Date: 12/7/2016

50

RunNo: 39207 SeqNo: 1226821

Units: mg/Kg

Analyte

Result PQL 10 SPK value SPK Ref Val %REC

LowLimit HighLimit %RPD **RPDLimit** Qual

Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) ND ND 8.2

10.00

82.3

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

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 3 of 5

P Sample pH Not In Range

RI. Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612296

08-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID MB-29014

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 29014

RunNo: 39220

Prep Date: 12/6/2016 Analysis Date: 12/7/2016

Units: mg/Kg

HighLimit

Analyte

Result PQL 5.0

SeqNo: 1227407 SPK value SPK Ref Val %REC

LowLimit

Qual

Gasoline Range Organics (GRO)

ND

RPDLimit

840

1000

83.6

68.3

%RPD

Surr: BFB

TestCode: EPA Method 8015D: Gasoline Range

144

Sample ID LCS-29014 Client ID:

LCSS

SampType: LCS Batch ID: 29014

RunNo: 39220

Units: mg/Kg

Analyte

Prep Date: 12/6/2016

Result

Analysis Date: 12/7/2016 PQL SPK value SPK Ref Val

SeqNo: 1227408 %REC

LowLimit

HighLimit %RPD **RPDLimit** Qual

Gasoline Range Organics (GRO) Surr: BFB

24 920

5.0 25.00 1000 94.7 92.3 74.6 68.3 123 144

Qualifiers:

Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Detection Limit RL.

P

Sample container temperature is out of limit as specified

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612296

08-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID MB-29014

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

Client ID:

PBS

Batch ID: 29014

RunNo: 39220

Prep Date: 12/6/2016

Analysis Date: 12/7/2016

SeqNo: 1227432

80

Units: mg/Kg

HighLimit %RPD

RPDLimit Qual

Result PQL Analyte ND 0.025 Benzene Toluene ND 0.050 ND 0.050 Ethylbenzene ND Xylenes, Total 0.10 Surr: 4-Bromofluorobenzene 0.91

Sample ID LCS-29014

SampType: LCS

TestCode: EPA Method 8021B: Volatiles

120

Client ID: LCSS

Batch ID: 29014

1.000

RunNo: 39220

90.7

Analysis I	Date: 12	2/7/2016	8	SeqNo: 1	227433	Units: mg/k	ζg		
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1.1	0.025	1.000	0	105	75.2	115			
0.97	0.050	1.000	0	96.9	80.7	112			
0.94	0.050	1.000	0	93.8	78.9	117			
2.8	0.10	3.000	0	93.7	79.2	115			
0.97		1.000		97.3	80	120			
	Result 1.1 0.97 0.94 2.8	Result PQL 1.1 0.025 0.97 0.050 0.94 0.050 2.8 0.10	Result PQL SPK value 1.1 0.025 1.000 0.97 0.050 1.000 0.94 0.050 1.000 2.8 0.10 3.000	Result PQL SPK value SPK Ref Val 1.1 0.025 1.000 0 0.97 0.050 1.000 0 0.94 0.050 1.000 0 2.8 0.10 3.000 0	Result PQL SPK value SPK Ref Val %REC 1.1 0.025 1.000 0 105 0.97 0.050 1.000 0 96.9 0.94 0.050 1.000 0 93.8 2.8 0.10 3.000 0 93.7	Result PQL SPK value SPK Ref Val %REC LowLimit 1.1 0.025 1.000 0 105 75.2 0.97 0.050 1.000 0 96.9 80.7 0.94 0.050 1.000 0 93.8 78.9 2.8 0.10 3.000 0 93.7 79.2	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 1.1 0.025 1.000 0 105 75.2 115 0.97 0.050 1.000 0 96.9 80.7 112 0.94 0.050 1.000 0 93.8 78.9 117 2.8 0.10 3.000 0 93.7 79.2 115	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 1.1 0.025 1.000 0 105 75.2 115 0.97 0.050 1.000 0 96.9 80.7 112 0.94 0.050 1.000 0 93.8 78.9 117 2.8 0.10 3.000 0 93.7 79.2 115	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 1.1 0.025 1.000 0 105 75.2 115 0.97 0.050 1.000 0 96.9 80.7 112 0.94 0.050 1.000 0 93.8 78.9 117 2.8 0.10 3.000 0 93.7 79.2 115

SPK value SPK Ref Val %REC LowLimit

Qualifiers:

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

Value above quantitation range

Page 5 of 5



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	r: 1612296		RcptNo: 1
Received by/date: 1207/16		. ,	
Logged By: Lindsay Mangin 12/7/2016 8:25:00 AM	1	Judy Hago	
Completed By: Lindsay Marigin 12/7/2016 8:49:03 AM	t	- Juney Hayer	
Reviewed By: 17 07/14		000	
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 [T]	NA
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🔽	No 🗆	NA 🗔
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No L	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌	
9. Was preservative added to bottles?	Yes	No 🗹	NA []
10.VOA vials have zero headspace?	Yes 📗	No []	No VOA Vials 🗭
11. Were any sample containers received broken?	Yes [No 🗹	# of preserved
tan a di	[7	N. [7	bottles checked
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗸	No 🗌	for pH: (<2 or >12 unless noted
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No []	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗸	No 🗔	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗔	Checked by:
4			
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes [No	NA M
Person Notified: Date:		AND THE STREET STREET,	
By Whom: Via:	[] eMail [Phone Fax	In Person
Regarding:			
Client Instructions:			
17. Additional remarks:			
18. Cooler Information			
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By	
1 3.3 Good Not Present			*

			CHAIN OF CUSTODY RECORD
Chad DApon 1. Proj. No. Project Name 205040112217 Lateral		ANALYSIS REQUESTED	Lab use only Due Date: Temp. of coolers when received (C*): 3,3 1 2 3 4 5 Page of
Matrix Date Time C G r Identifying Mar	Start Samble(s) Start VOA VOA VOA Usar Class		Lab Sample iD (Lab Use Only)
S 8/6/10 1400 S-8	-) (16/2296-001
S 12/16/16 1405 S-9		11/	-(07
		NFS	
		1 1 1 1 1 1 1	
		+++++	\
			7
	150% Rush 2 100% Rush Sime day	Time: NOTES:	
2616 16	00 Killey 12/6/11		2
Relinquished by (Signature) Date: 7	Time: Received by: (Signature) Date:	d 1700 3,11 To 10	m leng
Relinquished by (Signature) Date:	Time: Received by: (Signature) Date:	Time: 4= = #	on long
Relinquished by (Signature) Date! T	Time: Received by A(Signature) Date:	0825 AFERT WE	Sp. Da. o
Table of (Olgitators)	Trooffee by Cognatory	THIS.	
Matrix WW - Wastewater W - Water S Container VOA - 40 ml vial A/G - Amber / Or		harcoal tube SL - sludge O - Oil 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

OrderNo.: 1612498

December 12, 2016

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

FAX

RE: 6B-10

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612498

Date Reported: 12/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-10

Project: 6B-10

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

Lab ID: 1612498-001

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

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612498

Date Reported: 12/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-11

6B-10 Project:

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

Lab ID: 1612498-002

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

Analyses	Result	PQL Qu	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANIC	S		•	Analyst	том
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/9/2016 10:58:18 AM	29095
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/9/2016 10:58:18 AM	29095
Surr: DNOP	97.7	70-130	%Rec	1	12/9/2016 10:58:18 AM	29095
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/9/2016 10:43:52 AM	29078
Surr: BFB	86.2	68.3-144	%Rec	1	12/9/2016 10:43:52 AM	29078
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	0.20	0.024	mg/Kg	1	12/9/2016 10:43:52 AM	29078
Toluene	0.20	0.048	mg/Kg	1	12/9/2016 10:43:52 AM	29078
Ethylbenzene	ND	0.048	mg/Kg	1	12/9/2016 10:43:52 AM	29078
Xylenes, Total	ND	0.097	mg/Kg	1	12/9/2016 10:43:52 AM	29078
Surr: 4-Bromofluorobenzene	95.7	80-120	%Rec	1	12/9/2016 10:43:52 AM	29078

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 6

- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612498

Date Reported: 12/12/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-12

Project: 6B-10

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

Lab ID: 1612498-003

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

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

Page 4 of 6

1612498

12-Dec-16

Qual

Client:

APEX TITAN

Project:

6B-10

Sample ID	LCS-29095
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SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

LCSS

Batch ID: 29095

RunNo: 39269

Prep Date: 12/9/2016

Analysis Date: 12/9/2016

SeqNo: 1229305

Units: mg/Kg

HighLimit Analyte Result PQL SPK value SPK Ref Val %REC %RPD LowLimit Diesel Range Organics (DRO) 49 10 50.00 97.1 62.6 124 Surr: DNOP 4.8 5.000 95.9 70 130

