

AE Order Number Banner

Report Description

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App Number: pJK1424832159

3RP - 1011

ENTERPRISE PRODUCTS OPERATING, LLC

8/17/2017

3R-1011

Release Report/ General Correspondence

Enterprise SJ

Date: Apr-Jun 2017

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

.

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State of New Mexico **Energy Minerals and Natural** Resources

Oil Conservation Division

Form C-141 Revised August 8, 2011

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

1220 S. St. Francis Dr., Santa Fe, NM 87505 1220 South St. Francis Dr. Santa Fe, NM 87505 Santa Fe, NM 87505											
	Release Notification and Corrective Action										
	OPERATOR Initial Report Final Report										
	Name of Company: Enterprise Field Services LLC Contact: Thomas Long										
Address: 6 Facility Na			gton, NM	87401			No. 505-599-2		horing Pi	nolino	
							e. Natural Ga	is Gal			
Surface Ov	vner: BLM			Mineral C	Owner:	BLM			API No).	
			_			OF REL					
Unit Letter F	Section 24	Township 27N	Range 10W	Feet from the 1602	Line	outh	Feet from the 1484	Eas Line	West	County San Juan	
			Lat			_Longitud OF RELI	e_ <u>107.851010</u> E ASE		(. DIV DIST. 3
Type of Rele	ease: Natur	al Gas and N	latural Ga			Volume o	f Release: 17.88 ; 5-10 BBLS	5	Volume	Recovered:	None
Source of R	elease: Inte	rnal Corrosio	on				Hour of Occurre 2 @ 2:05 p.m.	nce:		Hour of Discovery: 7 @ 2:30 p.m.	
Was Immed	iate Notice		s 🗌 No	Not Red	quired	If YES, To	Whom? Courte homas - BLM	esy Not			
By Whom?							Hour March 2, 2				
Was a Wate	ercourse Re		🗌 Yes	🛛 No		If YES, Vo	olume Impacting	the Wa	atercourse)	
	ause of Prob release on l	lem and Re ateral 2A-4	medial Act	ion: On Febru			g routine operat surized, locked (ian identified a and remediation
measured a excavated a with this "Fir	pproximatel nd transpor nal" C-141.	y 18 feet lon ted to a New	g by 18 fe / Mexico C	et wide by 13)il Conservatio	feet dee on appro	ep. Approxir oved land fa		c yards ird part	of hydroca y correctiv	arbon impac e action rep	cted soil was oorts are included
rules and re which may e relieve the o ground wate	I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.										
		1	1.				OIL CON	SER\	ATION	DIVISIO	<u>N</u>
Signature:	In	1. fu	4							~	
Printed Nam	ne: Jon E. F	ields			/	Approved by	/ Environmental	Specia	list:	nous ?	25
Title: Directo	or, Environm	nental			/	Approval Da	te:6363	i ne	Expiration	Date:	
E-mail Addro	ess:jefields(@eprod.com			(Conditions o	of Approval:			Attached	
Duto.	112/201	7		e: (713)381-6	684				÷		
Attach Addi	tional Shee	ets If Neces	sary		4	NFI	1073346	170			



CORRECTIVE ACTION REPORT

Property:

Lateral 2A-4 Pipeline Release NW 1/4, S24 T27N R10W San Juan County, New Mexico

May 10, 2017 Apex Project No. 725040112259

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 Geologist

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

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CORRECTIVE ACTION REPORT

Lateral 2A-4 Pipeline Release NW 1/4, S24 T27N R10W San Juan County, New Mexico

Apex Project No. 725040112259

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 2A-4 pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ of Section 24, Township 27 North, Range 10 West, in rural San Juan County, New Mexico (36.56348N, 107.85101W), referred to hereinafter as the "Site". The Site is located on land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which transects the area from approximately north to south.

On February 17, 2017, a release of natural gas was discovered at the Site. Enterprise subsequently isolated and locked the line out of service. On March 2, 2017, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired.

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

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the 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.



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

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

- No water wells were identified on the OSE website within one mile of the Site. Due to the proximity to the upper Armenta Canyon arroyo, groundwater may be encountered at depths of less than 50 feet below grade surface (bgs). This information supports 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 release point is located approximately 138 feet from the upper Armenta Canyon arroyo which is identified as a "blue line" on the United States Geological Survey topographic map, resulting in a distance to surface water ranking score of "20".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On February 17, 2017, a release of natural gas was discovered at the Site. Enterprise subsequently isolated and locked the line out of service. On March 2, 2017, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired. During the pipeline repair and corrective action activities, Foutz & Bursum Construction Co Inc., provided heavy equipment and labor support, and Apex provided environmental support.

On March 3, 2017, a total of five (5) confirmation soil samples (S-1 through S-5) were collected from the sidewalls and floor of the final excavation for laboratory analysis.

The final excavation measured approximately 18 feet long by 18 feet wide, with a total depth of approximately 13 feet bgs.

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

A total of approximately 124 cubic yards of hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, New Mexico for disposal/remediation. The



executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

Figure 3 is a Site Map that indicates the approximate sample locations in relation to the excavation extents and the location of the pipeline (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

Apex field screened soil samples from the excavation utilizing a photoionization detector (PID) fitted with a 10.6 eV lamp and a calibrated Dexsil PetroFLAG[®] hydrocarbon analyzer system to guide excavation extents.

Apex's soil sampling program included the collection of five (5) confirmation soil samples (S-1 through S-5) from the excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated area and depicts the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

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

3.3 Laboratory Analytical Methods

The confirmation soil samples and stockpiled soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA SW-846 Method #8021, and total petroleum hydrocarbon (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-ofcustody form and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Release Notification*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or practical quantitation limits (PQLs) associated with the final confirmation samples (S-1 through S-5) to the OCD *RALs* for sites having a total ranking score of "40".

 The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the PQLs, which are below the OCD RAL of 10 milligrams per kilogram (mg/kg).



- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the PQLs, which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate combined TPH GRO/DRO/MRO concentrations above the PQLs, which are below the OCD RAL of 100 mg/kg for a Site ranking of "40".

The stockpiled soils resulting from the excavation were transported to the Envirotech landfarm near Hilltop, New Mexico, New Mexico for disposal/remediation.

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 2A-4 pipeline release site is located within the Enterprise ROW in the NW ¼ of Section 24, Township 27 North, Range 10 West, in rural San Juan County, New Mexico. The Site is located on land managed by the BLM. The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which transects the area from approximately north to south.

On February 17, 2017, a release of natural gas was discovered at the Site. Enterprise subsequently isolated and locked the line out of service. On March 2, 2017, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired.

- The primary objective of the environmental corrective action was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of poorly sorted silty sand with limited clay.
- The final excavation measured approximately 18 feet long by 18 feet wide, with a total depth of approximately 13 feet bgs.
- Prior to backfilling, five (5) confirmation samples soil samples were collected from the final excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the OCD *RALs* for a Site ranking of "40".
- A total of approximately 124 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill contoured to surrounding grade.

Based on field observations and laboratory analytical results, no additional investigation or corrective action warranted at this time.

Enterprise Field Services, LLC Corrective Action Report Lateral 2A-4 Pipeline Release May 10, 2017



6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

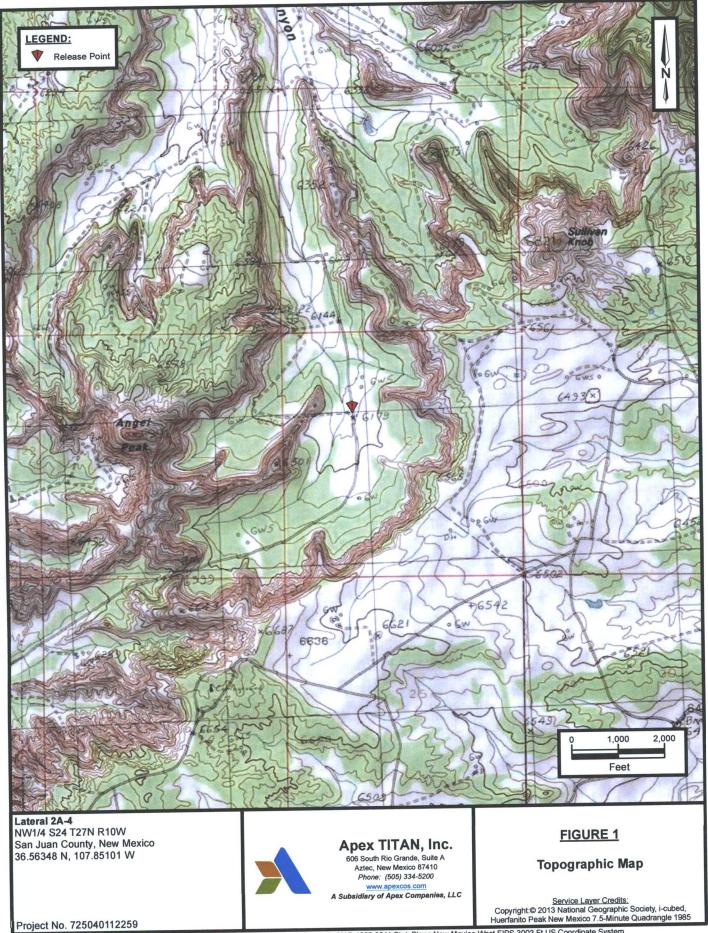
Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

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

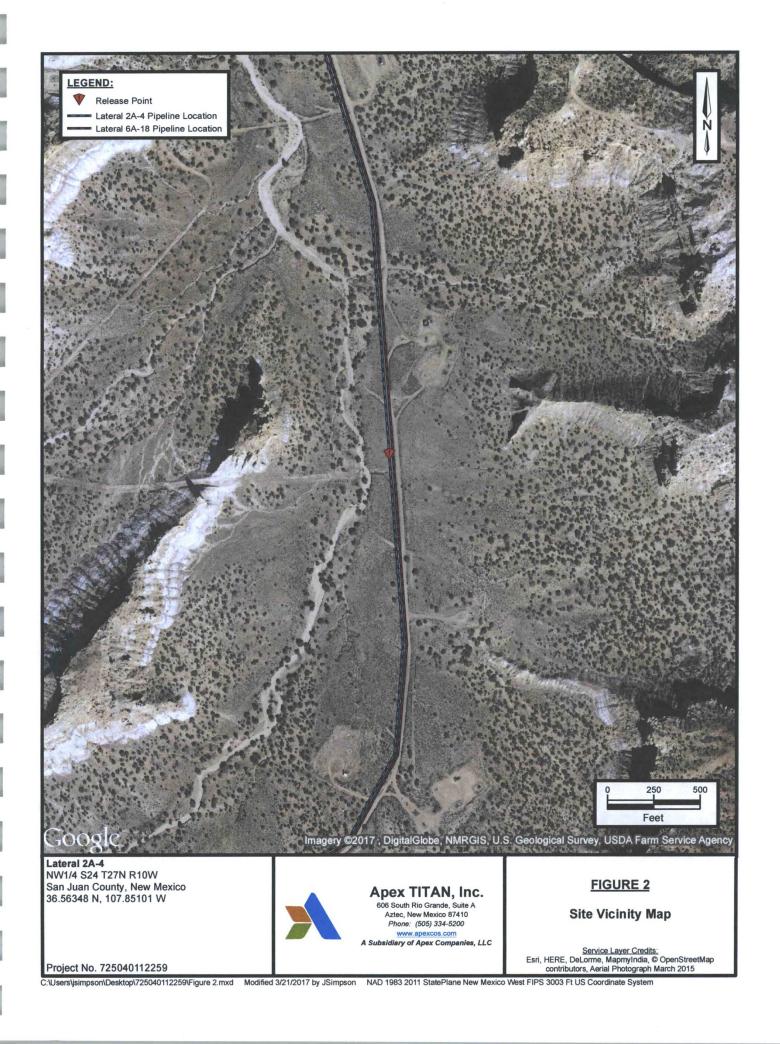


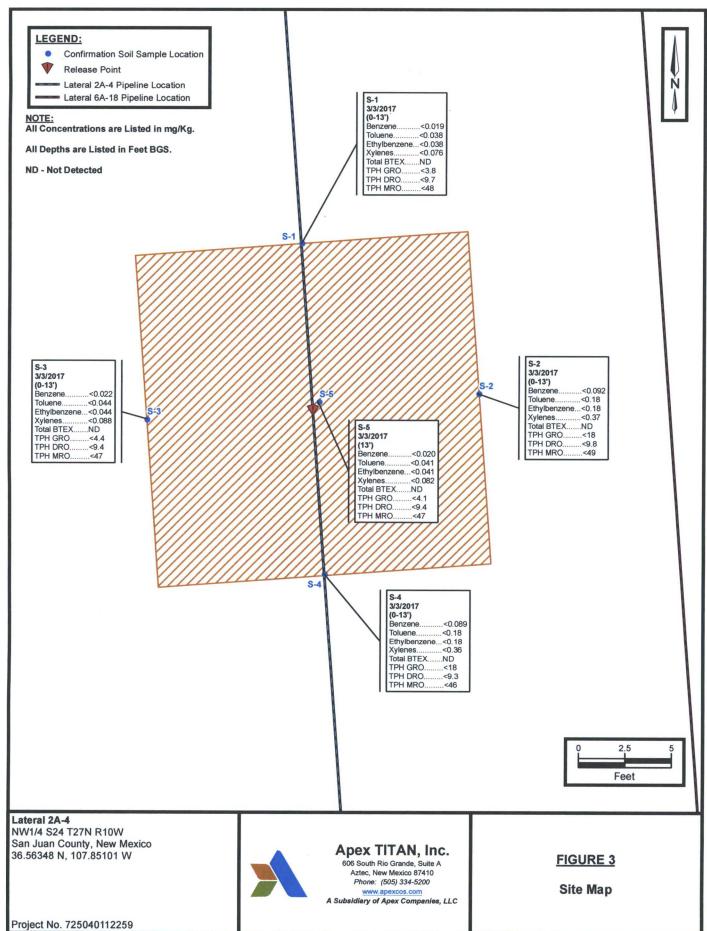
APPENDIX A

Figures



C:\Users\isimpson\Desktop\725040112259\Figure 1.mxd Modified 3/21/2017 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System





C:Users\jsimpson\Desktop\725040112259\Figure 3.mxd Modified 3/21/2017 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System

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APPENDIX B

Executed C-138 Solid Waste Acceptance Form

100

District 1 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 97057-0830

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 *Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site: Lateral 2A-4 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter F, Section 24, T27N, R10W; 36.563480, -107.851010 March 2017
4. Source and Description of Veste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline. 5. Estimated Volume $_50$ yd ³ bbls Known Volume (to be entered by the operator at the end of the haul) $_124$ yd ³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <u>PRINT & SIGN NAME</u> 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
1, <u>June Lay</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to <u>Generator Signature</u> complete the required testing/sign the Generator Waste Testing Certification.
I,, 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.
6. Transporter: Foutz & Bursum, Prado, Terned
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011 Address of Facility: Hilltop, NM
Method of Treatment and/or Disposal:
Waste Acceptance Status:
PRINT NAME: Greg Gran free TITLE: Environmental Manager DATE: 3/3/17
SIGNATURE: TELEPHONE NO.: 505-632-0615