10.00

Sample ID MB-29095

SampType: MBLK

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

Surr: DNOP

PBS

Batch ID: 29095

11

RunNo: 39269

109

70

Units: mg/Kg

130

Prep Date: Analysis Date: 12/9/2016 12/9/2016 SeqNo: 1229306 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit **HighLimit** %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50

Qualifiers:

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

P

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612498

12-Dec-16

Client:

APEX TITAN

Project:

6B-10

Sample ID MB-29078

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

68.3

Client ID: **PBS**

Batch ID: 29078

RunNo: 39283

Prep Date: 12/8/2016 Analysis Date: 12/9/2016

SPK value SPK Ref Val %REC

SeqNo: 1229674

Units: mg/Kg

Result PQL Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 860 1000

85.7

HighLimit

144

%RPD **RPDLimit** Qual

Qual

Sample ID LCS-29078

SampType: LCS

RunNo: 39283

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

12/8/2016

Batch ID: 29078

Analysis Date: 12/9/2016

SeqNo: 1229675

Units: mg/Kg

%REC Result PQL SPK value SPK Ref Val LowLimit HighLimit Analyte 23 Gasoline Range Organics (GRO) 5.0 25.00 0 91.9 74.6 123 920

Sum: BFB

Prep Date:

1000

92.3

68.3

144

%RPD

RPDLimit

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

RPD outside accepted recovery limits R

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Page 5 of 6

Sample pH Not In Range

RI. Reporting Detection Limit

Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612498

12-Dec-16

Client:

APEX TITAN

Project:

6B-10

Sample ID MB-29078	SampT	SampType: MBLK TestCode: EPA Method 8			8021B: Volat	iles				
Client ID: PBS	Batch	n ID: 29	078	RunNo: 39283						
Prep Date: 12/8/2016	Analysis D)ate: 12	2/9/2016	8	SeqNo: 1	229693	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.95		1.000		94.5	80	120			

Sample ID LCS-29078	SampT	ampType: LCS TestCode: EPA Method 8021B: Volatiles								
Client ID: LCSS	Batch	Batch ID: 29078 RunNo: 39283								
Prep Date: 12/8/2016	Analysis D	ate: 12	2/9/2016	8	SeqNo: 1	229694	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	91.9	75.2	115			
Toluene	0.95	0.050	1.000	0	95.1	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	94.6	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	95.4	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		98.5	80	120			

Qualifiers:

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

Page 6 of 6

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

Sample Log-In Check List

Work Order Number: 1612498 RcptNo: 1 Client Name: APEX AZTEC Received by/date: 12/9/2016 8:20:00 AM Logged By: Ashley Gallego 12/9/2016 8:29:49 AM Completed By: Ashley Gallegos Reviewed By: Chain of Custody 1. Custody seals intact on sample bottles? No Not Present ✓ No Not Present 2. Is Chain of Custody complete? Yes V 3. How was the sample delivered? Courier Log In NA 4. Was an attempt made to cool the samples? No 5. Were all samples received at a temperature of >0° C to 6.0°C NA No No 6. Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? No No 8. Are samples (except VOA and ONG) properly preserved? Yes NA 9. Was preservative added to bottles? Yes No No VOA Vials No 10. VOA vials have zero headspace? Yes 11. Were any sample containers received broken? No Yes # of preserved bottles checked for pH: No 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested? No Checked by: No 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) 16. Was client notified of all discrepancies with this order? NA V Yes No Person Notified: Date By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Good

		CHAIN OF CUSTODY RECORL
Laboratory, Mail Env	ANALYSIS REQUESTED	Lab use only Due Date
APEX Acdress: 1-30 Nm	3	Tomo of gooleys
Office Location AZFEC Nin	ð	Templi of coolers when received (C1)
Contact: A Fixeman	24	2 2 4 5
Phone:		Page) o
	4 . 9	Page 0
Project Manager & Service PO/SO#:	2	
Sampler's Name Sampler's Signature	\times $^{\mathcal{A}}$	
and whent	v.	
Proj. No. Project Name No/Type of Conta	mers 5 5	
2050-0 103 217 6B 70	mers XX	
Matrix Date Time O a centifying Marks of Samplers: P Hollow O SET SET		Tab Sample ID 'Lab Use Only's
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Title. Tesewes by, (Signature)	AFE I W	on long Sume 20819
Pelinquished by (Signature) Dato: Timo Received by: (Signature)	Date: Time:	•
Matrix W - Wastewater W - Water S - Soil SD - Solic L - Liguro A - Air Bag	C - Charcoal tube SL - sludge O - Oil	
Container VOA - 40 ml v si A/G - Amber - Or Glass 1 Liter 250 ml - Glass wide mouth	P/O - Plastic or other	



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

December 16, 2016

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

FAX

RE: 6B-10

OrderNo.: 1612745

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-13

Project:

6B-10

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

Lab ID:

1612745-001

Matrix: SOIL

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

Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE		2 8		Analys	st: AG
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	. 1	12/14/2016 1:16:13 P	M G39384
Surr: BFB	86.9	70-130	%Rec	1	12/14/2016 1:16:13 P	M G39384
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/14/2016 11:28:22	AM 29175
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	. 1	12/14/2016 11:28:22	AM 29175
Surr: DNOP	85.0	70-130	%Rec	1	12/14/2016 11:28:22	AM 29175
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analys	st: AG
Benzene	ND	0.019	mg/Kg	1	12/14/2016 1:16:13 P	M A39384
Toluene	ND	0.039	mg/Kg	1	12/14/2016 1:16:13 P	M A39384
Ethylbenzene	ND	0.039	mg/Kg	1	12/14/2016 1:16:13 P	M A39384
Xylenes, Total	ND	0.078	mg/Kg	1	12/14/2016 1:16:13 P	M A39384
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec	1	12/14/2016 1:16:13 P	M A39384
Surr: 4-Bromofluorobenzene	91.8	70-130	%Rec	1	12/14/2016 1:16:13 P	M A39384
Surr: Dibromofluoromethane	112	70-130	%Rec	. 1	12/14/2016 1:16:13 P	M A39384
Surr: Toluene-d8	97.0	70-130	%Rec	1	12/14/2016 1:16:13 P	M A39384

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

- Value exceeds Maximum Contaminant Level.
- 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
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 11 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612745

Hall Environmental Analysis Laboratory, Inc. Date Reported: 12/16/2016

CLIENT: APEX TITAN

Client Sample ID: S-14

Project:

6B-10

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

Lab ID:

1612745-002

Matrix: SOIL

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analy	st: AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/14/2016 1:44:53 F	M G39384
Surr: BFB	81.9	70-130	%Rec	1	12/14/2016 1:44:53 F	PM G39384
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	3			Analy	st: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/14/2016 11:50:04	AM 29175
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/14/2016 11:50:04	AM 29175
Surr: DNOP	84.6	70-130	%Rec	1	12/14/2016 11:50:04	AM 29175
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analy	st: AG
Benzene	ND	0.023	mg/Kg	1	12/14/2016 1:44:53 F	PM A39384
Toluene	ND	0.047	mg/Kg	1	12/14/2016 1:44:53 F	PM A39384
Ethylbenzene	ND	0.047	mg/Kg	1	12/14/2016 1:44:53 F	PM A39384
Xylenes, Total	ND	0.094	mg/Kg	1	12/14/2016 1:44:53 F	PM A39384
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	12/14/2016 1:44:53 F	PM A39384
Surr: 4-Bromofluorobenzene	88.0	70-130	%Rec	1	12/14/2016 1:44:53 F	PM A39384
Surr: Dibromofluoromethane	112	70-130	%Rec	1	12/14/2016 1:44:53 F	PM A39384
Surr: Toluene-d8	97.0	70-130	%Rec	1	12/14/2016 1:44:53 F	PM A39384

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 11 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lab ID: 1612745-003

6B-10

Client Sample ID: S-15

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

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	: AG
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/14/2016 2:13:39 PM	G39384
Surr: BFB	82.8	70-130	%Rec	1	12/14/2016 2:13:39 PM	G39384
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANICS	3			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/14/2016 12:11:41 P	M 29175
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/14/2016 12:11:41 P	M 29175
Surr: DNOP	85.0	70-130	%Rec	1	12/14/2016 12:11:41 P	M 29175
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: AG
Benzene	ND	0.020	mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Toluene	ND	0.039	mg/Kg	1	12/14/2016 2:13:39 PM	1 A39384
Ethylbenzene	ND	0.039	mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Xylenes, Total	ND	0.079	mg/Kg	1	12/14/2016 2:13:39 PM	A39384
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec	1	12/14/2016 2:13:39 PM	1 A39384
Surr: 4-Bromofluorobenzene	90.4	70-130	%Rec	1	12/14/2016 2:13:39 PM	A39384
Surr: Dibromofluoromethane	113	70-130	%Rec	1	12/14/2016 2:13:39 PM	A39384
Surr: Toluene-d8	93.4	70-130	%Rec	1	12/14/2016 2:13:39 PM	1 A39384

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 11 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN 6B-10

Project:

Lab ID:

1612745-004

Matrix: SOIL

Client Sample ID: S-16

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

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

Analyses	Result	PQL Qua	l Units	DF I	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analy	/st: AG
Gasoline Range Organics (GRO)	19000	1000	mg/Kg	250	12/14/2016 12:47:18	PM G39384
Surr: BFB	85.6	70-130	%Rec	250	12/14/2016 12:47:18	PM G39384
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analy	st: TOM
Diesel Range Organics (DRO)	370	9.7	mg/Kg	1	12/14/2016 12:33:25	PM 29175
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/14/2016 12:33:25	PM 29175
Surr: DNOP	90.5	70-130	%Rec	1	12/14/2016 12:33:25	PM 29175
EPA METHOD 8260B: VOLATILES	SHORT LIST				Anal	yst: AG
Benzene	49	5.2	mg/Kg	250	12/14/2016 12:47:18	PM A39384
Toluene	500	10	mg/Kg	250	12/14/2016 12:47:18	PM A39384
Ethylbenzene	36	10	mg/Kg	250	12/14/2016 12:47:18	PM A39384
Xylenes, Total	330	21	mg/Kg	250	12/14/2016 12:47:18	PM A39384
Surr: 1,2-Dichloroethane-d4	90.1	70-130	%Rec	250	12/14/2016 12:47:18	PM A39384
Surr: 4-Bromofluorobenzene	87.7	70-130	%Rec	250	12/14/2016 12:47:18	PM A39384
Surr: Dibromofluoromethane	89.7	70-130	%Rec	250	12/14/2016 12:47:18	PM A39384
Surr: Toluene-d8	99.4	70-130	%Rec	250	12/14/2016 12:47:18	PM A39384

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 11 J
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-17

Project: 6B-10

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

1612745-005 Lab ID:

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

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

Matrix: SOIL

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 11 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-18

Project: 6B-10 Collection Date: 12/13/2016 12:30:00 PM

Lab ID: 1612745-006 Matrix: SOIL

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

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

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 6 of 11
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612745

Date Reported: 12/16/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: 6B-10

Lab ID:

1612745-007

Client Sample ID: S-19

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

Matrix: SOIL

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE			7	Analyst	AG
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	12/14/2016 3:40:17 PM	G39384
Surr: BFB	84.3	70-130	%Rec	1	12/14/2016 3:40:17 PM	G39384
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	3			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/14/2016 1:38:06 PM	29175
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/14/2016 1:38:06 PM	29175
Surr: DNOP	78.7	70-130	%Rec	1	12/14/2016 1:38:06 PM	29175
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene	ND	0.021	mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Toluene	ND	0.043	mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Ethylbenzene	ND	0.043	mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Xylenes, Total	ND	0.086	mg/Kg	1	12/14/2016 3:40:17 PM	A39384
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: 4-Bromofluorobenzene	92.3	70-130	%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: Dibromofluoromethane	113	70-130	%Rec	1	12/14/2016 3:40:17 PM	A39384
Surr: Toluene-d8	96.2	70-130	%Rec	1	12/14/2016 3:40:17 PM	A39384

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 11
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745

16-Dec-16

Client:

APEX TITAN

Project:

6B-10

Sample ID LCS-29175	SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics									
Client ID: LCSS	,	Batch ID: 29175 RunNo: 39372						o organico		
Prep Date: 12/14/2016	Analysis Da	ate: 12	2/14/2016	SeqNo: 1232663			Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	89.4	63.8	116			
Surr: DNOP	4.2		5.000		83.2	70	130			

Sample ID MB-29175	SampT	ype: ME	BLK	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: PBS	Batch	ID: 29	175	R	RunNo: 3	9372				
Prep Date: 12/14/2016	Analysis D	ate: 12	2/14/2016	S	SeqNo: 1	232664	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10		3,000						
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.3		10.00		83.1	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

Page 8 of 11

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745

16-Dec-16

Client:

APEX TITAN

Project: 6B-10)									
Sample ID 100ng Ics	Samp	Type: LC	S	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batcl	h ID: A3	9384	F	RunNo: 3	39384				
Prep Date:	Analysis E	Date: 12	2/14/2016	8	SeqNo: 1	1233489	Units: mg/h	⟨ g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	70	130			
Toluene	0.97	0.050	1.000	0	96.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.52		0.5000		105	70	130			
Surr: 4-Bromofluorobenzene	0.45		0.5000		89.3	70	130			
Surr: Dibromofluoromethane	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.47		0.5000		93.6		130			
Sample ID rb	Samp	Гуре: МЕ	BLK	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
Client ID: PBS	Batc	h ID: A3	9384	F	RunNo: 3	39384				
Prep Date:	Analysis [Date: 12	2/14/2016	9	SeqNo: '	1233490	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.54		0.5000		107	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.2	70	130			
Surr: Dibromofluoromethane	0.58		0.5000		117	70	130			
Surr: Toluene-d8	0.47		0.5000		94.0	70	130			
Sample ID 1612745-001a	ms Samp	Гуре: М	3	Tes	tCode: E	PA Method	8260B: Vola	tiles Shor	t List	
Client ID: S-13	Batc	h ID: A3	9384	F	RunNo:	39384				
Prep Date:	Analysis [Date: 12	2/14/2016	8	SeqNo:	1233510	Units: mg/h	≺g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.019	0.7770	0	108	49.2	155			
Toluene	0.75	0.039	0.7770	0.01906	94.5	52	154			
Surr: 1,2-Dichloroethane-d4	0.39		0.3885		99.5	70	130			
Surr: 4-Bromofluorobenzene	0.35		0.3885		90.6	70	130			
Surr: Dibromofluoromethane	0.41		0.3885		105	70	130			
Surr: Toluene-d8	0.36		0.3885		93.8	70	130			
Sample ID 1612745-001a	msd Samp	Гуре: М	SD	Tes	tCode: E	PA Method	8260B: Vola	tiles Shor	t List	
Client ID: S-13	Batc	h ID: A3	9384	F	RunNo:	39384				
Prep Date:	Analysis [Date: 12	2/14/2016	5	SeqNo: 1	1233511	Units: mg/h	K g		
Analda	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte										
Benzene	0.79 0.72	0.019	0.7770 0.7770	0.01906	101 90.3	49.2 52	155	6.57	20	

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 9 of 11

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612745 16-Dec-16

Client:

APEX TITAN

Project:

6B-10

Sample ID 1612745-001amsd	SampT	ype: MS	SD	Test	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: S-13	Batch	ID: A3	9384	R	RunNo: 3	9384				
Prep Date:	Analysis D	ate: 1	2/14/2016	S	SeqNo: 1	233511	Units: mg/F	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.41		0.3885		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.36		0.3885		91.8	70	130	0	0	
Surr: Dibromofluoromethane	0.40		0.3885		104	70	130	0	0	
Surr: Toluene-d8	0.37		0.3885		95.0	70	130	0	0	

Qualifiers:

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

Page 10 of 11

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612745

16-Dec-16

Client:

APEX TITAN

Project:	6B-10									4 40	
Sample ID	2.5ug gro lcs	SampT	ype: LC	s	Test	Code: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batch	n ID: G3	9384	R	lunNo: 3	9384				
Prep Date:		Analysis D	ate: 12	2/14/2016	S	eqNo: 1	233373	Units: mg/h	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Rang	e Organics (GRO)	25	5.0	25.00	0	99.4	62.9	123			
Surr: BFB		420		500.0		83.3	70	130			
Sample ID	rb	SampT	ype: ME	BLK	Tes	Code: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batch	n ID: G3	9384	F	tunNo: 3	9384				
Prep Date:		Analysis D)ate: 12	2/14/2016	S	eqNo: 1	233374	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	e Organics (GRO)	ND	5.0								
Surr: BFB		400		500.0		80.0	70	130			
Sample ID	1612745-001AMS	SampT	уре: М	3	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	S-13	Batch	n ID: G3	9384	F	RunNo: 3	9384				
Prep Date:		Analysis D	Date: 12	2/14/2016	8	SeqNo: 1	234053	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	20	3.9	19.42	1.655	92.6	52.3	132			
Surr: BFB		340		388.5		88.3	70	130			
Sample ID	1612745-001AMSI	O SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	S-13	Batch	n ID: G3	9384	F	RunNo: 3	9384				
Prep Date:		Analysis D	Date: 12	2/14/2016	8	SeqNo: 1	234054	Units: mg/l	≺g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	18	3.9	19.42	1.655	86.6	52.3	132	6.12	20	
Surr: BFB		340		388.5		88.7	70	130	0	0	