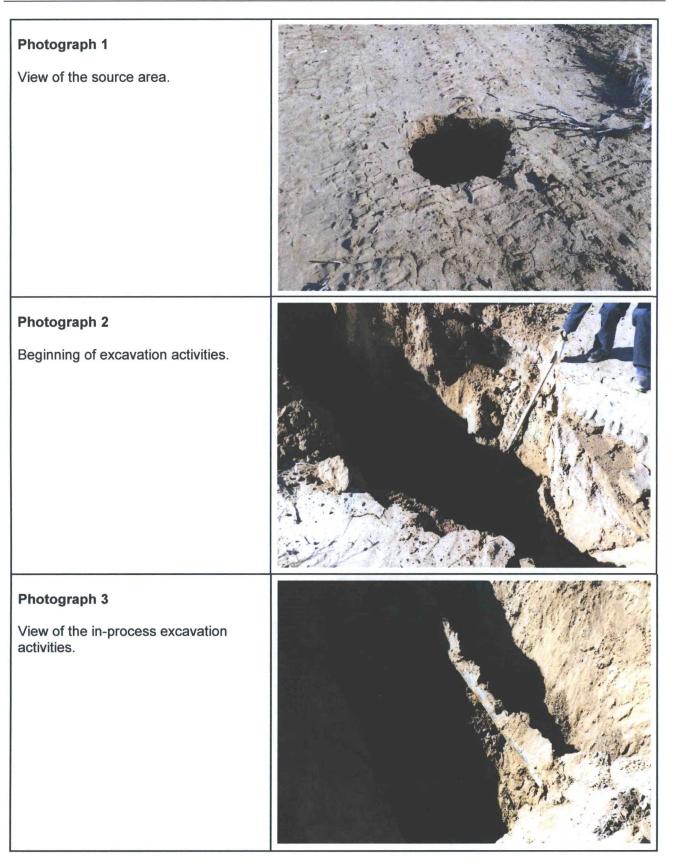


APPENDIX C

Photographic Documentation



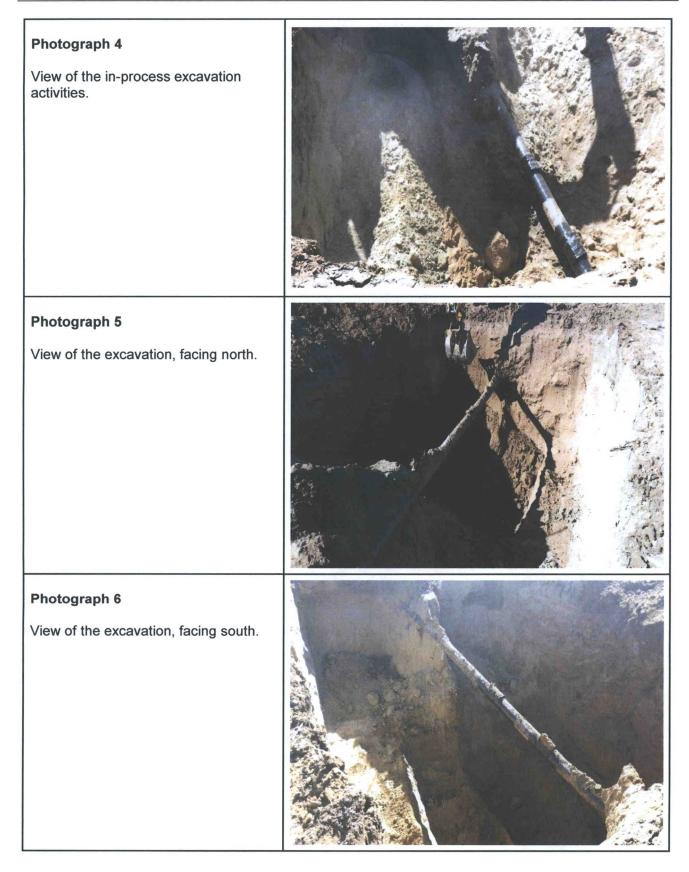
Lateral 2A-4 Pipeline Release





SITE PHOTOGRAPHS

Lateral 2A-4 Pipeline Release





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1

APPENDIX D

Table



					TABLE 1 I 2A-4 Pipeline ANALYTICAL SU					
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)
Departmer	ergy, Mineral & nt, Oil Conserva nediation Actio		10	NE	NE	NE	50		100	
					Excavation Soil Sam	ples				an a saik
S-1	3.3.17	0 to 13	<0.019	<0.038	<0.038	<0.076	ND	<3.8	<9.7	<48
S-2	3.3.17	0 to 13	<0.092	<0.18	<0.18	<0.37	ND	<18	<9.8	<49
	3.3.17	0 to 13	<0.022	<0.044	<0.044	<0.088	ND	<4.4	<9.4	<47
S-3	0.0.17				the second se		the second		T	1
S-3 S-4	3.3.17	0 to 13	<0.089	<0.18	<0.18	< 0.36	ND	<18	<9.3	<46

ND = Not Detected above the Practical Quantitation Limits

NE = Not Established

mg/kg = milligram per kilogram



Appendix E

Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

March 07, 2017

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

OrderNo.: 1703191

Dear Kyle Summers:

RE: Lateral 2A-4

Hall Environmental Analysis Laboratory received 5 sample(s) on 3/4/2017 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1703191 Date Reported: 3/7/2017

Hall Environmental Analysis Laboratory, Inc.

1

Analyses		Result	PQL Qu	al Units	DF Date Analyzed	Batch
Lab ID:	1703191-001	Matrix:	MEOH (SOIL) Received	I Date: 3/4/2017 9:30:00 AM	
Project:	Lateral 2A-4			Collection	Date: 3/3/2017 10:30:00 AM	í.
CLIENT:	APEX TITAN			Client Sam	ple ID: S-1	

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst:									
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	3/6/2017 12:51:18 PM	30525			
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	3/6/2017 12:51:18 PM	30525			
Surr: DNOP	108	70-130	%Rec	1	3/6/2017 12:51:18 PM	30525			
EPA METHOD 8015D: GASOLINE RANG	ε				Analyst	NSB			
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	3/6/2017 9:53:45 AM	30516			
Surr: BFB	91.5	54-150	%Rec	1	3/6/2017 9:53:45 AM	30516			
EPA METHOD 8021B: VOLATILES					Analyst	NSB			
Benzene	ND	0.019	mg/Kg	1	3/6/2017 9:53:45 AM	30516			
Toluene	ND	0.038	mg/Kg	1	3/6/2017 9:53:45 AM	30516			
Ethylbenzene	ND	0.038	mg/Kg	1	3/6/2017 9:53:45 AM	30516			
Xylenes, Total	ND	0.076	mg/Kg	1	3/6/2017 9:53:45 AM	30516			
Surr: 4-Bromofluorobenzene	120	66.6-132	%Rec	1	3/6/2017 9:53:45 AM	30516			

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

Analytical Report Lab Order 1703191

Date Reported: 3/7/2017

3/6/2017 10:17:17 AM 30516

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

CLIENT: APEX TITAN		(lient Samp	ole ID: S-2)	
Project: Lateral 2A-4			-		/2017 10:35:00 AM	
Lab ID: 1703191-002	Matrix:	MEOH (SOIL)			/2017 9:30:00 AM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG		s			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	3/6/2017 1:12:56 PM	30525
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	3/6/2017 1:12:56 PM	30525
Surr: DNOP	101	70-130	%Rec	1	3/6/2017 1:12:56 PM	30525
EPA METHOD 8015D: GASOLINE RANG	θE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	18	mg/Kg	5	3/6/2017 10:17:17 AM	30516
Surr: BFB	91.9	54-150	%Rec	5	3/6/2017 10:17:17 AM	30516
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.092	mg/Kg	5	3/6/2017 10:17:17 AM	30516
Toluene	ND	0.18	mg/Kg	5	3/6/2017 10:17:17 AM	30516
Ethylbenzene	ND	0.18	mg/Kg	5	3/6/2017 10:17:17 AM	30516
Xylenes, Total	ND	0.37	mg/Kg	5	3/6/2017 10:17:17 AM	30516

66.6-132

%Rec

5

122

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

Analytical Report Lab Order 1703191

Date Reported: 3/7/2017

3/6/2017 10:40:42 AM

3/6/2017 10:40:42 AM

3/6/2017 10:40:42 AM

30516

30516

30516

Hall Environmental Analysis Laboratory, Inc.

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: APEX TITAN Project: Lateral 2A-4		(Client Samp Collection		3 3/2017 10:40:00 AM	
Lab ID: 1703191-003	Matrix:	MEOH (SOIL)	Received	Date: 3/4	/2017 9:30:00 AM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANICS	3			Analyst	том
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/6/2017 1:34:43 PM	30525
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/6/2017 1:34:43 PM	30525
Surr: DNOP	105	70-130	%Rec	1	3/6/2017 1:34:43 PM	30525
EPA METHOD 8015D: GASOLINE RAM	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	3/6/2017 10:40:42 AM	30516
Surr: BFB	91.1	54-150	%Rec	1	3/6/2017 10:40:42 AM	30516
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.022	mg/Kg	1	3/6/2017 10:40:42 AM	30516
Toluene	ND	0.044	mg/Kg	1	3/6/2017 10:40:42 AM	30516

0.044

0.088

66.6-132

mg/Kg

mg/Kg

%Rec

1

1

1

ND

ND

119

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

Analytical Report Lab Order 1703191

Date Reported: 3/7/2017

Hall Environmental Analysis Laboratory, Inc.

		Client Samp	le ID: S-	4	
		Collection	Date: 3/3	3/2017 10:45:00 AM	
Matrix:	MEOH (SOII	L) Received	Date: 3/4	/2017 9:30:00 AM	
Result	PQL Q	ual Units	DF	Date Analyzed	Batch
IGE ORGANIC	s			Analys	t: TOM
ND	9.3	mg/Kg	1	3/6/2017 1:56:21 PM	30525
ND	46	mg/Kg	1	3/6/2017 1:56:21 PM	30525
101	70-130	%Rec	1	3/6/2017 1:56:21 PM	30525
NGE				Analys	: NSB
ND	18	mg/Kg	5	3/6/2017 11:04:18 AM	30516
92.8	54-150	%Rec	5	3/6/2017 11:04:18 AM	30516
				Analys	: NSB
ND	0.089	mg/Kg	5	3/6/2017 11:04:18 AM	30516
ND	0.18	mg/Kg	5	3/6/2017 11:04:18 AM	30516
ND	0.18	mg/Kg	5	3/6/2017 11:04:18 AM	30516
ND	0.36	mg/Kg	5	3/6/2017 11:04:18 AM	30516
122	66.6-132	%Rec	5	3/6/2017 11:04:18 AM	30516
	Result IGE ORGANIC ND ND 101 NGE ND 92.8 ND ND ND ND ND ND ND	Result PQL Qu IGE ORGANICS IGE IGE IGE ND 9.3 46 101 70-130 ND 46 101 70-130 ISE ND 18 92.8 54-150 ISE ND 0.089 ND 0.18 ND 0.18 ND 0.36	Matrix:MEOH (SOIL)CollectionMatrix:MEOH (SOIL)ReceivedResultPQLQualUnitsIGE ORGANICSInitsmg/KgND9.3mg/KgND46mg/Kg10170-130%RecND18mg/Kg92.854-150%RecND0.089mg/KgND0.18mg/KgND0.18mg/KgND0.18mg/KgND0.36mg/Kg	ND 18 mg/Kg 1 ND 18 mg/Kg 5 ND 0.089 mg/Kg 5 ND 0.18 mg/Kg 5 ND 0.18 mg/Kg 5 ND 0.36 mg/Kg 5	Result PQL Qual Units DF Date Analyzed IGE ORGANICS Analyst ND 9.3 mg/Kg 1 3/6/2017 1:56:21 PM ND 46 mg/Kg 1 3/6/2017 1:56:21 PM 101 70-130 %Rec 1 3/6/2017 1:56:21 PM 101 70-130 %Rec 1 3/6/2017 1:56:21 PM ND 46 mg/Kg 5 3/6/2017 1:56:21 PM ND 18 mg/Kg 5 3/6/2017 1:56:21 PM NGE Analyst Analyst ND 18 mg/Kg 5 3/6/2017 11:04:18 AM 92.8 54-150 %Rec 5 3/6/2017 11:04:18 AM 92.8 54-150 %Rec 5 3/6/2017 11:04:18 AM ND 0.089 mg/Kg 5 3/6/2017 11:04:18 AM ND 0.18 mg/Kg 5 3/6/2017 11:04:18 AM ND 0.36 mg/Kg 5 3/6/2017 11:04:18 AM ND

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

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 R
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 8 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1703191

Date Reported: 3/7/2017

Hall Environmental Analysis Laboratory, Inc.

Annaharan		Description	DOI	0	TI	DE Dete Analysed	
Lab ID:	1703191-005	Matrix:	MEOH (S	OIL)	Received	Date: 3/4/2017 9:30:00 AM	
Project:	Lateral 2A-4				Collection	Date: 3/3/2017 10:50:00 AM	
CLIENT:	APEX TITAN			C	lient Samp	ole ID: S-5	

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG		S			Analyst	том
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	3/6/2017 2:18:10 PM	30525
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	3/6/2017 2:18:10 PM	30525
Surr: DNOP	102	70-130	%Rec	1	3/6/2017 2:18:10 PM	30525
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	3/6/2017 11:27:45 AM	30516
Surr: BFB	94.0	54-150	%Rec	1	3/6/2017 11:27:45 AM	30516
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.020	mg/Kg	1	3/6/2017 11:27:45 AM	30516
Toluene	ND	0.041	mg/Kg	1	3/6/2017 11:27:45 AM	30516
Ethylbenzene	ND	0.041	mg/Kg	1	3/6/2017 11:27:45 AM	30516
Xylenes, Total	ND	0.082	mg/Kg	1	3/6/2017 11:27:45 AM	30516
Surr: 4-Bromofluorobenzene	119	66.6-132	%Rec	1	3/6/2017 11:27:45 AM	30516

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Project:

APEX TITAN Lateral 2A-4

Sample ID LCS-30525	SampT	ype: LC	s	Tes	TestCode: EPA Method 8015M/D: Diesel Range Organics							
Client ID: LCSS	Batch	ID: 30	525	R								
Prep Date: 3/6/2017	Analysis D	ate: 3/	6/2017	S	SeqNo: 1	289126	Units: mg/K					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	48	10	50.00	0	96.1	63.8	116					
Surr: DNOP	4.5		5.000		90.0	70	130					
Sample ID MB-30525	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015M/D: Die	esel Range	e Organics			
Sample ID MB-30525 Client ID: PBS		ype: ME			tCode: El RunNo: 4		8015M/D: Die	esel Range	e Organics			
		D: 30	525	R		1156	8015M/D: Die Units: mg/K	Ū	organics			
Client ID: PBS	Batch	D: 30	525 6/2017	R	RunNo: 4	1156		Ū	organics	Qual		
Client ID: PBS Prep Date: 3/6/2017	Batch Analysis D	n ID: 30 ate: 3/	525 6/2017	R	RunNo: 4 SeqNo: 1	1156 289127	Units: mg/K	íg	Ū	Qual		
Client ID: PBS Prep Date: 3/6/2017 Analyte	Batch Analysis D Result	n ID: 30 ate: 3/	525 6/2017	R	RunNo: 4 SeqNo: 1	1156 289127	Units: mg/K	íg	Ū	Qual		
Client ID: PBS Prep Date: 3/6/2017 Analyte Diesel Range Organics (DRO)	Batch Analysis D Result ND	n ID: 30 ate: 3/ PQL 10	525 6/2017	R	RunNo: 4 SeqNo: 1	1156 289127	Units: mg/K	íg	Ū	Qual		

Qualifiers:

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

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07-Mar-17

QC SUMMARY REPORT

WO#:

1703191 *07-Mar-17*

Hall Environmenta	l Analysis	Laboratory,	Inc.
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Client: Project: APEX TITAN Lateral 2A-4

Sample ID MB-30516	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	ID: 30	516	F	RunNo: 4						
Prep Date: 3/3/2017	Analysis D	ate: 3/	6/2017	S	SeqNo: 1	289697	Units: mg/M	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	900		1000		90.3	54	150				
Sample ID LCS-30516	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e		
Sample ID LCS-30516 Client ID: LCSS		ype: LC			tCode: El RunNo: 4		8015D: Gaso	oline Rang	e		
		ID: 30	516	R		1160	8015D: Gaso Units: mg/K		e		
Client ID: LCSS	Batch	ID: 30	516 6/2017	R	RunNo: 4	1160			e RPDLimit	Qual	
Client ID: LCSS Prep Date: 3/3/2017	Batch Analysis D	alD: 30	516 6/2017	R	RunNo: 4 SeqNo: 1	1160 289698	Units: mg/K	(g		Qual	

Qualifiers:

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

Page 7 of 8

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:

APEX TITAN Lateral 2A-4

Sample ID MB-30516	SampT	ype: ME	BLK	Test	TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch	n ID: 30	516	R	unNo: 4	1160					
Prep Date: 3/3/2017	Analysis D	ate: 3/	6/2017	S	eqNo: 1	289735	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.025									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	1.2		1.000		121	66.6	132				
Sample ID LCS-30516	SampT	ype: LC	S	Test							
				RunNo: 41160							
Client ID: LCSS	Batch	n ID: 30	516	R	unNo: 4	1160					
Client ID: LCSS Prep Date: 3/3/2017	Batch Analysis D				unNo: 4 eqNo: 1		Units: mg/K	g			
			6/2017				Units: mg/K HighLimit	g %RPD	RPDLimit	Qual	
Prep Date: 3/3/2017 Analyte	Analysis D	ate: 3/	6/2017	S	eqNo: 1	289736			RPDLimit	Qual	
Prep Date: 3/3/2017 Analyte Benzene	Analysis D Result	ate: 3/	6/2017 SPK value	SPK Ref Val	eqNo: 1 %REC	289736 LowLimit	HighLimit		RPDLimit	Qual	
Prep Date: 3/3/2017 Analyte Benzene Toluene	Analysis D Result 1.1	PQL 0.025	6/2017 SPK value 1.000	SPK Ref Val	eqNo: 1 %REC 107	289736 LowLimit 75.2	HighLimit 115		RPDLimit	Qual	
Prep Date: 3/3/2017	Analysis D Result 1.1 1.0	PQL 0.025 0.050	6/2017 SPK value 1.000 1.000	SPK Ref Val 0 0	eqNo: 1 %REC 107 103	289736 LowLimit 75.2 80.7	HighLimit 115 112		RPDLimit	Qual	

Qualifiers:

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

Page 8 of 8

WO#: 1703191

07-Mar-17

ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-39	tal Analysis Labori 4901 Hawkin Ibuquerque, NM 8 175 FAX: 505-345- hallenvironmental	^{13 NE} 7109 Sam 4107	ple Log-In C	neck List
Client Name: APEX AZTEC Work Order Numb	er: 1703191		RcptNo:	1
Received by/date:				
Logged By: Lindsay Mangin 3/4/2017 9:30:00 AM	ñ	Julip		İ
Completed By: Lindsay Mangin 3/6/2017 8:02:46 AM	٨	Altho		
Reviewed By: QJ 3/6/17/				
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗹	No 🗆	Not Present	
3. How was the sample delivered?	Courier			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗌	NA 🗆	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌		
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes	No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes	No 🗹	# of occord	
12.Does paperwork match bottle labels?	Yes 🗹	No 🗌	# of preserved bottles checked for pH:	
(Note discrepancies on chain of custody)		_		>12 unless noted
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No L	Adjusted?	
14. Is it clear what analyses were requested?	Yes M		Checked by:	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹			
Secolal flandling /if applicable)				
Special Handling (if applicable) 16. Was client notified of all discrepancies with this order?	Yes	No 🗆	NA 🗹	
Person Notified: Date				
By Whom: Via:	eMail	Phone 🗌 Fax	In Person	
Regarding:			and the second se	
Client Instructions:	linitetie sieelekeenteenteenteenteente		AND DESCRIPTION OF THE PROPERTY OF THE PROPERTY OF	
17. Additional remarks:				
18. <u>Cooler Information</u> <u>Cooler No</u> Temp ^o C Condition Seal Intact Seal No 1 2.1 Good Yes	Seal Date	Signed By		
Page 1 of 1				

															CHAIN OF CUSTODY RECORD
Offic Proje Samp	ler's N	catio lana	ger_K.	Sum pont:		Laboratory: Address: Contact: Phone: PO/SO #: Sampler's Sign M.	A.	Fr	2	N.M.	,			ANALYSIS REQUESTED	Lab use only Due Date: Temp. of coolers when received (Cr). 2, 1 1 2 3 4 5 Page l of l
Proj. 1		100	257	Project N	Vame	2A-4			No/T	ype of C	Contair	ers		531111	
Matrix	Da		Time	CoEp	Identifying Ma	ks of Sample(s)	Start Depth	End	VON	ANG 1LL	250 ml	Glass	04		Lab Sample ID (Lab Use Only)
5	3/3/	17	10:30		5-1							(1703191-001
5			10:35		5-2							1			-02
5			10:40		5- 3							١			-003
3			10:#5		5-4	1			_)			- 004
5		ļ	10:50		5-5	-						1			-006
														NES CO	
and the second second	round					and the second se	100%	and the second second		ne f	20	0	_	Tana L NOTED	
Relino Mi Relino	uished	d by d by	(Signature) (Signature) (Signature) (Signature)		3-3-77 <u>B</u> Date: 3-3-17 (8 Date:	Time: Receiv	ved by: ved by: ved by: ved/by:	(Signa (Signa	ature)	0	3/0	Date 2/3/ Date //// Date Date	7	Time: NOTES: <u>1305</u> Time: B; 11 90 70 <u>0935</u> Time: NFISH N 29039 Time:	om Long grad
Matrix		W	(Signature) W - Wastewa	ter		S - Soil SD - So	lid L	- Liqui	d A	- Air Bi	30	C.	Cha	Time: Incoal tube SL - sludge O - Oil lastic or other	/

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

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

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

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

	Santa Fe, NM 87505												
	Release Notification and Corrective Action												
					0	PERATO		\boxtimes	-	Report	Final Report		
	1.0	Enterprise F				Contact: Thomas Long/Runell Seale							
Address: 6	14 Reilly A	Ave, Farmin	gton, NM	87401		Telephone No. 505-599-2286							
Facility Na	me: Galle	gos Canyo	n Unit #2	03 DK		Facility Type: Natural Gas Gathering Pipeline							
Surface O	wner: BLM			Mineral C)wner	r: BLM			API N	o. NA			
				LOCA	TIO	N OF REI	EASE	\frown					
Unit Letter B	Section 24	Township 28N	Range 12W	Feet from the 2475	Nor Line	e South	Feet from the 953	East Line	Vest	County San Juan			
		-	La			_Longitud	e <u>108.05873</u> EASE						
Type of Rel	ease: Natur	al Gas and N	latural Ga				f Release: Unk	nown	Volume	Recovered: No	ne		
Source of R	elease: Sus	spected inter	nal corrosi	ion			Hour of Occurre @ 7:00 a.m.	ence:		nd Hour of Discov 17 @ 7:00 a.m.	very:		
Was Immed	liate Notice		s 🗌 No	Not Req	uired	If YES, To		esy Not		Vanessa Fields	- NMOCD		
By Whom? Was a Wate		ached?	☐ Yes	No No			Hour May 2, 20 blume Impacting						
Describe Ca Unit #203 w 2017 and E	ause of Prol ell tie. The nterprise de	pipeline was stermined this	medial Act isolated, c s release is	tion: On April 1 depressurized, s reportable pe	locke er NM	ed out and tag OCD regulat	ged out. Repai on on May 2, 20	rs and re 017, due	emediations to the v	ease on the Gall on were initiated olume of subsur	on April 28, face impacts.		
							port will be inclu						
rules and re which may relieve the o ground wate	gulations al endanger properator of l er, surface v	Il operators a ublic health o iability should vater, humar	re require or the envir d their ope n health or	d to report and ronment. The erations have fa the environme	l/or file accep ailed t ent. Ir	e certain rele otance of a C to adequately n addition, N	ase notifications -141 report by th investigate and AOCD acceptar aws and/or regu	s and pe he NMO d remed nce of a llations.	erform co CD mark iate conta C-141 re	and that pursuan rrective actions f ked as "Final Rep amination that po port does not re	or releases port" does not ose a threat to		
Signature:	In	l'. fu	6				<u>OIL CON</u>	ISER	AUO)		
Printed Nan	ne: Jon E. F	ields				Approved b	y Environmenta	I Specia	alist:	quint	9		
Title: Direct	or, Environr	nental				Approval Date: 510117 Expiration Date:							
E-mail Addr	ess:jefields	@eprod.com				C onditions (of Approval:-	<i>c</i> #	-	Attached	Approval		
Date: 57 Attach Add	5 101			e: (713)381-66	684	NVFI	71:32484	133			\		

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4118237 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number has been assigned. Please refer to this case number in all future correspondence.

WFIN3348433 It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District of fice in _______ on or before _______. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface vaters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

Nominal detection limits for field and laboratory analyses must be provided.

Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

• Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an asstimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at east one groundwater monitoring well to be installed in the area of likely maximum contamination.

If groundwater contamination is encountered, an additional investigation workplan may be required to determine the xtents of that contamination. Groundwater and/or surface water samples, If any, must be analyzed by a competent iboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and ations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses just be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory is must be provided including chain of custody documentation.

Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring ells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit ther the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should t be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location d fieldwork is recommended, especially if unusual circumstances are encountered.

thing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by noval cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness emedial efforts must still be provided to the OCD before any release incident will be closed.

I Griswold D Environmental Bureau Chief 20 South St. Francis Drive Inta Fe, New Mexico 87505 5-476-3465 I.griswold@state.nm.us 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

Form C-141 Revised August 8, 2011

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.

Release Notification and Corrective Action OPERATOR Initial Report Final Report Name of Company: Enterprise Field Services LLC Contact: Thomas Long Final Report Address: 614 Reilly Ave, Farmington, NM 87401 Telephone No. 505-599-2286 Employee Facility Name: Lateral C-11 (July 22, 2013) Facility Type: Natural Gas Gathering Pipeline Employee

Surface Owner: Navajo Allotment

Mineral Owner: Navajo Nation

Serial Number:

	LOCATION OF RELEASE									
Unit Letter L	Section 11	Township 27N	Range 9W	Feet from the 2160	North South Line	Feet from the 947	East West	County San Juan		

Latitude 36.58841 Longitude -107.76347

NATURE OF RELEASE									
Type of Release: Natural Gas and Condensate	Volume of Release: Estimated 10-15 Barrels of Condensate	Volume Recovered: None							
Source of Release: Internal Corrosion	Date and Hour of Occurrence: July 22, 2013	Date and Hour of Discovery: July 22, 2013 @ 1:40 p.m.							
Was Immediate Notice Given?	If YES, To Whom? Steve Austin -								
By Whom? Aaron Dailey	Date and Time: July 23, 2013 @ 8	3:30 a.m.							
Was a Watercourse Reached?	If YES, Volume								
If a Watercourse was Impacted, Describe Fully.*									
Describe Cause of Problem and Remedial Action: On July 22, 2013, Enterprise technicians discovered a release on the Lateral C-11 pipeline. The pipeline was isolated, blown down, locked out and tagged out. Initial pipeline repair and remediation activities were completed in July 2013.									
Describe Area Affected and Cleanup Action: Initial remediation activities occurred in July 2013. Subsequently, a work plan was submitted to New Mexico Oil Conservation Division (NMOCD) and the Navajo Nation Environmental Protection Agency (NNEPA) on December 2, 2013 with non- responsiveness. In October 2016, Enterprise initiated additional pipeline repairs at this release location with subsequent soil remediation activities. The contaminant mass was removed by mechanical excavation. The final excavation measured approximately 91 feet long by 15 feet wide ranging from 4 to 12.5 feet deep. Approximately 271 cubic yards of hydrocarbon impacted soil were excavated and transported to a NMOCD approved land farm facility. A third party corrective action report is included with this "Final" C-141. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.									
Signature: Jov . Full	<u>OIL CONSER</u>	VATION DIVISION							
Printed Name: Jon E. Fields	Approved by Environmental Speci	alist							
Title: Director, Environmental	Approval Date: 4/28/17	Expiration Date:							
E-mail Address:jefields@eprod.com	Conditions of Approval:	Attached							
Date: 3-13-17 Phone: (713)381-6684									
Attach Additional Sheets If Necessary	6732294								



OIL CONS. DIV DIST. 3 MAR 1 7 2017

CORRECTIVE ACTION REPORT

Property:

Lateral C-11 (July 2013) Pipeline Release SW 1/4, S11 T27N R9W San Juan County, New Mexico

> February 8, 2017 Apex Project No. 7030414G018

> > Prepared for:

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

Prepared by:

Ranee Deechilly

Project Scientist

Kyle Summers, CPG Branch Manager/Senior Project Manager

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

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CORRECTIVE ACTION REPORT

Lateral C-11 (July 2013) Pipeline Release SW 1/4, S11 T27N R9W San Juan County, New Mexico

Apex Project No. 7030414G018

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral C-11 (July 2013) pipeline release is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 11, Township 27 North, Range 9 West, in San Juan County, New Mexico (36.58841N, 107.76347W), referred to hereinafter as the "Site". The Site is located on Navajo Nation allotted lands. The Site is predominantly surrounded by native vegetation rangeland, periodically interrupted by oil and gas gathering facilities, and occasional private residences. The closest residence is located approximately 1,000 feet northwest of the Site. The Enterprise Lateral C-11 natural gas pipeline transects the area from approximately northeast to southwest.

On July 15, 2013, a release of natural gas was discovered at the Site. Animas Environmental Services, LLC (AES) completed the initial site assessment activities and collected 14 discrete soil samples (S-1 through S-14) from the repair excavation. Laboratory analytical results indicated constituent of concern (COC) concentrations above New Mexico Oil Conservation Division (OCD) *Remediation Action Levels (RALs)* in soils remaining on-Site. The excavation was subsequently backfilled with clean fill pending further site investigation activities. In December 2013, AES submitted a work plan to the New Mexico OCD, Bureau of Indian Affairs (BIA) and Navajo Nation Environmental Protection Agency (NNEPA) that included results from the initial site assessment and proposed investigative activities to evaluate potential hydrocarbon impact to soil and groundwater, however, approval from the BIA has apparently not yet been received. (*Continued Site Assessment Workplan*, dated November 22, 2013 – AES).

During 2014 and 2015, Enterprise pursued monitoring well drilling permits and water use permits through the Navajo Nation Water Code Administration (NNWCA) Department of Water Resources in order to proceed with proposed soil and groundwater investigative activities, but was unable to obtain them. In 2016, NNWCA Shiprock Field Office Compliance Officer Mr. Melvin Badonie indicated that well drilling and water use permits are not required for Sites located within Navajo Nation allotted lands. Also during 2016, the NNEPA indicated that BIA approval would be required on all environmental projects occurring on Navajo Nation lands if the work was not continuous with the initial response or pipeline repair activities.

During October 2016, Enterprise initiated additional pipeline repair activities at the Site to facilitate the replacement of approximately 80 feet of pipe. During these activities Enterprise elected to excavate within the ROW as an extension to the pipeline repair activities to remove as much remaining hydrocarbon-affected soils as practicable.