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Page 11 of 11

- P Sample pH Not In Range
- RL. Reporting Detection Limit
- Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	APEX AZTEC	Work Order Num	ber: 1612745		RcptNo:	1
Received by/da	ate: /	T 12/14/16				
Logged By:	Anne Thome	12/14/2016 8:05:0	MA C	anne Am	_	
Completed By:	Anne Thorne	e 12/14/2016 9:07;5	5 AM	an Ilm	_	
Reviewed By:	· AC	12/14/	11 0	O(1114)		
Chain of Cu	stody					
	eals intact on san	nple bottles?	Yes	No 🗆	Not Present	
2. Is Chain of	Custody comple	ite?	Yes 🗸	No 🗆	Not Present	
3. How was th	he sample delive	red?	Courier			
Log In						
4. Was an at	tempt made to co	ool the samples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all sa	amples received	at a temperature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆	
6. Sample(s)	in proper contain	ner(s)?	Yes 🗹	No 🗌		
7. Sufficient s	sample volume fo	or indicated test(s)?	Yes 🗹	No 🗌		
8. Are sample	es (except VOA a	and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was prese	rvative added to	bottles?	Yes	No 🗹	NA 🗆	
10. VOA vials	have zero heads	pace?	Yes 🗌	No 🗌	No VOA Vials	
11, Were any	sample containe	rs received broken?	Yes 🗆	No 🗹		
				_	# of preserved bottles checked	
7 7	erwork match bott repancies on cha		Yes 🗹	No 📙	for pH:	r >12 unless noted)
	•	ified on Chain of Custody?	Yes 🗸	No 🗆	Adjusted?	
	vhat analyses we		Yes 🗹	No 🗆		
15. Were all ho	olding times able fy customer for a	to be met?	Yes 🗹	No 🗆	Checked by:	
Special Han	dling (if appl	licable)				
16. Was client	notified of all dis	crepancies with this order?	Yes	No 🗆	NA 🗸	
Pers	on Notified:	Da	te l			1
	Vhom:	Via	'	Phone Fax	In Person	
	arding:					
Clier	nt Instructions:					
17. Additional	remarks:	A CONTRACTOR OF THE CONTRACTOR				ı
18. Cooler In	formation					
Cooler	No Temp °C	Condition Seal Intact Seal No	Seal Date	Signed By		
1	1.0	Good Yes				

				CHAIN OF CUSTODY RECORD
Project Manager K. Summers	Laboratory: Hand Address: ARQ Contact: A Free Phone: PO/SO #: Sampler's Signature		ANALYSIS REQUESTED	Lab use only Due Date: Temp. of coolers (. 6 when received (C°): 1 2 3 4 5 Page of
Proj. No. Project Name	, ,,	No/Type of Containers		
68-10			1000	
Matrix Date Time C G r Identifying Mar	oks of Sample(s) Start Depth Depth	A/G ILL 250 ml Glass Jar P/O	TOP /	Lab Sample ID (Lab Use Only)
5/2/13/4/110 \$ 5-13			XX	1612745-cd
1 1125 5-14		1		702
1/30 5-15				703
1150 5-16				
1200 5-17				704
1230 5-18				-w/s
1245 5-19		4	14	-701
	115			
K	15			
	150% Rush 2100% Rush		T	
12/13/16 14	Time: Received by: (Signa	ture) Date:	Time: NOTES: Bil	1 Tom Long
Helinquished by (Signature) Date: 1 1/3/14	Fime: Received by: (Signation of the Control of the	12-114/6	Time: N2.	Tom Long 6819 RUSH!
	Time: Received by: (Signa		Time:	Same Day
Matrix WW - Wastewater W - Water S	S - Soil SD - Solid L - Liquic		rcoal tube 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

December 19, 2016

Kyle Summers

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Lateral 6B 10

OrderNo.: 1612883

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-20

Project: Lateral 6B 10

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

Lab ID: 1612883-001

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

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-21

Project: Lateral 6B 10

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

Lab ID: 1612883-002

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

Analyses	Result	PQL Qua	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	GE ORGANIC	S			Analyst	том
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/16/2016 10:50:19 AM	1 29231
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	12/16/2016 10:50:19 AM	1 29231
Surr: DNOP	85.6	70-130	%Rec	1	12/16/2016 10:50:19 AM	1 29231
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	12/16/2016 10:37:14 AM	G39452
Surr: BFB	89.6	68.3-144	%Rec	1	12/16/2016 10:37:14 AM	G39452
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.017	mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Toluene	ND	0.035	mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Ethylbenzene	ND	0.035	mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Xylenes, Total	ND	0.069	mg/Kg	1	12/16/2016 10:37:14 AM	B39452
Surr: 4-Bromofluorobenzene	97.6	80-120	%Rec	1	12/16/2016 10:37:14 AM	B39452

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

- 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
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 13 J
- Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-22

Project: Lateral 6B 10

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

Lab ID: 1612883-003

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

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-23

Project: Lateral 6B 10

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

Lab ID: 1612883-004

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

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

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 13
- P Sample pH Not In Range
- RI. Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-24

Project: Lateral 6B 10 Collection Date: 12/15/2016 2:20:00 PM

Lab ID: 1612883-005

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

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL R	ANGE ORGANIC	S	1		Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/16/2016 12:12:58	PM 29231
Motor Oil Range Organics (MRO)	ND	. 49	mg/Kg	1	12/16/2016 12:12:58	PM 29231
Surr: DNOP	86.3	70-130	%Rec	1	12/16/2016 12:12:58	PM 29231
EPA METHOD 8015D: GASOLINE	RANGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	12/16/2016 11:01:42	AM G39452
Surr: BFB	88.6	68.3-144	%Rec	1	12/16/2016 11:01:42	AM G39452
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.019	mg/Kg	1	12/16/2016 11:01:42	AM B39452
Toluene	ND	0.039	mg/Kg	1	12/16/2016 11:01:42	AM B39452
Ethylbenzene	ND	0.039	mg/Kg	1	12/16/2016 11:01:42	AM B39452
Xylenes, Total	ND	0.078	mg/Kg	1	12/16/2016 11:01:42	AM B39452
Surr: 4-Bromofluorobenzene	96.6	80-120	%Rec	1	12/16/2016 11:01:42	AM B39452

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 5 of 13 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-25

Project: Lateral 6B 10

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

Lab ID: 1612883-006

Matrix: MEOH (SOIL)

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

Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	3			Analys	t: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/16/2016 12:40:28 F	PM 29231
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	12/16/2016 12:40:28 F	PM 29231
Surr: DNOP	85.9	70-130	%Rec	1	12/16/2016 12:40:28 F	PM 29231
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/16/2016 11:26:16	AM G39452
Surr: BFB	89.4	68.3-144	%Rec	1	12/16/2016 11:26:16	AM G39452
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.018	mg/Kg	1	12/16/2016 11:26:16	AM B39452
Toluene	ND	0.036	mg/Kg	1	12/16/2016 11:26:16	AM B39452
Ethylbenzene	ND	0.036	mg/Kg	1	12/16/2016 11:26:16 /	AM B39452
Xylenes, Total	ND	0.072	mg/Kg	1	12/16/2016 11:26:16	AM B39452
Surr: 4-Bromofluorobenzene	97.3	80-120	%Rec	1	12/16/2016 11:26:16	AM B39452

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 13
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-26

Project: Lateral 6B 10

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

1612883-007 Lab ID:

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

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	3			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	12/16/2016 1:08:00 P	M 29231
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/16/2016 1:08:00 P	M 29231
Surr: DNOP	85.8	70-130	%Rec	1	12/16/2016 1:08:00 P	M 29231
EPA METHOD 8015D: GASOLINE RAI	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/16/2016 11:50:56	AM G39452
Surr: BFB	86.3	68.3-144	%Rec	1	12/16/2016 11:50:56	AM G39452
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.024	mg/Kg	1	12/16/2016 11:50:56	AM B39452
Toluene	ND	0.047	mg/Kg	1	12/16/2016 11:50:56	AM B39452
Ethylbenzene	ND	0.047	mg/Kg	1	12/16/2016 11:50:56	AM B39452
Xylenes, Total	ND	0.095	mg/Kg	1	12/16/2016 11:50:56	AM B39452
Surr: 4-Bromofluorobenzene	91.8	80-120	%Rec	1	12/16/2016 11:50:56	AM B39452

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 13 J
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order 1612883