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



1.2 Project Objective

The primary objective of the environmental corrective action was to reduce the COCs in the on-Site soils to below the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) OCD *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 NNEPA and the New Mexico OCD. In the absence of published NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) references the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

Ra	Ranking Criteria						
	<50 feet	20					
Depth to Groundwater	50 to 99 feet	10	20				
	>100 feet	0					
Wellhead Protection Area • <1,000 feet from	Yes	20					
a water source, or; <200 feet from private domestic water source.	No	0	0				
Distance to Surface	<200 feet	20	7				
Distance to Surface Water Body	200 to 1,000 feet	10	10				
Water Body	>1,000 feet	0					
Total	Ranking Score		30				

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

- Based on depths to groundwater observed in groundwater monitoring wells located at the nearby Lateral C-11 (2012) Release Site, depth to groundwater at the Site is anticipated to be less than 50 feet below grade surface (bgs). This information supports 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 approximately 600 feet southwest of an ephemeral wash that is identified as a "blue line" on the United States Geological Society topographic map. This information supports a distance to surface water ranking score of "10".



3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

During October 2016, Enterprise initiated additional pipeline repair activities at the Site to facilitate the replacement of approximately 80 feet of pipe. During these activities Enterprise elected to excavate within the ROW as an extension to the pipeline repair activities to remove as much remaining hydrocarbon-affected soils as practicable. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Apex provided environmental support.

On November 15, 2016, a total of 13 confirmation soil samples (CS-1 through CS-13) were collected from the repair excavation. Additionally, three (3) soil samples (SP-1 through SP-3) were collected from the stockpiled soils to evaluate its potential for reuse as backfill. On November 30, 2016, the floor of the former release footprint was over-excavated and five (5) soil samples (CS-14 through CS-18) were collected to complete the analytical profile. Combined total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), and motor oil/mineral range organics (MRO) concentrations exceeded OCD standards, however, OCD gave permission to backfill.

The final excavation measured approximately 91 feet long by 15 feet wide, with total depths ranging from four (4) feet bgs to 12.5 feet bgs. The initial excavation was extended approximately 50 feet to the east and 17 feet to the west to facilitate the replacement of 80 feet of pipe. The extended excavation to the east was approximately five (5) feet deep bgs and the extended excavation to the west was approximately four (4) feet deep bgs.

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

A total of approximately 271 cubic yards of hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The landfarm mistakenly added these affected soils to the disposal ticket for the nearby Lateral C-11 (2012) release and as such the C-138 lists the combined volume of soil from these two (2) Sites. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and laboratory–confirmed stockpiled soils, and then contoured to surrounding grade.

Figure 3 is a Site Map with Soil Analytical Results that indicates the approximate location of the excavated area in relation to the pipeline (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 18 confirmation soil samples from the repair excavation and three (3) soil samples from the associated stockpiles for laboratory analysis.

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



3.3 Laboratory Analytical Methods

The confirmation soil samples and stockpiled soil samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA SW-846 Method #8021, and TPH GRO, DRO, and MRO using EPA SW-846 Method #8015.

Laboratory results are summarized in Table 1, included in Appendix D. The executed chain-ofcustody form 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 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 final confirmation soil samples and stockpiled soil samples to the OCD *RALs* for sites having a total ranking score of "30". Soils associated with stockpile soil sample SP-2 were transported to an approved OCD facility for disposal/treatment and are not included in the following discussion.

- The laboratory analyses of the confirmation samples from soils remaining in place and the reused stockpiled soils indicate benzene concentrations below the PQLs, which are below the OCD RAL of 10 mg/kg.
- The laboratory analyses of the confirmation samples from soils remaining in place and the reused stockpiled soils indicate total BTEX concentrations below the PQLs, which are below the OCD *RAL* of 50 mg/kg.
- The laboratory analysis of confirmation sample CS-17 indicates a combined TPH GRO/DRO/MRO concentration of 146 mg/kg, which exceeds the OCD RAL of 100 mg/kg. The laboratory analyses of confirmation samples CS-1 through CS-16 and CS-18, and stockpiled soil samples SP-1 and SP-3 indicate combined TPH GRO/DRO/MRO concentrations ranging from below PQLs to 81 mg/kg (CS-14), which are below the OCD RAL of 100 mg/kg.

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral C-11 pipeline release Site is located within the Enterprise pipeline ROW in the SW ¼ of Section 11, Township 27 North, Range 9 West, in San Juan County, New Mexico. The Site is located on Navajo Nation allotted lands. The Site is predominantly surrounded by native vegetation rangeland, periodically interrupted by oil and gas gathering facilities, and occasional private residences. The closest residence is located approximately 1,000 feet northwest of the Site. The Enterprise Lateral C-11 natural gas pipeline transects the area from approximately northeast to southwest.



During October 2016, Enterprise initiated additional pipeline repair activities at the Site to facilitate the replacement of approximately 80 feet of pipe. During these activities Enterprise elected to excavate within the ROW as an extension to the pipeline repair activities to remove as much remaining hydrocarbon-affected soils as practicable.

- 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 sand and silty sand.
- The final excavation measured approximately 91 feet long by 15 feet wide, with total depths ranging from four (4) feet bgs to 12.5 feet bgs. The initial excavation was extended approximately 50 feet to the east and 17 feet to the west to allow the replacement of 80 feet of pipe. The extended excavation to the east was approximately five (5) feet deep bgs and the extended excavation to the west was approximately four (4) feet deep bgs.
- Prior to backfilling, 18 excavation soil samples and three (3) stockpiled soil samples were collected for laboratory analyses. Soils associated with stockpile samples SP-2 transported to an approved OCD facility for disposal/treatment. Based on analytical results, one (1) soil sample from the soils remaining in place exhibited TPH GRO/DRO/MRO concentrations slightly above the above the OCD *RALs* for TPH GRO/DRO/MRO.
- A total of approximately 271 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The landfarm mistakenly added these affected soils to the disposal ticket for the nearby Lateral C-11 (2012) release and as such the C-138 lists the combined volume of soil from these two (2) Sites. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and laboratory-confirmed stockpiled soils, and then contoured to the approximate surrounding grade.

Although one (1) soil sample from the soils remaining in place exhibited combined TPH GRO/DRO/MRO concentrations slightly in excess of the OCD RALs, the OCD granted Enterprise permission to backfill (close) the Site due to a lack of perceived risk to the environment. Based on the laboratory analytical results and OCD approval to backfill the Site, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed 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

Enterprise Field Services, LLC Corrective Action Report Lateral C-11 (July 2013) Pipeline Release February 8, 2017



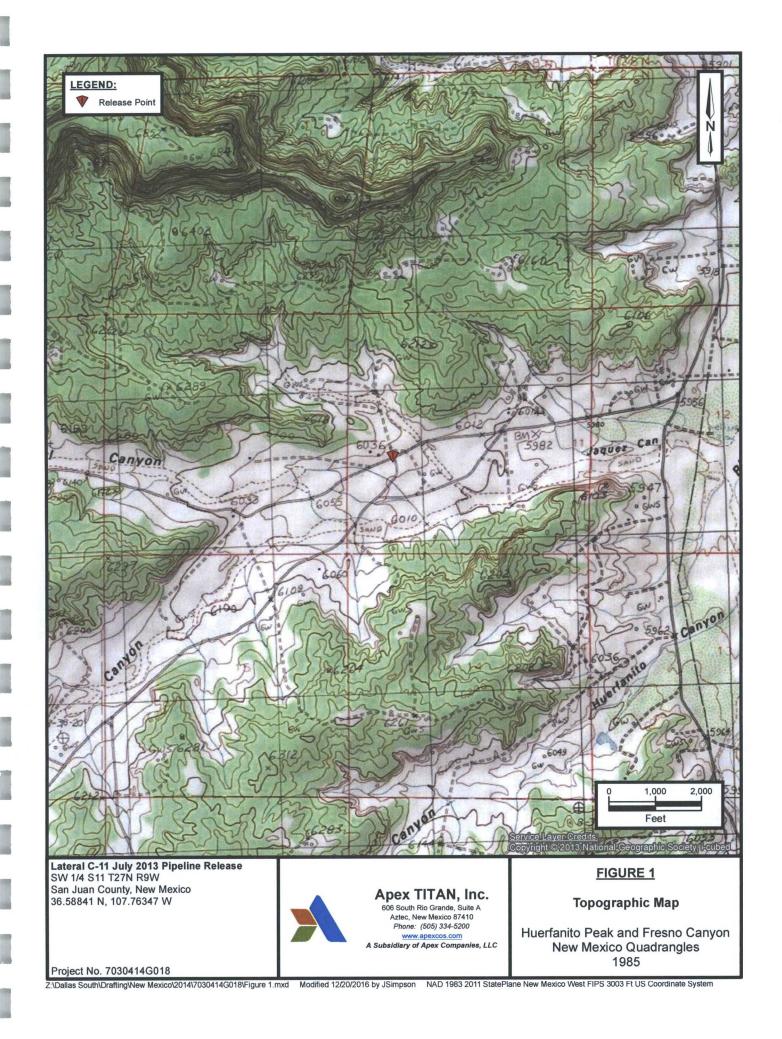
indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other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

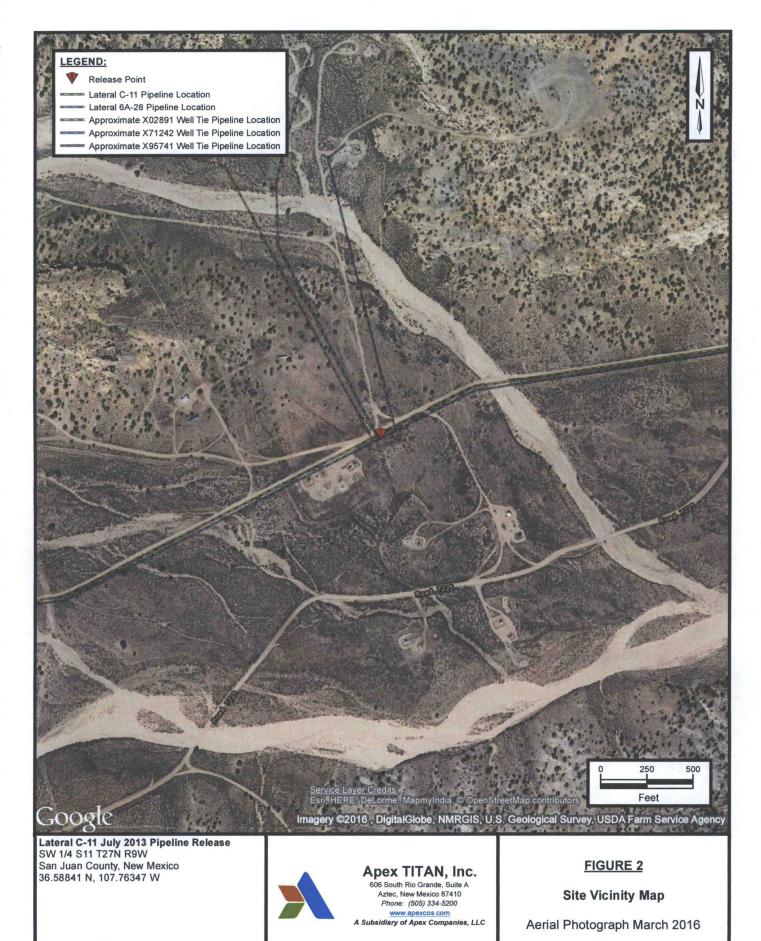
This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution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



APPENDIX A

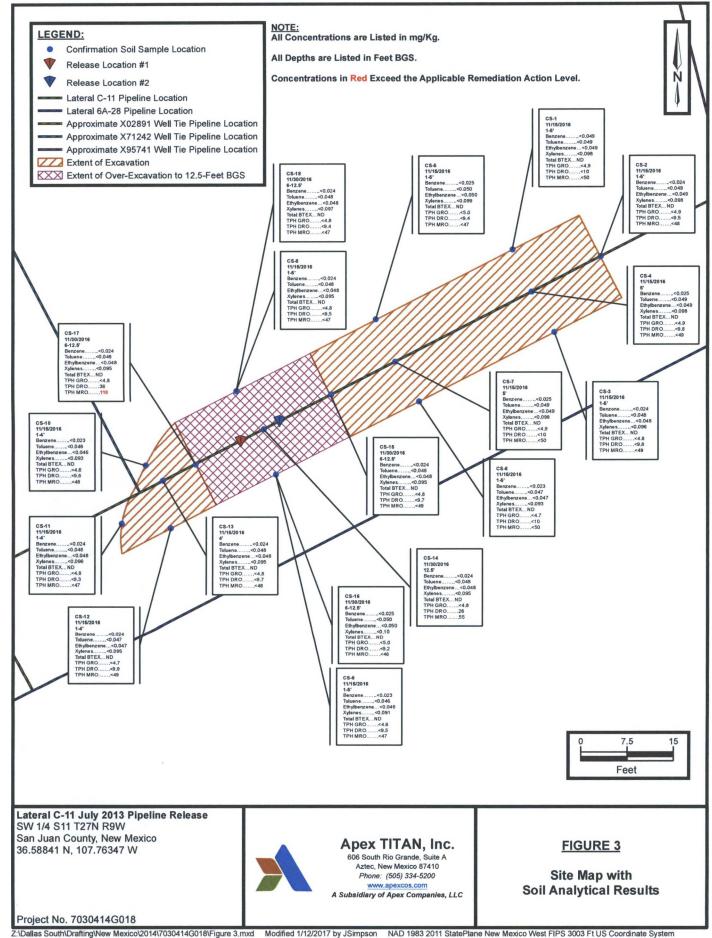
Figures





Project No. 7030414G018

Z:\Dallas South\Drafting\New Mexico\2014\7030414G018\Figure 2.mxd Modified 12/20/2016 by JSimpson NAD 1983 2011 StatePlane New Mexico West FIPS 3003 Ft US Coordinate System



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APPENDIX B

Executed C-138 Solid Waste Acceptance Form

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

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

97257-0813

Form C-138 Revised 08/01/11

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 **Originating Site:** 2. Lateral C-11 2013 Pipeline Release Location of Material (Street Address, City, State or ULSTR): 3. UL L Section 11 T27N R9W; 36.58841, -107.76347 Source and Description of Waste: Hydrocarbon Impacted Soil associated with a natural gas pipeline release. 4. Estimated Volume 50 (yd³) bbls Known Volume (to be entered by the operator at the end of the haul) 1056 / bbls GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS 5. , representative or authorized agent for Enterprise Products Operating do hereby I, Thomas Long **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 Monthly Weekly Per Load exempt waste. 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. , 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. OCD Permitted Surface Waste Management Facility 5. Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM01-0011 Address of Facility: Hill Top, NM Method of Treatment and/or Disposal: Evaporation ☐ Injection ☐ Treating Plant ⊠ Landfarm ☐ Landfill ☐ Other Waste Acceptance Status: **APPROVED** DENIED (Must Be Maintained As Permanent Record) TITLE: Environmental Manager DATE: 11/30/16 PRINT NAME: (TTES SIGNATURE: TELEPHONE NO.: 505-632-0615 Surface Waste Management Facility Authorized Agent



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APPENDIX C

Photographic Documentation



SITE PHOTOGRAPHS

Lateral C-11 (2013) Pipeline Release

Photograph 1

View of the source area, facing northeast.



Photograph 2

View of the in-process excavation activities, facing northeast.



Photograph 3

View of the repaired pipe, facing south-west.



SITE PHOTOGRAPHS



Lateral C-11 (2013) Pipeline Release

Photograph 4

View of the repaired pipe, facing northeast.



Photograph 5

View of the in-process over-excavation activities at the points of release, facing west. In this photo, the east-northeast portion of the unaffected extended pipeline replacement excavation has already been backfilled to facilitate the deeper excavation in the release area.





APPENDIX D

Tables



TABLE 1 Lateral C-11 2013 Pipeline Release SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH MRO (mg/kg)
New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level		10	NE	NE	NE	50		100		
			Samples fro	om Stockpiled	Soil Removed for D	isposal/Treat	ment			des an
SP-2	11.15.16	Stockpile	<0.050	<0.050	<0.050	<0.10	ND	<5.0	190	520
				Stoc	kpile Soil Samples					
SP-1	11.15.16	Stockpile	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<10	<50
SP-3	11.15.16	Stockpile	<0.050	<0.050	<0.050	<0.10	ND	<5.0	<9.9	<49
				Excavation	Confirmation Sam	oles				
CS-1	11.15.16	1 to 5	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<10	<50
CS-2	11.15.16	1 to 5	<0.024	<0.049	<0.049	<0.098	ND	<4.9	<9.5	<48
CS-3	11.15.16	1 to 5	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.8	<49
CS-4	11.15.16	5	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<9.8	<49
CS-5	11.15.16	1 to 5	<0.025	<0.050	<0.050	<0.099	ND	<5.0	<9.4	<47
CS-6	11.15.16	1 to 5	<0.023	<0.047	<0.047	< 0.093	ND	<4.7	<10	<50
CS-7	11.15.16	5	<0.025	<0.049	<0.049	<0.098	ND	<4.9	<10	<50
CS-8	11.15.16	1 to 5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	<9.5	<47
CS-9	11.15.16	1 to 5	<0.023	<0.046	<0.046	<0.091	ND	<4.6	<9.5	<47
CS-10	11.15.16	1 to 4	<0.023	<0.046	<0.046	<0.093	ND	<4.6	<9.6	<48
CS-11	11.15.16	1 to 4	<0.024	<0.048	<0.048	<0.096	ND	<4.8	<9.3	<47
CS-12	11.15.16	1 to 4	<0.024	<0.047	<0.047	<0.095	ND	<4.7	<9.9	<49
CS-13	11.15.16	4	<0.024	<0.048	<0.048	<0.095	ND	<4.8	<9.7	<48
CS-14	11.30.16	12.5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	26	55
CS-15	11.30.16	6 to 12.5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	<9.7	<49
CS-16	11.30.16	6 to 12.5	<0.025	<0.050	<0.050	<0.10	ND	<5.0	<9.2	<46
CS-17	11.30.16	6 to 12.5	<0.024	<0.048	<0.048	<0.095	ND	<4.8	36	110
CS-18	11.30.16	6 to 12.5	<0.024	<0.048	<0.048	<0.097	ND	<4.8	<9.4	<47

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

mg/kg = milligram per kilogram

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established



Appendix E

Laboratory Analytical Reports & Chain of Custody Documentation

10

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 21, 2016

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

OrderNo.: 1611790

Dear Kyle Summers:

RE: Lateral C-11 2013

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/16/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1611790

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/21/2016 Client Sample ID: SP-1

CLIENT:APEX TITANProject:Lateral C-11 2013Lab ID:1611790-001

Collection Date: 11/15/2016 2:00:00 PM Received Date: 11/16/2016 8:00:00 AM

Analyses	Result	PQL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE		Analy	st: JME			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/17/2016 9:25:42 A	M 28701
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/17/2016 9:25:42 A	M 28701
Surr: DNOP	110	70-130	%Rec	1	11/17/2016 9:25:42 A	M 28701
EPA METHOD 8015D: GASOLINE RANG	E				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/17/2016 12:08:22	PM 28714
Surr: BFB	95.1	68.3-144	%Rec	1	11/17/2016 12:08:22	PM 28714
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.048	mg/Kg	1	11/17/2016 12:08:22	PM 28714
Toluene	ND	0.048	mg/Kg	1	11/17/2016 12:08:22	PM 28714
Ethylbenzene	ND	0.048	mg/Kg	1	11/17/2016 12:08:22	PM 28714
Xylenes, Total	ND	0.096	mg/Kg	1	11/17/2016 12:08:22	PM 28714
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	1	11/17/2016 12:08:22	PM 28714

Matrix: SOIL

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

Analytical Report

Lab Order 1611790

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

						A	
Analyses		Result	PQL	Qual	Units	DF Date Analyzed	Batch
Lab ID:	1611790-002	Matrix:	SOIL		Received	Date: 11/16/2016 8:00:00 AN	1
Project:	Lateral C-11 2013			(Collection	Date: 11/15/2016 2:10:00 PM	E
CLIENT:	APEX TITAN			Cl	ient Samp	le ID: SP-2	

EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S				Analyst:	JME
Diesel Range Organics (DRO)	190	97		mg/Kg	10	11/17/2016 1:32:48 PM	28701
Motor Oil Range Organics (MRO)	520	480		mg/Kg	10	11/17/2016 1:32:48 PM	28701
Surr: DNOP	0	70-130	S	%Rec	10	11/17/2016 1:32:48 PM	28701
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/17/2016 1:21:43 PM	28714
Surr: BFB	94.6	68.3-144		%Rec	1	11/17/2016 1:21:43 PM	28714
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.050		mg/Kg	1	11/17/2016 1:21:43 PM	28714
Toluene	ND	0.050		mg/Kg	1	11/17/2016 1:21:43 PM	28714
Ethylbenzene	ND	0.050		mg/Kg	1	11/17/2016 1:21:43 PM	28714
Xylenes, Total	ND	0.10		mg/Kg	1	11/17/2016 1:21:43 PM	28714
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	11/17/2016 1:21:43 PM	28714

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	D	Sample Diluted Due to Matrix		Value above quantitation range	
	Η	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits Page		
	ND Not Detected at the Reporting Limit		Р	Sample pH Not In Range Page 2 of 6	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	% Recovery outside of range due to dilution or matrix		Sample container temperature is out of limit as specified	

Analytical Report Lab Order 1611790 Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

Project:

Lab ID:

CLIENT: APEX TITAN Client Sample ID: SP-3 Lateral C-11 2013 Collection Date: 11/15/2016 2:20:00 PM 1611790-003 Received Date: 11/16/2016 8:00:00 AM Matrix: SOIL POL Qual Units Result **DF** Date Analyzed Batch

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analyst	JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/17/2016 3:49:09 PM	28701
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/17/2016 3:49:09 PM	28701
Surr: DNOP	100	70-130	%Rec	1	11/17/2016 3:49:09 PM	28701
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/17/2016 2:34:53 PM	28714
Surr: BFB	96.1	68.3-144	%Rec	1	11/17/2016 2:34:53 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	11/17/2016 2:34:53 PM	28714
Toluene	ND	0.050	mg/Kg	1	11/17/2016 2:34:53 PM	28714
Ethylbenzene	ND	0.050	mg/Kg	1	11/17/2016 2:34:53 PM	28714
Xylenes, Total	ND	0.10	mg/Kg	1	11/17/2016 2:34:53 PM	28714
Surr: 4-Bromofluorobenzene	108	80-120	%Rec	1	11/17/2016 2:34:53 PM	28714

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

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc.	

WO#: 1611790

21-Nov-16

Client: Project:	APEX TI Lateral C										
Sample ID	MB-28701	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	PBS	Batch	ID: 28	701	F	RunNo: 3	8768				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	S	SeqNo: 1	211355	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	ND	10								
Motor Oil Rang	e Organics (MRO)	ND	50								
Surr: DNOP		8.9		10.00		89.1	70	130			
Sample ID	LCS-28701	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch	ID: 28	701	F	RunNo: 3	8768				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	S	SeqNo: 1	211490	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	42	10	50.00	0	83.8	62.6	124			
Surr: DNOP		4.2		5.000		83.6	70	130			
Sample ID	1611790-001AMS	SampT	ype: MS	6	Test	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	SP-1	Batch	ID: 28	701	R	RunNo: 3	8769				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	S	SeqNo: 1	212056	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	51	9.7	48.45	0	106	51.6	130			
Surr: DNOP		4.6		4.845		94.6	70	130			
Sample ID	1611790-001AMSE	SampT	ype: MS	SD	Test	tCode: El	A Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	SP-1	Batch	ID: 28	701	R	RunNo: 3	8769				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	S	eqNo: 1	212057	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	48	9.2	46.17	0	104	51.6	130	6.31	20	
Surr: DNOP		4.2		4.617		91.9	70	130	0	0	

Qualifiers:

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

Page 4 of 6

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project: APEX TITAN

Project:	Lateral C	-11 2013									
Sample ID	MB-28714	SampT	уре: МЕ	3LK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch	h ID: 28	714	F	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D	ate: 11	1/17/2016	S	SeqNo: 1	212132	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	e Organics (GRO)	ND	5.0								
Surr: BFB		950		1000		94.6	68.3	144			
Sample ID	LCS-28714	SampT	ype: LC	s	Tesi	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch	h ID: 28	714	R	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D	ate: 11	1/17/2016	S	SeqNo: 1	212133	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Range	e Organics (GRO)	22	5.0	25.00	0	89.9	74.6	123			
Surr: BFB		1000		1000		102	68.3	144			
Sample ID	1611790-002AMS	SampT	ype: MS	3	Test	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	SP-2	Batch	h ID: 28	714	R	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D)ate: 11	1/17/2016	S	SeqNo: 1	212136	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	e Organics (GRO)	24	4.8	23.95	0	102	61.3	150			
Surr: BFB		980		957.9		102	68.3	144			
Sample ID	1611790-002AMS	SampT	ype: MS	SD.	Test	tCode: El	PA Method	8015D: Gaso	line Rang	е	
Client ID:	SP-2	Batch	n ID: 28	714	R	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D)ate: 11	1/17/2016	S	SeqNo: 1	212137	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Surr: BFB	e Organics (GRO)	23	4.8	24.18	0	95.8	61.3	150	5.07	20	
		1000		967.1		104	68.3	144	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

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

WO#: 1611790

21-Nov-16

Page 5 of 6

-	MMARY				ory, Inc.					WO#:	1611790 21-Nov-16
Client: Project:	APEX TI Lateral C										
Sample ID	MB-28714	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batch	n ID: 28	714	F	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	S	SeqNo: 1	212159	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025					<u> </u>			
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
	ofluorobenzene	1.0		1.000		102	80	120			
Sample ID	LCS-28714	SampT	ype: LC	s	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batch	714	RunNo: 38798							
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	SeqNo: 1212160 Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	107	75.2	115			
Toluene		1.1	0.050	1.000	0	110	80.7	112			
Ethylbenzene		1.0	0.050	1.000	0	102	78.9	117			
Xylenes, Total		3.0	0.10	3.000	0	99.6	79.2	115			
Surr: 4-Brom	ofluorobenzene	1.1		1.000		108	80	120			
Sample ID	1611790-001AMS	SampT	ype: M	S	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	SP-1	Batch	D: 28	714	F	RunNo: 3	8798				
Prep Date:	11/16/2016	Analysis D	ate: 1	1/17/2016	5	SeqNo: 1	212162	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.024	0.9515	0	111	71.5	122			
Toluene		1.0	0.048	0.9515	0	108	71.2	123			
Ethylbenzene		1.0	0.048	0.9515	0	106	75.2	130			
Xylenes, Total		2.9	0.095	2.854	0	103	72.4	131			
Surr: 4-Brom	ofluorobenzene	1.0		0.9515		108	80	120			
Sample ID	1611790-001AMS	611790-001AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles						tiles			
Client ID:	CD 4	Potob	10. 20	74.4	-	unblo: 2	0700				

Client ID: SP-1	Batch ID: 28714			R	unNo: 3	8798				
Prep Date: 11/16/2016	Analysis Date: 11/17/2016			S	eqNo: 1	212163	Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.023	0.9328	0	109	71.5	122	3.75	20	
Toluene	1.0	0.047	0.9328	0	109	71.2	123	1.47	20	
Ethylbenzene	0.97	0.047	0.9328	0	104	75.2	130	3.81	20	
Xylenes, Total	2.9	0.093	2.799	0	103	72.4	131	2.09	20	
Surr: 4-Bromofluorobenzene	0.96		0.9328		103	80	120	0	0	

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

Page 6 of 6

ENVIRONMENTAL ANALYSIS LABORATORY TEL: 50	vironmental Analysis Laborati 4901 Hawkins Albuquerque, NM 871 5-345-3975 FAX: 505-345-41 lite: www.hallenvironmental.c	NE 109 Sam	ple Log-In Check List
Client Name: APEX AZTEC Work Orde	er Number: 1611790		RcptNo: 1
Received by/date: 00 11/10	116		
Logged By: Ashley Gallegos 11/16/2016	8:00:00 AM	AJ	
Completed By: Ashley Gallegos 11/16/2016	8:25:16 AM	AJ	
Reviewed By:			
Chain of Custody			
1. Custody seals intact on sample bottles?	Yes	No []	Not Present
2. Is Chain of Custody complete?	Yes 🖌	No []]	Not Present
3. How was the sample delivered?	Courier		
Log In			
4. Was an attempt made to cool the samples?	Yes 🖌	No 🗌	na 🗔
5. Were all samples received at a temperature of >0° C to 6	5.0°C Yes 🗹	No []]	NA []
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for Indicated test(s)?	Yes 🗹	No []]	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA
10.VOA vials have zero headspace?	Yes	No 🗌	No VOA Vials
11. Were any sample containers received broken?	Yes	No 🔽	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🛄	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No	Adjusted?
14. Is it clear what analyses were requested?	Yes 🖌	No []	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🖌	No []	Checked by:
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes	No 🗌	NA
Person Notified:	Date		
By Whom:	Via: 🗌 eMail 🗌 P	hone 门 Fax	In Person
Regarding:			
Client Instructions:			
17. Additional remarks:			
18. <u>Cooler Information</u> Cooler No Temp ^o C Condition Seal Intact So 1 1.6 Good Yes	eal No Seal Date	Signed By	
and a second			

																				C	HAIN C	OF C	USTODY RECOR
			ster	C N	M	Laboratory: Address:	-			1					UES	TED	Turt		//	//			Lab use only Due Date: Temp. of coolers when received (C°): 1,60
						Contact:	A	I.Fr	eem	an						Lee Lael		/	/	/		/	1 2 3 4 5
						Phone:										10	/	/	/ /	/ /			Pageof
Proje	ect Manag	ger <u> </u>	Sur	nm	ws	PO/SO #: _									A	14	/	/ /	/ /	/	/ /		
	er's Name anec T	Deechil	ly		4	Sampler's Sign	ature	21							Sent BIE	Hatsin	//	/	/				
Proj. N	lo.		Proje	att	ame eral (-(1	2013		5	No/Ty	/pe of C	ontair	ners		5	\$ 3	7/	/	/ /	//	//			
Matrix	Date	Time	CoEp	Grad		rks of Sample(s)	Start Depth	End Depth	VOA	AG 1Lt	250 ml	Glass Jar	D/d				//	/	/		/ L	.ab Sa	ample ID (Lab Use Only)
	11/15/14	1400			58-	1						(X	K						16	11	790-001
5	11/15/14	1410			SP-	2						1		X	X								-002
5	11/15/16	1420			SP.	-3						ł		X	X								-003
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Reling	n Du	Signature)		11	Date:	Time: Receiv	red by:	(Signa	ture)	ON	1	Date	-12	Tin 174		NOTE			-		1	T	
101	uished by (Jaet	>	1	115/10 18	Time: Receiv	/ed by:				i	Date	16	08	ne:						Long N217		
	uished by (_					ved by:					Date			ne:					-	1		Us hr Rush Friday morning
						0.0-11.000.00		1		Ale		-	Ch	man al 6-1		Ol alter		-	01			-	Friday morning
Matrix Contain		V - Wastewa A - 40 ml via			W - Water A/G - Amber / O	S - Soil SD - So Glass 1 Liter		- Liquid	Glass	- All Ba	uth			rcoal tul		SL - slud	ge	0.	Oil				

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 06, 2016

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

RE: Lateral C-11 2013

OrderNo.: 1612018

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 12/1/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1612018

Date Reported: 12/6/2016

Hall Environmental Analysis Laboratory, Inc.