Date Reported: 12/19/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-27

Project: Lateral 6B 10

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

Lab ID: 1612883-008

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

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	st: TOM
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/16/2016 1:35:25 P	M 29231
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/16/2016 1:35:25 P	M 29231
Surr: DNOP	85.9	70-130	%Rec	1	12/16/2016 1:35:25 P	M 29231
EPA METHOD 8015D: GASOLINE RAM	IGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	12/16/2016 12:15:32	PM G3945
Surr: BFB	88.1	68.3-144	%Rec	1	12/16/2016 12:15:32 [PM G3945
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.018	mg/Kg	1	12/16/2016 12:15:32	PM B39452
Toluene	ND	0.036	mg/Kg	1	12/16/2016 12:15:32	PM B39452
Ethylbenzene	ND	0.036	mg/Kg	1	12/16/2016 12:15:32	PM B39452
Xylenes, Total	ND	0.071	mg/Kg	1	12/16/2016 12:15:32	PM B39452
Surr: 4-Bromofluorobenzene	93.1	80-120	%Rec	1	12/16/2016 12:15:32	PM B39452

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 13 J
- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B 10

Sample ID LCS-29231

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS

Batch ID: 29231

RunNo: 39450

Prep Date: 12/16/2016

Analysis Date: 12/16/2016

10

PQL

SeqNo: 1235511

96.6

85.7

Units: mg/Kg

Analyte Diesel Range Organics (DRO) Surr: DNOP

Result 48 4.3 SPK value SPK Ref Val %REC 50.00 5.000

10.00

5.030

LowLimit

116

130

HighLimit

63.8

70

70

RPDLimit Qual

Sample ID MB-29231

SampType: MBLK Batch ID: 29231

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

Client ID: Prep Date: 12/16/2016

PBS

Analysis Date: 12/16/2016

RunNo: 39450 SeqNo: 1235512

Units: mg/Kg

Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

Result PQL ND 10 ND 50

8.8

SPK value SPK Ref Val %REC LowLimit HighLimit

RPDLimit %RPD Qual

Surr: DNOP

SampType: MS

TestCode: EPA Method 8015M/D: Diesel Range Organics

130

Client ID: S-20

Prep Date: 12/16/2016

Batch ID: 29231

RunNo: 39450

88.3

Prep Date: 12/16/2016

Sample ID 1612883-001AMS

Analysis Date: 12/16/2016

SeqNo: 1236423

Units: mg/Kg HighLimit

%RPD **RPDLimit** Qual

Qual

Analyte Diesel Range Organics (DRO) Surr: DNOP

47 4.1

Result

PQL SPK value SPK Ref Val %REC 10 50.30

93.1 81.5 130 130

TestCode: EPA Method 8015M/D: Diesel Range Organics

Sample ID 1612883-001AMSD Client ID:

S-20

SampType: MSD Batch ID: 29231

Analysis Date: 12/16/2016

RunNo: 39450

51.6

70

LowLimit

RPDLimit

Analyte Diesel Range Organics (DRO) Result PQL SPK value SPK Ref Val

49

4.2

SeqNo: 1236424

Units: mg/Kg

%RPD

4.40

Surr: DNOP

10

50.25 5.025 %REC 97.4

84.6

0

LowLimit 51.6 70 **HighLimit** 130 130

0

20 0

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H

% Recovery outside of range due to dilution or matrix

- ND
- R RPD outside accepted recovery limits
- Not Detected at the Reporting Limit
- 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 container temperature is out of limit as specified

Page 9 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

APEX TITAN Client: Lateral 6B 10 Project: TestCode: EPA Method 8015D: Gasoline Range Sample ID RB SampType: MBLK Client ID: PBS Batch ID: G39452 RunNo: 39452 Prep Date: Analysis Date: 12/16/2016 SeqNo: 1235862 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 860 1000 85.9 68.3 144 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G39452 RunNo: 39452 Prep Date: Analysis Date: 12/16/2016 SeqNo: 1235863 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit **HighLimit** %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 5.0 25.00 107 74.6 123 Surr: BFB 930 1000 93.1 68.3 144 Sample ID 1612883-001AMS TestCode: EPA Method 8015D: Gasoline Range SampType: MS Client ID: S-20 Batch ID: G39452 RunNo: 39452 Prep Date: Analysis Date: 12/16/2016 SegNo: 1235864 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 20 3.5 17.42 0 114 61.3 150 Surr: BFB 670 696.9 96.4 68.3 144 Sample ID 1612883-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: S-20 Batch ID: G39452 RunNo: 39452 Prep Date: Analysis Date: 12/16/2016 SeqNo: 1235865 Units: mg/Kg SPK value SPK Ref Val LowLimit %RPD **RPDLimit** Analyte Result POL %RFC HighLimit Qual Gasoline Range Organics (GRO) 19 3.5 17.42 0 111 613 150 2.62 20 Surr: BFB 650 696.9 68.3 144 0 Sample ID MB-29188 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 29188 RunNo: 39451 Prep Date: 12/14/2016 Analysis Date: 12/16/2016 SeqNo: 1235878 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual LowLimit Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 880 1000 68 3 88 1 144

Qualifiers:

Analyte

Client ID:

Prep Date:

* Value exceeds Maximum Contaminant Level

D Sample Diluted Due to Matrix

Sample ID LCS-29188

LCSS

12/14/2016

H Holding times for preparation or analysis exceeded

SampType: LCS

Result

Batch ID: 29188

Analysis Date: 12/16/2016

PQL

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

LowLimit

TestCode: EPA Method 8015D: Gasoline Range

Units: mg/Kg

HighLimit

%RPD

E Value above quantitation range

RunNo: 39451

SeqNo: 1235879

J Analyte detected below quantitation limits

Page 10 of 13

RPDLimit

Qual

P Sample pH Not In Range

SPK value SPK Ref Val %REC

R1. Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

960

WO#:

1612883

19-Dec-16

Qual

Client:

APEX TITAN

Project:

Lateral 6B 10

Sample ID LCS-29188

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

68.3

Client ID:

Surr: BFB

LCSS

Batch ID: 29188

RunNo: 39451

Prep Date: 12/14/2016 Analysis Date: 12/16/2016

SeqNo: 1235879

95.8

Units: mg/Kg

144

%RPD **RPDLimit** Result **PQL** SPK value SPK Ref Val %REC LowLimit **HighLimit** Gasoline Range Organics (GRO) 25 5.0 25.00 100 74.6 123

1000

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix

Holding times for preparation or analysis exceeded H

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Value above quantitation range

Analyte detected below quantitation limits J

Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Page 11 of 13

Hall Environmental Analysis Laboratory, Inc.

WO#: **1612883**

19-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B 10

Sample ID RB	SampT	SampType: MBLK			tCode: El	iles				
Client ID: PBS	Batch	ID: B3	9452	F	RunNo: 3	9452				
Prep Date:	Analysis D	Analysis Date: 12/16/2016			SeqNo: 1	235870	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.92		1.000		91.6	80	120			

Sample ID 100NG BTEX LC	S SampT	ype: LC	S	Tes						
Client ID: LCSS	Batch	ID: B3	9452	F	RunNo: 3	9452				
Prep Date:	Analysis D	ate: 12	2/16/2016	S	SeqNo: 1	235871	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	104	75.2	115			
Toluene	1.0	0.050	1.000	0	99.8	80.7	112			
Ethylbenzene	0.98	0.050	1.000	0	97.9	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	95.2	79.2	115			
Surr: 4-Bromofluorobenzene	0.98		1.000		97.5	80	120			

Sample ID 1612883-002AM	Samp	Type: MS	3	Tes	tCode: E	tiles				
Client ID: S-21	Batc	h ID: B3	9452	F	RunNo: 3					
Prep Date:	Analysis [Date: 12	2/16/2016	8	SeqNo: 1	235872	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.73	0.017	0.6920	0	105	61.5	138			
Toluene	0.70	0.035	0.6920	0	102	71.4	127			
Ethylbenzene	0.69	0.035	0.6920	0	99.2	70.9	132			
Xylenes, Total	2.0	0.069	2.076	0.01059	95.1	76.2	123			
Surr: 4-Bromofluorobenzene	0.65		0.6920		94.2	80	120			

Sample ID 1612883-002AMS	SD SampT	ype: MS	SD	TestCode: EPA Method 8021B: Volatiles						
Client ID: S-21	Batch	ID: B3	9452	R	RunNo: 3	9452				
Prep Date:	Analysis D	ate: 12	2/16/2016	S	SeqNo: 1					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.72	0.017	0.6920	0	105	61.5	138	0.772	20	
Toluene	0.72	0.035	0.6920	0	103	71.4	127	1.59	20	
Ethylbenzene	0.69	0.035	0.6920	0	99.4	70.9	132	0.111	20	
Xylenes, Total	2.0	0.069	2.076	0.01059	94.3	76.2	123	0.875	20	
Surr: 4-Bromofluorobenzene	0.67		0.6920		97.3	80	120	0	0	