10

CLIENT	APEX TITAN			Client Samp	e ID: CS	5-14			
Project:	Lateral C-11 2013			-		/30/2016 12:15:00 P	М		
Lab ID:	1612018-001	Matrix: SC	DIL	Received Date: 12/1/2016 8:25:00 AM					
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch		
EPA ME	THOD 8015M/D: DIESEL R	ANGE ORGANICS				Analy	st: TOM		

Motor Oil Range Organics (MRO)	55	49	mg/Kg	1	12/5/2016 10:47:15 AM	28971
Surr: DNOP	103	70-130	%Rec	1	12/5/2016 10:47:15 AM	28971
EPA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/2/2016 10:00:11 AM	28954
Surr: BFB	82.5	68.3-144	%Rec	1	12/2/2016 10:00:11 AM	28954
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
5						
Benzene	ND	0.024	mg/Kg	1	12/2/2016 10:00:11 AM	28954
Benzene Toluene	ND ND	0.024 0.048	mg/Kg mg/Kg	1 1		28954 28954
			0 0	1 1 1	12/2/2016 10:00:11 AM	
Toluene	ND	0.048	mg/Kg	1 1 1 1	12/2/2016 10:00:11 AM 12/2/2016 10:00:11 AM	28954
Toluene Ethylbenzene	ND ND	0.048 0.048	mg/Kg mg/Kg	1 1 1 1	12/2/2016 10:00:11 AM 12/2/2016 10:00:11 AM 12/2/2016 10:00:11 AM	28954 28954

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

Analytical Report

Batch

-

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1612018 Date Reported: 12/6/2016

CLIENT: APEX TITAN Client Sample ID: CS-15 Collection Date: 11/30/2016 12:25:00 PM Project: Lateral C-11 2013 Received Date: 12/1/2016 8:25:00 AM Lab ID: 1612018-002 Matrix: SOIL Analyses Result **PQL** Qual Units **DF** Date Analyzed ~

ORGANIC	S			Analyst: TOM	
ND	9.7	mg/Kg	1	12/5/2016 11:08:53 AM 28971	
ND	49	mg/Kg	1	12/5/2016 11:08:53 AM 28971	
98.4	70-130	%Rec	1	12/5/2016 11:08:53 AM 28971	
				Analyst: NSB	
ND	4.8	mg/Kg	1	12/2/2016 11:10:55 AM 28954	
82.5	68.3-144	%Rec	1	12/2/2016 11:10:55 AM 28954	
				Analyst: NSB	
ND	0.024	mg/Kg	1	12/2/2016 11:10:55 AM 28954	
ND	0.048	mg/Kg	1	12/2/2016 11:10:55 AM 28954	
ND	0.048	mg/Kg	1	12/2/2016 11:10:55 AM 28954	
ND	0.095	mg/Kg	1	12/2/2016 11:10:55 AM 28954	
97.6	80-120	%Rec		12/2/2016 11:10:55 AM 28954	
	ND ND 98.4 ND 82.5 ND ND ND ND ND	ND 9.7 ND 49 98.4 70-130	ND 49 mg/Kg 98.4 70-130 %Rec ND 4.8 mg/Kg 82.5 68.3-144 %Rec ND 0.024 mg/Kg ND 0.048 mg/Kg ND 0.048 mg/Kg ND 0.095 mg/Kg	ND 9.7 mg/Kg 1 ND 49 mg/Kg 1 98.4 70-130 %Rec 1 ND 4.8 mg/Kg 1 ND 4.8 mg/Kg 1 82.5 68.3-144 %Rec 1 ND 0.024 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.048 mg/Kg 1 ND 0.095 mg/Kg 1	ND 9.7 mg/Kg 1 12/5/2016 11:08:53 AM 28971 ND 49 mg/Kg 1 12/5/2016 11:08:53 AM 28971 98.4 70-130 %Rec 1 12/5/2016 11:08:53 AM 28971 98.4 70-130 %Rec 1 12/5/2016 11:08:53 AM 28971 S Analyst: NSB NSB ND 4.8 mg/Kg 1 12/2/2016 11:10:55 AM 28954 82.5 68.3-144 %Rec 1 12/2/2016 11:10:55 AM 28954 Analyst: NSB ND 0.024 mg/Kg 1 12/2/2016 11:10:55 AM 28954 ND 0.048 mg/Kg 1 12/2/2016 11:10:55 AM 28954 ND 0.048 mg/Kg 1 12/2/2016 11:10:55 AM 28954 ND 0.048 mg/Kg 1 12/2/2016 11:10:55 AM 28954 ND 0.095 mg/Kg 1 12/2/2016 11:10:55 AM 28954 ND 0.095

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

ers:	*	Value exceeds Maximum Contaminant Level.

Qualifie

- Sample Diluted Due to Matrix D
- 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 S
- В Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 2 of 9 J
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- W Sample container temperature is out of limit as specified

Analytical Report Lab Order 1612018

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/6/2016 Client Sample ID: CS-16 Collection Date: 11/30/2016 12:35:00 PM

 Project:
 Lateral C-11 2013

 Lab ID:
 1612018-003

CLIENT: APEX TITAN

Collection Date: 11/30/2016 12:35:00 PM Received Date: 12/1/2016 8:25:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE		S			Analyst	TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	12/5/2016 11:30:29 AM	28971
Motor Oil Range Organics (MRO)	ND	46	mg/Kg	1	12/5/2016 11:30:29 AM	28971
Surr: DNOP	101	70-130	%Rec	1	12/5/2016 11:30:29 AM	28971
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	12/2/2016 12:21:56 PM	28954
Surr: BFB	82.4	68.3-144	%Rec	1	12/2/2016 12:21:56 PM	28954
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	12/2/2016 12:21:56 PM	28954
Toluene	ND	0.050	mg/Kg	1	12/2/2016 12:21:56 PM	28954
Ethylbenzene	ND	0.050	mg/Kg	1	12/2/2016 12:21:56 PM	28954
Xylenes, Total	ND	0.10	mg/Kg	1	12/2/2016 12:21:56 PM	28954
Surr: 4-Bromofluorobenzene	97.1	80-120	%Rec	1	12/2/2016 12:21:56 PM	28954

Matrix: SOIL

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

Analytical Report Lab Order 1612018 Date Reported: 12/6/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: CS-17 Project: Lateral C-11 2013 Collection Date: 11/30/2016 12:45:00 PM Lab ID: 1612018-004 Matrix: SOIL Received Date: 12/1/2016 8:25:00 AM Analyses Result PQL Qual Units DF Date Analyzed Batch

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS A						ТОМ
Diesel Range Organics (DRO)	36	9.4	mg/Kg	1	12/5/2016 12:13:58 PM	28971
Motor Oil Range Organics (MRO)	110	47	mg/Kg	1	12/5/2016 12:13:58 PM	28971
Surr: DNOP	103	70-130	%Rec	1	12/5/2016 12:13:58 PM	28971
EPA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/2/2016 12:45:35 PM	28954
Surr: BFB	82.6	68.3-144	%Rec	1	12/2/2016 12:45:35 PM 2	28954
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	12/2/2016 12:45:35 PM 2	28954
Toluene	ND	0.048	mg/Kg	1	12/2/2016 12:45:35 PM 2	28954
Ethylbenzene	ND	0.048	mg/Kg	1	12/2/2016 12:45:35 PM 2	28954
Xylenes, Total	ND	0.095	mg/Kg	1	12/2/2016 12:45:35 PM 2	28954
Surr: 4-Bromofluorobenzene	96.8	80-120	%Rec	1	12/2/2016 12:45:35 PM 2	28954

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

Analytical Report Lab Order 1612018

Date Reported: 12/6/2016

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result		Qual	Units	DF Date Analyzed Batc
Lab ID:	1612018-005	Matrix:	SOIL		Receive	ed Date: 12/1/2016 8:25:00 AM
Project:	Lateral C-11 2013				Collectio	on Date: 11/30/2016 12:55:00 PM
CLIENT:	APEX TITAN	Client Sample ID: CS-18				

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst:						
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	12/5/2016 11:52:22 AM	28971
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	12/5/2016 11:52:22 AM	28971
Surr: DNOP	98.1	70-130	%Rec	1	12/5/2016 11:52:22 AM	28971
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/2/2016 1:09:12 PM	28954
Surr: BFB	82.1	68.3-144	%Rec	1	12/2/2016 1:09:12 PM	28954
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	12/2/2016 1:09:12 PM	28954
Toluene	ND	0.048	mg/Kg	1	12/2/2016 1:09:12 PM	28954
Ethylbenzene	ND	0.048	mg/Kg	1	12/2/2016 1:09:12 PM	28954
Xylenes, Total	ND	0.097	mg/Kg	1	12/2/2016 1:09:12 PM	28954
Surr: 4-Bromofluorobenzene	95.0	80-120	%Rec	1	12/2/2016 1:09:12 PM	28954

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

QC SUMMARY REPORT

WO#: 1612018

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Hall Environmental Analysis Laboratory, Inc.

Client: Project:	APEX TITAN Lateral C-11 2013							
Sample ID	LCS-28971	SampType:	LCS					
Client ID:	LCSS	Batch ID:	2897					

Sample ID LCS-28971	SampType	e: LCS	Tes	tCode: EP	A Method	8015M/D: Di	esel Range	e Organics	
Client ID: LCSS	Batch ID): 28971	F	RunNo: 39	131				
Prep Date: 12/2/2016	Analysis Date	e: 12/5/2016	5	SeqNo: 12	24358	Units: mg/M	(g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10 50.00	0	95.5	62.6	124			
Surr: DNOP	4.7	5.000		93.4	70	130			
Sample ID MB-28971	SampType	e: MBLK	Tes	tCode: EP	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID): 28971	F	RunNo: 39	131				
Prep Date: 12/2/2016	Analysis Date	e: 12/5/2016	5	SeqNo: 12	24359	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10							
Motor Oil Range Organics (MRO)	ND	50							
Surr: DNOP	9.7	10.00		96.6	70	130			
Sample ID MB-28987	SampType	e: MBLK	Tes	tCode: EP/	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID	28987	F	RunNo: 391	131				
Prep Date: 12/5/2016	Analysis Date	e: 12/5/2016	5	SeqNo: 12	24588	Units: %Re	C		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.8	10.00		98.0	70	130			
Sample ID LCS-28987	SampType	e: LCS	Tes	tCode: EP/	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch ID): 28987	F	RunNo: 391	131				
Prep Date: 12/5/2016	Analysis Date	e: 12/5/2016	S	SeqNo: 122	24590	Units: %Re	C		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8	5.000		96.0	70	130			
Sample ID 1612018-001AMS	SampType	e: MS	Tes	tCode: EP/	A Method	8015M/D: Die	esel Range	e Organics	
Client ID: CS-14	Batch ID	28971	F	RunNo: 391	131				
Prep Date: 12/2/2016	Analysis Date	e: 12/5/2016	S	SeqNo: 122	24688	Units: mg/K	g		
Analyte	Result F	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte Diesel Range Organics (DRO)	Result F 86	PQL SPK value 9.5 47.48		%REC 127	LowLimit 51.6	HighLimit 130	%RPD	RPDLimit	Qual
			26.00				%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	86 5.0	9.5 47.48 4.748	26.00	127 105	51.6 70	130			Qual
Diesel Range Organics (DRO) Surr: DNOP	86 5.0	9.5 47.48 4.748 e: MSD	26.00 Tes	127 105	51.6 70 A Method	130 130			Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID 1612018-001AMS	86 5.0 D SampType	9.5 47.48 4.748 e: MSD b: 28971	26.00 Tes F	127 105 tCode: EP/	51.6 70 A Method 131	130 130	esel Range		Qual
Diesel Range Organics (DRO) Surr: DNOP Sample ID 1612018-001AMS Client ID: CS-14	86 5.0 D SampType Batch ID Analysis Date	9.5 47.48 4.748 e: MSD b: 28971 e: 12/5/2016	26.00 Tes F	127 105 tCode: EP/ RunNo: 39 1 SeqNo: 122	51.6 70 A Method 131	130 130 8015M/D: Die	esel Range		Qual

Qualifiers:

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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

APEX TITAN

Project: Lateral C-11 2013

Client:

Sample ID	1612018-001AMSD	SampType:	MSD	Tes	tCode: E	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID:	CS-14	Batch ID:	28971	R	aunNo:	39131				
Prep Date	12/2/2016	Analysis Date:	12/5/2016	S	eqNo:	1224689	Units: mg/K	g		
Analyte		Result PC	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNO	0	5.0	4.845		104	70	130	0	0	

Qualifiers:

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

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WO#: 1612018 06-Dec-16

QC SUMMARY REPORT

WO#: 1612018

06-Dec-16

Hall Environmental Analysis Laboratory, Inc.

Client: Project: APEX TITAN Lateral C-11 2013

Sample ID	MB-28954	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8015D: Gasc	line Rang	9	
Client ID:	PBS	Batch	ID: 28	954	R	aunNo: 3	9123				
Prep Date:	12/1/2016	Analysis D	ate: 1	2/2/2016	S	SeqNo: 1	223834	Units: mg/M	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	ND	5.0								
Surr: BFB		810		1000		81.3	68.3	144			
Sample ID	LCS-28954	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	Qual
Client ID:	LCSS	Batch	ID: 28	954	R	aunNo: 3	9123				
Prep Date:	12/1/2016	Analysis D	ate: 1	2/2/2016	s	eqNo: 1	223835	Units: mg/k	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	23	5.0	25.00	0	93.3	74.6	123			
Surr: BFB		860		1000		85.6	68.3	144			
Sample ID	1612018-002AMS	SampT	ype: MS	6	Tes	Code: E	PA Method	8015D: Gasc	line Rang	e	
Client ID:	CS-15	Client ID: CS-15 Batch ID: 28954 Prep Date: 12/1/2016 Analysis Date: 12/2/2016			R	unNo: 3	9123				
						tunNo: 3 SeqNo: 1		Units: mg/K	g		
Prep Date:				2/2/2016				Units: mg/k HighLimit	(g %RPD	RPDLimit	Qual
Prep Date: Analyte		Analysis D	ate: 1	2/2/2016	S	SeqNo: 1	223838		•	RPDLimit	Qual
Prep Date: Analyte	12/1/2016	Analysis D Result	ate: 1: PQL	2/2/2016 SPK value	SPK Ref Val	eqNo: 1 %REC	223838 LowLimit	HighLimit	•	RPDLimit	Qual
Prep Date: Analyte Gasoline Rang Surr: BFB	12/1/2016	Analysis D Result 22 870	ate: 1: PQL	2/2/2016 SPK value 24.51 980.4	SPK Ref Val 0	SeqNo: 1 %REC 89.0 89.2	223838 LowLimit 61.3 68.3	HighLimit 150	%RPD		Qual
Prep Date: Analyte Gasoline Rang Surr: BFB	12/1/2016 ge Organics (GRO) 1612018-002AMSI	Analysis D Result 22 870 D SampT	ate: 12 PQL 4.9	2/2/2016 SPK value 24.51 980.4	SPK Ref Val 0 Test	SeqNo: 1 %REC 89.0 89.2	223838 LowLimit 61.3 68.3 PA Method	HighLimit 150 144	%RPD		Qual
Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	12/1/2016 ge Organics (GRO) 1612018-002AMSI	Analysis D Result 22 870 D SampT	ate: 12 PQL 4.9 ype: MS	2/2/2016 SPK value 24.51 980.4 SD 954	SPK Ref Val 0 Tesi R	SeqNo: 1 %REC 89.0 89.2 tCode: E	223838 LowLimit 61.3 68.3 PA Method 9123	HighLimit 150 144	%RPD		Qual
Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	12/1/2016 ge Organics (GRO) 1612018-002AMSI CS-15	Analysis D Result 22 870 D SampT Batch	ate: 12 PQL 4.9 ype: MS	2/2/2016 SPK value 24.51 980.4 SD 954 2/2/2016	SPK Ref Val 0 Tesi R	SeqNo: 1 %REC 89.0 89.2 tCode: El tunNo: 3	223838 LowLimit 61.3 68.3 PA Method 9123	HighLimit 150 144 8015D: Gaso	%RPD		Qual
Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	12/1/2016 ge Organics (GRO) 1612018-002AMSI CS-15	Analysis D Result 22 870 D SampT Batch Analysis D	ate: 1; PQL 4.9 ype: MS 1D: 28 ate: 1;	2/2/2016 SPK value 24.51 980.4 SD 954 2/2/2016	SPK Ref Val 0 Tesi R S	SeqNo: 1 %REC 89.0 89.2 tCode: El cunNo: 3 SeqNo: 1	223838 LowLimit 61.3 68.3 PA Method 9123 223839	HighLimit 150 144 8015D: Gaso Units: mg/K	%RPD	9	
Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	12/1/2016 ge Organics (GRO) 1612018-002AMSI CS-15 12/1/2016	Analysis D Result 22 870 D SampT Batch Analysis D Result	ate: 12 PQL 4.9 ype: MS 1D: 28 ate: 12 PQL	2/2/2016 SPK value 24.51 980.4 SD 954 2/2/2016 SPK value	SPK Ref Val 0 Tesi R SPK Ref Val	GeqNo: 1 %REC 89.0 89.2 tCode: El RunNo: 3 GeqNo: 1 %REC	223838 LowLimit 61.3 68.3 PA Method 9123 223839 LowLimit	HighLimit 150 144 8015D: Gaso Units: mg/K HighLimit	%RPD	e RPDLimit	Qual

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

Client: Project: APEX TITAN

Lateral C-11 2013

	Toject: Lateral C-11 2015										
Sample ID MB-	-28954	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: PBS	S	Batch	ID: 28	954	F	RunNo: 3	9123				
Prep Date: 12	2/1/2016	Analysis D	ate: 12	2/2/2016	S	SeqNo: 1	223861	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-Bromofluor	robenzene	0.94		1.000		94.5	80	120			
Sample ID LCS	S-28954	SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	iles		
Client ID: LCS	SS	Batch	ID: 289	954	R	RunNo: 3	9123				
Prep Date: 12	2/1/2016	Analysis D	ate: 12	2/2/2016	S	SeqNo: 1	223862	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	75.2	115			
Toluene		0.99	0.050	1.000	0	98.9	80.7	112			
Ethylbenzene		0.94	0.050	1.000	0	93.8	78.9	117			
Xylenes, Total		2.8	0.10	3.000	0	93.3	79.2	115			
Surr: 4-Bromofluor	robenzene	0.99		1.000		99.0	80	120			
Sample ID 161	2018-001AMS	SampT	ype: MS	5	Test	tCode: El	PA Method	8021B: Volat	iles		
Client ID: CS-	-14	Batch	ID: 289	954	R	RunNo: 3	9123				
Prep Date: 12	2/1/2016	Analysis Da	ate: 12	2/2/2016	S	SeqNo: 1	223864	Units: mg/K	g		
Analyte											
, and yes		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
		Result 1.0	PQL 0.024	SPK value 0.9671	SPK Ref Val	%REC 109	LowLimit 61.5	HighLimit 138	%RPD	RPDLimit	Qual
Benzene								-	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene		1.0	0.024	0.9671	0	109	61.5	138	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene		1.0 1.0	0.024 0.048	0.9671 0.9671	0 0	109 104	61.5 71.4	138 127	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene	robenzene	1.0 1.0 0.96	0.024 0.048 0.048	0.9671 0.9671 0.9671	0 0 0	109 104 99.6	61.5 71.4 70.9	138 127 132	%RPD	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Total		1.0 1.0 0.96 2.9 1.0	0.024 0.048 0.048	0.9671 0.9671 0.9671 2.901 0.9671	0 0 0	109 104 99.6 98.6 103	61.5 71.4 70.9 76.2 80	138 127 132 123		RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor	2018-001AMSD	1.0 1.0 0.96 2.9 1.0 SampTy	0.024 0.048 0.048 0.097	0.9671 0.9671 0.9671 2.901 0.9671	0 0 0 0 Test	109 104 99.6 98.6 103	61.5 71.4 70.9 76.2 80 PA Method	138 127 132 123 120		RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 161 2	2018-001AMSD 14	1.0 1.0 0.96 2.9 1.0 SampTy	0.024 0.048 0.048 0.097 ype: MS	0.9671 0.9671 0.9671 2.901 0.9671	0 0 0 Test	109 104 99.6 98.6 103	61.5 71.4 70.9 76.2 80 PA Method 9123	138 127 132 123 120	iles	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 161 2 Client ID: CS -	2018-001AMSD 14	1.0 1.0 2.9 1.0 SampTy Batch Analysis Da	0.024 0.048 0.048 0.097 ype: MS	0.9671 0.9671 0.9671 2.901 0.9671 6D 954	0 0 0 Test	109 104 99.6 98.6 103 tCode: El	61.5 71.4 70.9 76.2 80 PA Method 9123	138 127 132 123 120 8021B: Volat	iles	RPDLimit	Qual
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 1612 Client ID: CS- Prep Date: 120	2018-001AMSD 14	1.0 1.0 0.96 2.9 1.0 SampTy Batch Analysis Da	0.024 0.048 0.048 0.097 ype: MS ID: 289 ate: 12	0.9671 0.9671 0.9671 2.901 0.9671 6D 954	0 0 0 Test R S	109 104 99.6 98.6 103 tCode: El RunNo: 3 SeqNo: 1:	61.5 71.4 70.9 76.2 80 PA Method 9123 223865	138 127 132 123 120 8021B: Volat Units: mg/K	iles g		
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 1612 Client ID: CS- Prep Date: 122 Analyte	2018-001AMSD 14	1.0 1.0 0.96 2.9 1.0 SampTy Batch Analysis Da Result 1.2 1.2	0.024 0.048 0.048 0.097 ype: MS ID: 289 ate: 12 PQL	0.9671 0.9671 2.901 0.9671 0.9671 5D 954 2/2/2016 SPK value	0 0 0 Tesi R SPK Ref Val	109 104 99.6 98.6 103 tCode: El RunNo: 3 SeqNo: 1 %REC	61.5 71.4 70.9 76.2 80 PA Method 9123 223865 LowLimit	138 127 132 123 120 8021B: Volat Units: mg/K HighLimit 138 127	iles g %RPD	RPDLimit 20 20	
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 1612 Client ID: CS- Prep Date: 120 Analyte Benzene	2018-001AMSD 14	1.0 1.0 0.96 2.9 1.0 SampTy Batch Analysis Da Result 1.2	0.024 0.048 0.048 0.097 ype: MS ID: 289 ate: 12 PQL 0.024	0.9671 0.9671 2.901 0.9671 0.9671 5D 954 2/2/2016 SPK value 0.9416	0 0 0 Test R SPK Ref Val 0	109 104 99.6 98.6 103 tCode: El RunNo: 3 SeqNo: 1 %REC 129	61.5 71.4 70.9 76.2 80 PA Method 9123 223865 LowLimit 61.5	138 127 132 123 120 8021B: Volat Units: mg/K HighLimit 138	iles g %RPD 14.4	RPDLimit 20	
Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluor Sample ID 1612 Client ID: CS- Prep Date: 120 Analyte Benzene Toluene	2018-001AMSD 14	1.0 1.0 0.96 2.9 1.0 SampTy Batch Analysis Da Result 1.2 1.2	0.024 0.048 0.097 ype: MS ID: 289 ate: 12 PQL 0.024 0.047	0.9671 0.9671 2.901 0.9671 5D 954 2/2/2016 SPK value 0.9416 0.9416	0 0 0 Test R SPK Ref Val 0 0	109 104 99.6 98.6 103 tCode: EI RunNo: 3 SeqNo: 1 %REC 129 122	61.5 71.4 70.9 76.2 80 PA Method 9123 223865 LowLimit 61.5 71.4	138 127 132 123 120 8021B: Volat Units: mg/K HighLimit 138 127	iles g 14.4 13.6	RPDLimit 20 20	

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
- 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
- Analyte detected below quantitation limits J
 - Sample pH Not In Range
- RL Reporting Detection Limit

Р

W Sample container temperature is out of limit as specified Page 9 of 9

WO#: 1612018

06-Dec-16

ENVIRONMENTAL ANALYSIS	all Environmental Analysis La 4901 Ha Albuquerque, N EL: 505-345-3975 FAX: 505- Website: www.hallenvironm	wkins NE M 87109 345-4107	Sam	ple Log-In Ct	eck List
Client Name: APEX AZTEC Wo	k Order Number: 1612018	3		RoptNo:	1
Received by/date: 1M 12/01/14					
Logged By: Lindsey Concha 12/1/2	016 8:25:00 AM				
Completed By: Lindsey Concha 12/01	11.				
	01/16				
	01110				
<u>Chain of Custody</u>	_	_		-	
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?	Courier				
Log In					
4. Was an attempt made to cool the samples?	Yes 🗹		No 🗌	NA 🗌	
5. Were all samples received at a temperature of >0	Cto6.0°C Yes 🗹]	No 🗌	NA 🗍	
6. Sample(s) in proper container(s)?	Yes		No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	2	No 🗌		
8. Are samples (except VOA and ONG) properly pres	rved? Yes	2	No 🗌		
9. Was preservative added to bottles?	Yes 🗌]	No 🗹	NA 🗆	
10. VOA vials have zero headspace?	Yes]	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes 🗆]	No 🗹		
			_	# of preserved bottles checked	
12. Does paperwork match bottle labels?	Yes 🗹		No 🗌	for pH:	>12 unless noted)
(Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custo	v? Yes 🗹	1	No 🗆	Adjusted?	 12 unless noted)
14. Is it clear what analyses were requested?	Yes V				
15. Were all holding times able to be met?	Yes V	-	No 🗌	Checked by:	
(If no, notify customer for authorization.)					
Special Handling (if applicable)					
16. Was client notified of all discrepancies with this ord	er? Yes]	No 🗀	NA 🗹	
Person Notified:	Date				
By Whom:	Via: 🗋 eMail	Phone	🗍 Fax	In Person	
Regarding:					
Client Instructions:					
17. Additional remarks:					
18. Cooler Information				1	
	t Seal No Seal Date	Sign	ed By		
1 1.6 Good Yes				1	

																			C	HAIN	OF (CUSTODY RECORD
Offic Proje	PEX e Locatio	on A			VM (((Laboratory: Address: Contact: Phone: PO/SO #: ampier's Sign	Å A.F	Baj						Analys Reque	STED	+URC/WRG						Lab use only Due Date: Temp. of coolers when received (C°): J. (1 2 3 4 5 Page / of /
Proj. I	Proj. No. Project Name Lateral (1)					2013			No/Тур	e of Co	ontain	ers		802	Ally !	//	//	//	/ /			
Matrix	Date	Time	CoEp	G r a b	Identifying Marks		Start Depth	End Depth	VOA	AG 1L	250 ml	Glass Jar	D/O		/ /	/				/	Lab S	ampie ID (Lab Use Only)
5	11/30/16	1215			CS-	14						1		XX						16	12	100-810
1		1225			CS-	15						1		XX								- 002
		1235			C5-	16						1		XX							_	-003
		1245			CS-	17						1		XX								-004
V	-V	1255			C5-	18						1		ХX								-005
		-																				
<u> </u>						MES				_	_	-	_		_	+		_				
											_		_									
Relinc Relinc	uished by	I Nor (Signature) (Signature) (Signature) (Signature)	1		Date: Tin 1/33/14 /6 Date: Tin 1/36/16 /9 (Date: Tin	ne: Receiv	ved by:	(Signa (Signa	iture)	12	; 0	Date:	2	Time: <u>123</u> Time: <u>0825</u> Time: Time:	NO	TES:					00	EPROD) day turn around
Matrix Contai		W - Wastewa DA - 40 ml via			W - Water S - A/G - Amber / Or G	Soil SD - So Blass 1 Liter	lid L	- Liquio 250 ml -	d A - Glass wi	Air Bag de moi	g uth			coal tube astic or othe		sludge	() - Oil				

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



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

November 21, 2016

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

OrderNo.: 1611791

Dear Kyle Summers:

RE: Lateral C-11 2013

Hall Environmental Analysis Laboratory received 13 sample(s) on 11/16/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical	Report	

Lab Order 1611791

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN	Client Sample ID: CS-1										
Project: Lateral C-11 2013	Collection Date: 11/15/2016 11:45:00 AM										
Lab ID: 1611791-001	Matrix: S	OIL	Received Date: 11/16/2016 8:00:00 AM								
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch					
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS				Analys	st: JME					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/17/2016 9:53:16 Al	M 28701					
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/17/2016 9:53:16 Al	M 28701					
Surr: DNOP	90.7	70-130	%Rec	1	11/17/2016 9:53:16 AI	M 28701					

Sull. DNOI	30.7	70-150	7011000		11/1//2010 3.33.10 AM	20/01
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/17/2016 2:59:22 PM	28714
Surr: BFB	93.0	68.3-144	%Rec	1	11/17/2016 2:59:22 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.049	mg/Kg	1	11/17/2016 2:59:22 PM	28714
Toluene	ND	0.049	mg/Kg	1	11/17/2016 2:59:22 PM	28714
Ethylbenzene	ND	0.049	mg/Kg	1	11/17/2016 2:59:22 PM	28714
Xylenes, Total	ND	0.098	mg/Kg	1	11/17/2016 2:59:22 PM	28714
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	11/17/2016 2:59:22 PM	28714

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 16
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report	
Lab Order 1611791	

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

-

Analyses	Result	PQL Qual	Units	DF Date Analyzed	Batch		
Lab ID: 1611791-002	Matrix: S	OIL	Received	Date: 11/16/2016 8:00:00 AN	1		
Project: Lateral C-11 2013			Collection	Date: 11/15/2016 11:55:00 A	Μ		
CLIENT: APEX TITAN	Client Sample ID: CS-2						

EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S			Analyst: JME	1
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	11/17/2016 4:16:06 PM 2870)1
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/17/2016 4:16:06 PM 2870)1
Surr: DNOP	91.0	70-130	%Rec	1	11/17/2016 4:16:06 PM 2870)1
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst: NSE	3
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/17/2016 3:23:48 PM 2871	4
Surr: BFB	92.1	68.3-144	%Rec	1	11/17/2016 3:23:48 PM 2871	4
EPA METHOD 8021B: VOLATILES					Analyst: NSE	3
Benzene	ND	0.024	mg/Kg	1	11/17/2016 3:23:48 PM 2871	4
Toluene	ND	0.049	mg/Kg	1	11/17/2016 3:23:48 PM 2871	4
Ethylbenzene	ND	0.049	mg/Kg	1	11/17/2016 3:23:48 PM 2871	4
Xylenes, Total	ND	0.098	mg/Kg	1	11/17/2016 3:23:48 PM 2871	4
Surr: 4-Bromofluorobenzene	98.5	80-120	%Rec	1	11/17/2016 3:23:48 PM 2871	4