Qualifiers:

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

Page 12 of 13

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612883

19-Dec-16

Client: Project: APEX TITAN Lateral 6B 10

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

Sample ID LCS-29188	Samp	ype: LC	S	Tes	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batcl	h ID: 29	188	F	RunNo: 3	9451					
Prep Date: 12/14/2016	Analysis D	Analysis Date: 12/16/2016			SeqNo: 1	235893	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.025	1.000	0	110	75.2	115				
Toluene	1.0	0.050	1.000	0	103	80.7	112				
Ethylbenzene	0.98	0.050	1.000	0	98.3	78.9	117				
Xylenes, Total	3.0	0.10	3.000	0	98.9	79.2	115				
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				

Qualifiers:

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

Page 13 of 13

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins Nt. Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

			WHITE SERVICE SERVICE					
Client Name:	APEX AZTEC	Work Order Number:	16128	83			RcptNo:	1
Received by/da	te:	12/110/110						
Logged By:	Lindsay Mangin	12/16/2016 7:15:00 AM	А		Julyt	0		
Completed By:	Lindsay Mangin	12/16/2016 7:19:58 AM	A		Julyth	90		
Reviewed By:	as	12/16/16						
Chain of Cus	stody							
	als intact on sample bottles?		Yes		No		Not Present ✔	
**	Custody complete?		Yes	~	No		Not Present	
3. How was th	e sample delivered?		Cour	ier				
Log In								
	empt made to cool the sample	es?	Yes	~	No		NA	
5. Were all sa	imples received at a tempera	ture of >0° C to 6.0°C	Yes	v	No	ĭ	NA	
6. Sample(s)	in proper container(s)?		Yes	V,	No			
7. Sufficient s	ample volume for indicated to	est(s)?	Yes	~	No			
8. Are sample	es (except VOA and ONG) pro	operly preserved?	Yes	✓.	No			
9. Was presen	rvative added to bottles?		Yes	6	No	V	NA	
10.VOA vials I	have zero headspace?		Yes		No		No VOA Vials ✔	
	sample containers received b	roken?	Yes		No	~	# - 6 d	
							# of preserved bottles checked	
	rwork match bottle labels?		Yes	~	No	1	for pH: (<2	or >12 unless noted)
	epancies on chain of custody as correctly identified on Chai		Yes	~	No		Adjusted?	,
	hat analyses were requested		Yes	~	No			
15. Were all ho	olding times able to be met? y customer for authorization.)		Yes	V	No		Checked by:	
Special Han	dling (if applicable)							
16. Was client	notified of all discrepancies w	vith this order?	Yes		No		NA 🗸	
Perso	on Notified:	Date:		<u> </u>	and the state of t	-		
By W	/hom:	Via:	eM	ail	Phone	Fax	In Person	
Rega	arding:							
Clien	t Instructions:							
17. Additional	remarks:							
18. Cooler Int	1 1	Seal Intact Seal No	Seal D	ate	Signed E	Зу		
1,	0.0					1		

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Samp	ier's Name					Sampler's Signa	ature -	1	and the same of th				5	//	//	11	//	f			
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Proj. I	No.		Proje		lateral	63-1			No/Ty	rpe of (Containers		15/2				//				
Matrix	Date	Time	Comp	Grab		rks of Sample(s)		End	VOA	A/G 1LL	250 ml Glass	P/0	12			//			ample 1D (La		
5	12/15/16	1400			5.00	0					i						, i	6/	2883	3-001	
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	uished by				Date: 1	Time: Receiv	ed by: (Signa	ture)	_	Dat 12/1	5/16	Time: N	NOTES:		T-x	100	4		* * * * * * * * * * * * * * * * * * * *	
Relino	uished by (Signature)	ters	5	Date: 1	Fime: Receive	red/by:	7			12/14/	é:	71me: 0715	B. I	to	100		J		٥	
Relino	uished by	Signature)			Date:	Time: Receiv	red by:	Signa	ture)		Dat	e:	Time:	AFE	# N	1208	19		Serci	Day	
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Matrix Contai		V - Wastewa A - 40 ml via			W - Water S A/G - Amber / Or	S - Soil SD - Soir Glass 1 Liter	lid L	- Liquic	f A	- Air Ba	ag C		rcoal tube St	- sludge	0 -	Oil					_



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

December 20, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Lateral 6B 10 OrderNo.: 1612942

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-28

Project: Lateral 6B 10

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

Lab ID:

1612942-001

Collection Date: 12/10/2010 11:00:00 AN

Matrix: MEOH (SOIL) Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL Qu	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	12/19/2016 11:53:15	AM 29257
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	12/19/2016 11:53:15	'AM 29257
Surr: DNOP	85.9	70-130	%Rec	1	12/19/2016 11:53:15	AM 29257
EPA METHOD 8015D: GASOLINE RA	NGE	*			Analy	st: NSB
Gasoline Range Organics (GRO)	, ND	3.8	mg/Kg	1	12/19/2016 10:45:05	AM G39493
Surr: BFB	85.1	68.3-144	%Rec	1	12/19/2016 10:45:05	AM G39493
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.019	mg/Kg	1	12/19/2016 10:45:05	AM B39493
Toluene	ND	0.038	mg/Kg	- 1	12/19/2016 10:45:05	AM B39493
Ethylbenzene	ND	0.038	mg/Kg	1	12/19/2016 10:45:05	AM B39493
Xylenes, Total	ND	0.076	mg/Kg	1	12/19/2016 10:45:05	AM B39493
Surr: 4-Bromofluorobenzene	94.5	80-120	%Rec	1	12/19/2016 10:45:05	AM B39493

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-29

Project: Lateral 6B 10

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

Lab ID: 1612942-002

Matrix: MEOH (SOIL) Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	S				Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/19/2016 12:20:38	PM 29257
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	12/19/2016 12:20:38	PM 29257
Surr: DNOP	84.5	70-130		%Rec	1	12/19/2016 12:20:38	PM 29257
EPA METHOD 8015D: GASOLINE RA	NGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	12/19/2016 11:08:32	AM G3949
Surr: BFB	86.2	68.3-144		%Rec	1	12/19/2016 11:08:32	AM G3949
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.017		mg/Kg	1	12/19/2016 11:08:32	AM B39493
Toluene	ND	0.035		mg/Kg	1	12/19/2016 11:08:32	AM B39493
Ethylbenzene	ND	0.035		mg/Kg	1	12/19/2016 11:08:32	AM B39493
Xylenes, Total	ND	0.069		mg/Kg	1	12/19/2016 11:08:32	AM B39493
Surr: 4-Bromofluorobenzene	95.3	80-120		%Rec	1	12/19/2016 11:08:32	AM B39493

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: S-30

Project: Lateral 6B 10

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

Lab ID: 1612942-003

Matrix: MEOH (SOIL) Received Date: 12/17/2016 7:45:00 AM

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

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612942

Date Reported: 12/20/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lateral 6B 10

Client Sample ID: S-31

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

Project: Lateral 6B 10 **Lab ID:** 1612942-004

Matrix: MEOH (SOIL) Received Date: 12/17/2016 7:45:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/19/2016 1:14:55 PM	29257
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/19/2016 1:14:55 PM	29257
Surr: DNOP	85.3	70-130	%Rec	1	12/19/2016 1:14:55 PM	29257
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	12/19/2016 11:55:45 A	M G39493
Surr: BFB	87.9	68.3-144	%Rec	1	12/19/2016 11:55:45 A	M G39493
EPA METHOD 8021B: VOLATILES					Analys	NSB
Benzene	ND	0.018	mg/Kg	1	12/19/2016 11:55:45 A	M B39493
Toluene	ND	0.035	mg/Kg	1	12/19/2016 11:55:45 A	M B39493
Ethylbenzene	ND	0.035	mg/Kg	1	12/19/2016 11:55:45 A	M B39493
Xylenes, Total	ND	0.071	mg/Kg	1	12/19/2016 11:55:45 A	M B39493
Surr: 4-Bromofluorobenzene	95.9	80-120	%Rec	1	12/19/2016 11:55:45 A	M B39493

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 7
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612942

20-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B 10

Sample ID I	LCS-29257
-------------	-----------

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: LCSS

Batch ID: 29257

RunNo: 39484

Prep Date: 12/19/2016

Analysis Date: 12/19/2016

Analyte

Result

SeqNo: 1236591

Units: ma/Ka HighLimit

116

130

%REC PQL SPK value SPK Ref Val LowLimit Diesel Range Organics (DRO) 48 10 50.00 Surr: DNOF 4.3 5.000 86.9

TestCode: EPA Method 8015M/D: Diesel Range Organics

Sample ID MB-29257 Client ID:

Analyte

Surr: DNOF

Client ID:

PBS

SampType: MBLK Batch ID: 29257

RunNo: 39484

Prep Date: 12/19/2016

Analysis Date: 12/19/2016

Result

Result

4.3

SeqNo: 1236592

Units: mg/Kg

HighLimit

%RPD

%RPD **RPDLimit**

RPDLimit

Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)

ND

ND 50 8.2

10

82.3

SPK value SPK Ref Val %REC LowLimit

70

130

Qual

Sample ID LCS-29233

Prep Date: 12/16/2016

LCSS

SampType: LCS Batch ID: 29233

TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 39485

63.8

Units: %Rec

HighLimit

130

Analyte Surr: DNOP

Analysis Date: 12/19/2016

SPK value SPK Ref Val

5.000

10.00

SeqNo: 1237666 %REC

LowLimit

%RPD

RPDLimit Qual

Sample ID MB-29233

SampType: MBLK

PQL

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

PBS

Batch ID: 29233

PQL

RunNo: 39485

86.8

Prep Date:

12/16/2016

Analysis Date: 12/19/2016

SegNo: 1237667

Units: %Rec

%RPD **RPDLimit**

Qual

Analyte Surr: DNOP

8.9

Result

10.00

SPK value SPK Ref Val

%REC 89.0

70

LowLimit

HighLimit 130

Qualifiers:

- Value exceeds Maximum Contaminant Level
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H

% Recovery outside of range due to dilution or matrix

- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

- Analyte detected below quantitation limits
- Sample pH Not In Range
- RI Reporting Detection Limit
- Sample container temperature is out of limit as specified

Analyte detected in the associated Method Blank

Value above quantitation range

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

Result

23

950

PQL

5.0

WO#:

1612942

20-Dec-16

Client:

APEX TITAN

Project:

Analyte

Surr: BFB

Gasoline Range Organics (GRO)

Lateral 6B 10

Sample ID RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: G39493 RunNo: 39493 Prep Date: Analysis Date: 12/19/2016 SeqNo: 1237109 Units: mg/Kg Analyte Result SPK value SPK Ref Val %REC %RPD PQL HighLimit **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 Surr: BFB 900 1000 68.3 89.9 144 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: G39493 RunNo: 39493 Prep Date: Analysis Date: 12/19/2016 SeqNo: 1237110 Units: mg/Kg

0

%REC

91.4

95.3

LowLimit

74.6

68.3

HighLimit

123

144

%RPD

RPDLimit

Qual

SPK value SPK Ref Val

25.00

1000

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•	ии	11	•	e.	LV

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612942

20-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B 10

Sample ID RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: PBS	Batch	n ID: B3	9493	F	RunNo: 3	9493				
Prep Date:	Analysis D)ate: 12	2/19/2016	8	SeqNo: 1	237116	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		99.5	80	120			

Sample ID 100NG BTEX LC	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batch	1D: B3	9493	F	RunNo: 3	9493				
Prep Date:	Analysis D	ate: 12	2/19/2016	5	SeqNo: 1	237117	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	97.8	75.2	115			
Toluene	0.96	0.050	1.000	0	96.3	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	95.4	78.9	117			
Xylenes, Total	2.9	0.10	3.000	0	96.3	79.2	115			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 7 of 7

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	APEX AZTEC	Work Order Number	er: 1612942		RcptNo:	1
Received by/dat	te:	12/17/16		100 P 200811 0 0	***** ** **** * ****	* * * * * * * * * * * * * * * * * * * *
Logged By:	Lindsay Mangin	12/17/2016 7:45:00 /	M	July Allego		
Completed By:	Lindsay Mangin	12/17/2016 8:19:30 /	AM	Juney Hope		-
Reviewed By:	A 12/19/16			0 0		
Chain of Cus			A CALL OF THE PROPERTY OF THE	****	A PARAMETERS AND DESCRIPTION OF THE	
	als intact on sample bottle	es?	Yes	No 🗌	Not Present	
2. Is Chain of	Custody complete?		Yes 🗸	No 🗍	Not Present	
3. How was the	e sample delivered?		Courier			
Log In						
4. Was an atte	empt made to cool the sa	mples?	Yes 🗸	No 🗌	NA 🗌	
5. Were all sa	mples received at a temp	erature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA []	
6. Sample(s) i	in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sa	ample volume for indicate	d test(s)?	Yes 🗸	No []		
8, Are samples	s (except VOA and ONG)	properly preserved?	Yes 🗸	No 🗌		
9. Was presen	vative added to bottles?		Yes	No 🗹	NA []	
10.VOA vials h	ave zero headspace?		Yes	No 🗌	No VOA Vials	
11. Were any s	sample containers receive	d broken?	Yes 🗌	No V	# of preserved	
12 Dags 2020	work match bottle labels?	,	Yes 🗸	No 🗌	bottles checked for pH:	
	epancies on chain of cust		Tes 💌	NO 1_1	21,00,000	>12 unless noted)
13. Are matrice:	s correctly identified on C	hain of Custody?	Yes 🗸	No .	Adjusted?	w as x
14. is it clear wi	hat analyses were reques	ted?	Yes 🗸	No		
	ding times able to be me customer for authorization		Yes 🗸	No	Checked by:	0. X 1 0.000 (\$1.700)
Special Hand	dling (If applicable)					
16. Was client r	notified of all discrepancie	s with this order?	Yes	No L	NA 🗸	
Perso	on Notified:	Date:			A committee of the second of t	
By Wi	1	Via:	,	Phone Fax	In Person	
Regar	rding:					
Client	Instructions:				And the state of t	
17. Additional r	remarks:	THE CONTROL OF THE PARTY SHAPE			management and a state of the control of the contro	
18. Cooler Info	Co. B. C. C. C.	n Seal Intact Seal No	Seal Date	Signed By		
1	2.1 Good	Yes				

																		C	HAIN	OF C	CUSTO	DY HE	CORD
	A	,				Laboratory:	7	1211	Er	V			ANAL	YSIS JESTED	Sing		//	//		//	Lab use Due Date		
A	PEX				,	Address: _		A3E	2 1	V.M				/,	60	//	/ /	/	//	/ /	Temp. of o	coolers	
Offic	e Locatio	n H	zte	c	N.M									/1	3/	/ /	/	/	//	/	when rece	eived (C°):	2.1
						Contact:	A	Fs.	un	nan			1		Y /		/	/ /	/ /		1 2	3 4	5
						Phone:								0/00			//				Page	1 of_	
Proie	ect Mana	ger :	x _	Su-	imes_	PO/SO#: _								B 8	/	//	/ /		11	1			
	lar's Name					Sampler's Signa		, ,	7				1	127	//	/ /			//				
	Che	1 DA	30n	<i>1</i> ;		(2	0/2	2/	0				7	GR3 603	//		//	//	//				
Proj. N	No.		Proje	ect Na	lateral	63-12	> .	٠.	No/Ty	ype of C	Contain	ers	ATE	Ha /		//	//						
Matrix	Date	Time	Comp	Grab	Identifying Mar	ks of Sample(s)	Start	End	VOA	A/G	250 ml	Glass Jar P/O		7/	//	//		//		Lab S	ample ID (La	ab Use On	ly)
5	131416	1100		D	5-2	18						1	111		11				llol	29	42-	001	
5		1105			5-2							1							100		•	202	
5		1/10			S-3	0						1	111									∞ 3	
3		1115			5-31	1						t ·										004	
		1100			5-3																		
		1105			5-3	3								N							(4)		
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															1								
	round time	□ Nor					Q100%		thurs)		- 1	Deter	Timo	: NOT	Ee.	-							
	wished by		1	12		ime: Receiv	HU	Signa	iture)			Date:	1305	NOT		/i	2	Ta	10	106			
Relipe	uished by I	(Signature)	10.		Date: T	ime: Receiv	ed by:	(Signa	ture)	1.		Date:	Time	:	01	(1)	10	10m	· w	"	-	Sane	
Reling	uished by	(Signature)	100			ime: Receiv	ed by:	Signa	iture)	124	17	Date:	Time		AF	5#	N	26	- lo 819			Sane Day	
Relino	uished by	(Signature)			Date: T	ime: Receiv	ed by:	(Signa	iture)		+	Date:	Time	:	F14 P	7/							
Matrix Contain		W - Wastewa			W - Water S A/G - Amber / Or	Glass 1 Liter	lid L	- Liquid	d A	- Air Ba	ag outh		arcoal tube	SL - sh	udge	0-	Oil		25				



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

December 22, 2016

Kyle Summers APEX TITAN 606 S. Rio Grande Unit A Aztec, NM 87410

FAX

RE: Lateral 6B-10

TEL: (903) 821-5603

orderNo.: 1612B30

Dear Kyle Summers:

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

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1612B30

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral 6B-10

Lab ID: 1612B30-001

Client Sample ID: SP-1

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

Matrix: SOIL

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

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	S			Analys	t: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/21/2016 9:56:21 AM	1 29323
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	12/21/2016 9:56:21 AN	1 29323
Surr: DNOP	82.2	70-130	%Rec	1	12/21/2016 9:56:21 AM	1 29323
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	7.5	mg/Kg	2	12/21/2016 10:30:51 A	M G39562
Surr: BFB	94.0	68.3-144	%Rec	2	12/21/2016 10:30:51 A	M G39562
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.037	mg/Kg	2	12/21/2016 10:30:51 A	M B39562
Toluene	ND	0.075	mg/Kg	2	12/21/2016 10:30:51 A	M B39562
Ethylbenzene	ND	0.075	mg/Kg	2	12/21/2016 10:30:51 A	M B39562
Xylenes, Total	ND	0.15	mg/Kg	2	12/21/2016 10:30:51 A	M B39562
Surr: 4-Bromofluorobenzene	106	80-120	%Rec	2	12/21/2016 10:30:51 A	M B39562

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 5
- P Sample pH Not In Range
- RI. Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order 1612B30

Date Reported: 12/22/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Lab ID:

Project: Lateral 6B-10

1612B30-002

Matrix: SOIL

Client Sample ID: SP-2

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

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

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

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 5 J
- Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Result

45

WO#:

1612B30

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID LCS-29323

SampType: LCS

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID:

LCSS

Batch ID: 29323

RunNo: 39554

SeqNo: 1238761

Prep Date: 12/21/2016

Analysis Date: 12/21/2016 **PQL**

LowLimit

%REC

Units: mg/Kg

Analyte Diesel Range Organics (DRO)

4.2 5.000

Analysis Date: 12/21/2016

10

89.8 63.8 83.8 70

%RPD HighLimit 116

130

RPDLimit Qual

Surr: DNOP

Sample ID MB-29323

SampType: MBLK

RunNo: 39554

SPK value SPK Ref Val %REC LowLimit

TestCode: EPA Method 8015M/D: Diesel Range Organics

%RPD

Prep Date: 12/21/2016

Surr: DNOP

PBS Client ID:

Batch ID: 29323

SeqNo: 1238762

Units: mg/Kg

HighLimit

RPDLimit Qual

Analyte Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Result ND 10 ND

50 8.1

10.00

SPK value SPK Ref Val

50.00

80.8

70

130

Qualifiers:

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

Page 3 of 5

- Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612B30

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID RB

Prep Date:

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: G39562

5.0

RunNo: 39562

Units: mg/Kg

144

%RPD **RPDLimit**

Analyte

Analysis Date: 12/21/2016 Result PQL

SPK value SPK Ref Val %REC

SeqNo: 1239331

HighLimit

Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 900

1000

90.4

68.3

LowLimit

LowLimit

Sample ID 2.5UG GRO LCS

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

RunNo: 39562

Client ID: Prep Date: LCSS Batch ID: G39562 Analysis Date: 12/21/2016

SPK Ref Val

SeqNo: 1239332

%REC

Units: mg/Kg

Qual

Analyte Gasoline Range Organics (GRO) Result

PQL SPK value 25.00 HighLimit 123 %RPD

Page 4 of 5

144

RPDLimit

29 5.0 0 116 74.6 Sum: BFB 930 1000 93.0 68.3

Qualifiers:

ND

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1612B30

22-Dec-16

Client:

APEX TITAN

Project:

Lateral 6B-10

Sample ID RB

SampType: MBLK

PQL

0.025

0.050

0.050

0.10

TestCode: EPA Method 8021B: Volatiles

Client ID:

PBS

Batch ID: B39562

RunNo: 39562

HighLimit

Prep Date:

Analysis Date: 12/21/2016

Result

ND

ND

ND

ND

SPK value SPK Ref Val %REC LowLimit

SeqNo: 1239369

Units: mg/Kg

%RPD **RPDLimit**

Qual

Qual

Analyte Benzene Toluene Ethylbenzene Xylenes, Total

Surr: 4-Bromofluorobenzene

120

Sample ID 100NG BTEX LCS Client ID:

Prep Date:

LCSS

SampType: LCS

Analysis Date: 12/21/2016

Batch ID: B39562

1.000

RunNo: 39562

SeqNo: 1239370

TestCode: EPA Method 8021B: Volatiles

Units: mg/Kg

RPDLimit %RPD

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	9
Benzene	1.1	0.025	1.000	0	109	75.2	115	
Toluene	1.1	0.050	1.000	0	106	80.7	112	
Ethylbenzene	1.0	0.050	1.000	0	105	78.9	117	
Xylenes, Total	3.1	0.10	3.000	0	102	79.2	115	
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120	

Qualifiers:

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

Page 5 of 5



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:	16125	30		RcptNo:	1
Received by/date:	12/2/1/6					
Logged By: Anne Thorne	12/21/2016 8:00:00 AM	M		anne Am	_	
Completed By: Anne Thorne	12/21/2016,8:33:58 AM	M		Ame Am		
Reviewed By:	12/21/11					
Chain of Custody	CIELHO					
1. Custody seals intact on sample	bottles?	Yes		No 🗌	Not Present	
2. Is Chain of Custody complete?		Yes	V	No 🗌	Not Present	
3. How was the sample delivered?		Cour	er			
Log In						
4. Was an attempt made to cool to	ne samples?	Yes	V	No 🗔	NA 🗆	
5. Were all samples received at a	temperature of >0° C to 6.0°C	Yes	Y	No 🗌	NA 🗆	
6. Sample(s) in proper container(s	3)?	Yes	V	No 🗌		
7. Sufficient sample volume for inc	licated test(s)?	Yes	✓	No 🗆		
8. Are samples (except VOA and o	ONG) properly preserved?	Yes	V	No 🗆	_	
9. Was preservative added to bott	es?	Yes		No 🗹	NA 🗌	
10.VOA vials have zero headspace	97	Yes		No 🗆	No VOA Viais	
11. Were any sample containers re	ceived broken?	Yes		No 🗹	# of processed	
					# of preserved bottles checked	
12. Does paperwork match bottle la (Note discrepancies on chain of		Yes	V	No L	for pH: (<2	or >12 unless noted)
13. Are matrices correctly identified		Yes	✓	No 🗆	Adjusted?	
14. Is it clear what analyses were re	_	Yes	V	No 🗆		
15. Were all holding times able to b		Yes	V	No 🗌	Checked by:	
(,)	,					
Special Handling (if applica	ble)					
16. Was client notified of all discret	pancies with this order?	Yes		No 🗆	NA 🗹	
Person Notified:	Date					7
By Whom:	Via:	_ eMa	ail 🔲	Phone Fax	☐ In Person	
Regarding:			-			
Client Instructions:			-			
17. Additional remarks:						~
18. Cooler Information						
	ondition Seal Intact Seal No	Seal D	ate	Signed By	1	
1 1.0 God	od Yes			a control and the control and		

				CHAIN OF CUSTODY RECORD
APEX 4	Laboratory: Hall Env Address: ABQ N.M	,	ANALYSIS REQUESTED	Lab use only Due Date:
Office Location Aztec AM				Temp. of coolers when received (C°): \
	Contact: A. Fizema	7		1 2 3 4 5
	Phone:		3/20///	/ / Pagelof(
Project Manager K. Summers	PO/SO#:			/ / /
Sampler's Name	Sampler's Signature			
Chad CHoondi	May 6	y		
Proj. No. Project Name 205040112217 Careed	No/Type of C	Containers		/ /
205040112217 CG	#5 #5 4 m=	9-8.0	1 72 / / / / /	/ /
F D	uks of Samble(s) Start Depth AAG VOA	Glass Jar P/O		Lab Sample ID (Lab Use Only)
3 P/20/14 14:30 SE-				16/2B30 001
> 1/20/14 1435 SJ	2		111	762
	30% Rush 3/100% Rush			
	Time: Received by: (Signature)	Date:	Time: NOTES:	
Relinquished by (Signature) Date:	Time: Received by: (aignature)	Date: 12/21/16	0800 B11 fe	Tem long 06819 Same Day
Relinquished by (Signature) Date!	Time: Received by: (Signature)	Date:	Time:	isin came
Relinquished by (Signature) Date:	Time: Received by: (Signature)	Date:	Time: AFE Z N S	Deg Deg
Matrix WW - Wastewater W - Water Container VOA - 40 ml vial A/G - Amber / C	S - Soil SD - Solid L - Liquid A - Air Bair Glass 1 Liter 250 ml - Glass wide mo		arcoal tube SL - sludge O - Oil Plastic or other	