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 2 of 16
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Ana	lvtical	Report	

Lab Order 1611791

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN	Client Sample ID: CS-3							
Project: Lateral C-11 2013	Collection Date: 11/15/2016 12:05:00 PM							
Lab ID: 1611791-003	Matrix: S	SOIL	Received 1	Date: 11/	16/2016 8:00:00 AM	[
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Analys	st: JME		
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	11/17/2016 4:43:23 PI	M 28701		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/17/2016 4:43:23 PI	M 28701		
Surr: DNOP	91.5	70-130	%Rec	1	11/17/2016 4:43:23 PI	M 28701		

EPA METHOD 8015D: GASOLINE RAN	GE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/17/2016 3:48:12 PM	28714
Surr: BFB	93.0	68.3-144	%Rec	1	11/17/2016 3:48:12 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.024	mg/Kg	1	11/17/2016 3:48:12 PM	28714
Toluene	ND	0.048	mg/Kg	1	11/17/2016 3:48:12 PM	28714
Ethylbenzene	ND	0.048	mg/Kg	1	11/17/2016 3:48:12 PM	28714
Xylenes, Total	ND	0.096	mg/Kg	1	11/17/2016 3:48:12 PM	28714
Surr: 4-Bromofluorobenzene	102	80-120	%Rec	1	11/17/2016 3:48:12 PM	28714

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 16
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Lab Order 1611791

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

Analyses	Result	PQL	Qual Units	DF Date Analyzed	Batch			
Lab ID: 1611791-004	Matrix:	SOIL	Received	Date: 11/16/2016 8:00:00 Al	M			
Project: Lateral C-11 2013			Collection	Date: 11/15/2016 12:15:00 F	'M			
CLIENT: APEX TITAN		Client Sample ID: CS-4						

EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyse								
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	11/17/2016 3:21:56 PM 2870	1		
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/17/2016 3:21:56 PM 2870	1		
Surr: DNOP	99.5	70-130	%Rec	1	11/17/2016 3:21:56 PM 2870	1		
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/17/2016 5:49:49 PM 28714	4		
Surr: BFB	92.3	68.3-144	%Rec	1	11/17/2016 5:49:49 PM 28714	4		
EPA METHOD 8021B: VOLATILES					Analyst: NSB			
Benzene	ND	0.025	mg/Kg	1	11/17/2016 5:49:49 PM 28714	4		
Toluene	ND	0.049	mg/Kg	1	11/17/2016 5:49:49 PM 28714	4		
Ethylbenzene	ND	0.049	mg/Kg	1	11/17/2016 5:49:49 PM 28714	4		
Xylenes, Total	ND	0.098	mg/Kg	1	11/17/2016 5:49:49 PM 28714	4		
Surr: 4-Bromofluorobenzene	99.2	80-120	%Rec	1	11/17/2016 5:49:49 PM 28714	4		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 16
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1611791** Date Reported: **11/21/2016**

CLIENT: APEX TITAN			Client Sampl	e ID: CS	-5	
Project: Lateral C-11 2013			Collection	Date: 11/	/15/2016 12:25:00 PM	
Lab ID: 1611791-005	Matrix:	SOIL	Received	Date: 11/	/16/2016 8:00:00 AM	
Analyses	Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG		6			Analyst	JME
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	11/17/2016 1:49:41 PM	28701
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/17/2016 1:49:41 PM	28701
Surr: DNOP	90.7	70-130	%Rec	1	11/17/2016 1:49:41 PM	28701
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	11/17/2016 6:14:18 PM	28714
Surr: BFB	94.2	68.3-144	%Rec	1	11/17/2016 6:14:18 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.025	mg/Kg	1	11/17/2016 6:14:18 PM	28714
Toluene	ND	0.050	mg/Kg	1	11/17/2016 6:14:18 PM	28714
Ethylbenzene	ND	0.050	mg/Kg	1	11/17/2016 6:14:18 PM	28714
Xylenes, Total	ND	0.099	mg/Kg	1	11/17/2016 6:14:18 PM	28714
Surr: 4-Bromofluorobenzene	104	80-120	%Rec	1	11/17/2016 6:14:18 PM	28714

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

Qualifiers:

*

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded

Value exceeds Maximum Contaminant Level.

- 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 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order **1611791** Date Reported: **11/21/2016**

CLIENT:	APEX TITAN			Client Sampl	e ID: CS	-6	
Project:	Lateral C-11 2013			Collection	Date: 11/	15/2016 12:35:00 PM	
Lab ID:	1611791-006	Matrix: S	SOIL	Received I	Date: 11/	/16/2016 8:00:00 AM	
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	JME
Diesel Ra	ange Organics (DRO)	ND	10	mg/Kg	1	11/17/2016 2:11:53 PM	28701
Motor Oil	Range Organics (MRO)	ND	50	mg/Kg	1	11/17/2016 2:11:53 PM	28701
Surr: D	NOP	90.5	70-130	%Rec	1	11/17/2016 2:11:53 PM	28701
EPA MET	HOD 8015D: GASOLINE RA	ANGE				Analyst	NSB
Gasoline	Range Organics (GRO)	ND	4.7	mg/Kg	1	11/17/2016 6:38:42 PM	28714
Surr: B	FB	91.5	68.3-144	%Rec	1	11/17/2016 6:38:42 PM	28714
EPA MET	HOD 8021B: VOLATILES					Analyst	NSB
Benzene		ND	0.023	mg/Kg	1	11/17/2016 6:38:42 PM	28714
Toluene		ND	0.047	mg/Kg	1	11/17/2016 6:38:42 PM	28714
Ethylbenz	zene	ND	0.047	mg/Kg	1	11/17/2016 6:38:42 PM	28714
Xylenes,	Total	ND	0.093	mg/Kg	1	11/17/2016 6:38:42 PM	28714
Surr: 4	-Bromofluorobenzene	100	80-120	%Rec	1	11/17/2016 6:38:42 PM	28714
Curl. 4	DIGHTOHOOOHLOHO	100	00 120	101100			

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 16
	ND Not Detected at the Reporting Limit		Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

Lab Order 1611791 Date Reported: 11/21/2016

CLIENT: APEX TITAN	Client Sample ID: CS-7								
Project: Lateral C-11 2013	Collection Date: 11/15/2016 12:45:00 PM								
Lab ID: 1611791-007	Matrix:	Received	Received Date: 11/16/2016 8:00:00 AM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	JME			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/17/2016 2:37:56 PM	28701			
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	11/17/2016 2:37:56 PM	28701			
Surr: DNOP	84.8	70-130	%Rec	1	11/17/2016 2:37:56 PM	28701			
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/17/2016 7:03:06 PM	28714			
Surr: BFB	93.1	68.3-144	%Rec	1	11/17/2016 7:03:06 PM	28714			
EPA METHOD 8021B: VOLATILES					Analyst	NSB			
Benzene	ND	0.025	mg/Kg	1	11/17/2016 7:03:06 PM	28714			
Toluene	ND	0.049	mg/Kg	1	11/17/2016 7:03:06 PM	28714			
Ethylbenzene	ND	0.049	mg/Kg	1	11/17/2016 7:03:06 PM	28714			
Xylenes, Total	ND	0.098	mg/Kg	1	11/17/2016 7:03:06 PM	28714			
Surr: 4-Bromofluorobenzene	103	80-120	%Rec	1	11/17/2016 7:03:06 PM	28714			

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

Analytical Report Lab Order 1611791 Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

1

CLIENT: APEX TITAN	Client Sample ID: CS-8 Collection Date: 11/15/2016 12:55:00 PM							
Project: Lateral C-11 2013								
Lab ID: 1611791-008	Matrix:	Received 1	Received Date: 11/16/2016 8:00:00 AM					
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analyst	JME		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	11/17/2016 3:00:05 PM	28701		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/17/2016 3:00:05 PM	28701		
Surr: DNOP	84.6	70-130	%Rec	1	11/17/2016 3:00:05 PM	28701		
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/17/2016 7:27:29 PM	28714		
Surr: BFB	92.7	68.3-144	%Rec	1	11/17/2016 7:27:29 PM	28714		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	11/17/2016 7:27:29 PM	28714		
Toluene	ND	0.048	mg/Kg	1	11/17/2016 7:27:29 PM	28714		
Ethylbenzene	ND	0.048	mg/Kg	1	11/17/2016 7:27:29 PM	28714		
Xylenes, Total	ND	0.095	mg/Kg	1	11/17/2016 7:27:29 PM	28714		
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	11/17/2016 7:27:29 PM	28714		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 8 of 10
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/21/2016

CLIENT: APEX TITAN			Client Sampl	e ID: CS	-9	
Project: Lateral C-11 2013			Collection 1	Date: 11/	15/2016 1:05:00 PM	
Lab ID: 1611791-009	Matrix:	SOIL	Received 1	Date: 11/	/16/2016 8:00:00 AM	
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM		6			Analyst	JME
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	11/17/2016 3:22:21 PM	28701
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/17/2016 3:22:21 PM	28701
Surr: DNOP	87.8	70-130	%Rec	1	11/17/2016 3:22:21 PM	28701
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	11/17/2016 7:51:49 PM	28714
Surr: BFB	88.7	68.3-144	%Rec	1	11/17/2016 7:51:49 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.023	mg/Kg	1	11/17/2016 7:51:49 PM	28714
Toluene	ND	0.046	mg/Kg	1	11/17/2016 7:51:49 PM	28714
Ethylbenzene	ND	0.046	mg/Kg	1	11/17/2016 7:51:49 PM	28714
Xylenes, Total	ND	0.091	mg/Kg	1	11/17/2016 7:51:49 PM	28714
Surr: 4-Bromofluorobenzene	94.9	80-120	%Rec	1	11/17/2016 7:51:49 PM	28714

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 16
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Date Reported: 11/21/2016

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: CS-10							
Collection Date: 11/15/2016 1:15:00 PM							
Matrix:	Received	Received Date: 11/16/2016 8:00:00 AM					
Result	PQL Q	ual Units	DF	Date Analyzed	Batch		
IGE ORGANICS	5			Analyst	JME		
ND	9.6	mg/Kg	1	11/17/2016 3:44:23 PM	28701		
ND	48	mg/Kg	1	11/17/2016 3:44:23 PM	28701		
82.9	70-130	%Rec	1	11/17/2016 3:44:23 PM	28701		
NGE				Analyst	NSB		
ND	4.6	mg/Kg	1	11/17/2016 8:16:10 PM	28714		
91.1	68.3-144	%Rec	1	11/17/2016 8:16:10 PM	28714		
				Analyst	NSB		
ND	0.023	mg/Kg	1	11/17/2016 8:16:10 PM	28714		
ND	0.046	mg/Kg	1	11/17/2016 8:16:10 PM	28714		
ND	0.046	mg/Kg	1	11/17/2016 8:16:10 PM	28714		
ND	0.093	mg/Kg	1	11/17/2016 8:16:10 PM	28714		
97.9	80-120	%Rec	1	11/17/2016 8:16:10 PM	28714		
	Result NGE ORGANICS ND ND 82.9 NGE ND 91.1 ND ND ND ND ND	NGE ORGANICS ND 9.6 ND 48 82.9 70-130 NGE ND 4.6 91.1 68.3-144 ND 0.023 ND 0.046 ND 0.046 ND 0.093	Matrix: SOIL Collection Neceived Neceived <t< td=""><td>Matrix: SOIL Received Date: 11/ Matrix: SOIL Received Date: 11/ Result PQL Qual Units DF NGE ORGANICS ND 9.6 mg/Kg 1 ND 9.6 mg/Kg 1 ND 48 mg/Kg 1 ND 4.6 mg/Kg 1 NGE ND 4.6 mg/Kg 1 ND 0.023 mg/Kg 1 ND 0.023 mg/Kg 1 ND 0.046 mg/Kg 1 ND 0.046 mg/Kg 1 ND 0.093 mg/Kg 1</td><td>Matrix: SOIL Collection Date: 11/15/2016 1:15:00 PM Matrix: SOIL Received Date: 11/16/2016 8:00:00 AM Result PQL Qual Units DF Date Analyzed NGE ORGANICS Analyst: Analyst: Analyst: Analyst: ND 9.6 mg/Kg 1 11/17/2016 3:44:23 PM Analyst: ND 48 mg/Kg 1 11/17/2016 3:44:23 PM 82.9 70-130 %Rec 1 11/17/2016 3:44:23 PM NGE Analyst: Analyst: Analyst: ND 4.6 mg/Kg 1 11/17/2016 8:16:10 PM 91.1 68.3-144 %Rec 1 11/17/2016 8:16:10 PM 91.1 68.3-144 %Rec 1 11/17/2016 8:16:10 PM ND 0.023 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1<</td></t<>	Matrix: SOIL Received Date: 11/ Matrix: SOIL Received Date: 11/ Result PQL Qual Units DF NGE ORGANICS ND 9.6 mg/Kg 1 ND 9.6 mg/Kg 1 ND 48 mg/Kg 1 ND 4.6 mg/Kg 1 NGE ND 4.6 mg/Kg 1 ND 0.023 mg/Kg 1 ND 0.023 mg/Kg 1 ND 0.046 mg/Kg 1 ND 0.046 mg/Kg 1 ND 0.093 mg/Kg 1	Matrix: SOIL Collection Date: 11/15/2016 1:15:00 PM Matrix: SOIL Received Date: 11/16/2016 8:00:00 AM Result PQL Qual Units DF Date Analyzed NGE ORGANICS Analyst: Analyst: Analyst: Analyst: ND 9.6 mg/Kg 1 11/17/2016 3:44:23 PM Analyst: ND 48 mg/Kg 1 11/17/2016 3:44:23 PM 82.9 70-130 %Rec 1 11/17/2016 3:44:23 PM NGE Analyst: Analyst: Analyst: ND 4.6 mg/Kg 1 11/17/2016 8:16:10 PM 91.1 68.3-144 %Rec 1 11/17/2016 8:16:10 PM 91.1 68.3-144 %Rec 1 11/17/2016 8:16:10 PM ND 0.023 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1 11/17/2016 8:16:10 PM ND 0.046 mg/Kg 1<		

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

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
	D	

1

- 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 16
- 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.

Date Reported: 11/21/2016

CLIENT: APEX TITAN	Client Sample ID: CS-11							
Project: Lateral C-11 2013			Collection	Date: 11/	/15/2016 1:25:00 PM			
Lab ID: 1611791-011	Matrix:	SOIL	Received	Date: 11/	/16/2016 8:00:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	JME		
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	11/17/2016 4:06:37 PM	28701		
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	11/17/2016 4:06:37 PM	28701		
Surr: DNOP	86.6	70-130	%Rec	1	11/17/2016 4:06:37 PM	28701		
EPA METHOD 8015D: GASOLINE RAM	IGE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/17/2016 8:40:31 PM	28714		
Surr: BFB	88.9	68.3-144	%Rec	1	11/17/2016 8:40:31 PM	28714		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	11/17/2016 8:40:31 PM	28714		
Toluene	ND	0.048	mg/Kg	1	11/17/2016 8:40:31 PM	28714		
Ethylbenzene	ND	0.048	mg/Kg	1	11/17/2016 8:40:31 PM	28714		
Xylenes, Total	ND	0.096	mg/Kg	1	11/17/2016 8:40:31 PM	28714		
Surr: 4-Bromofluorobenzene	94.3	80-120	%Rec	1	11/17/2016 8:40:31 PM	28714		

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded J Analyte deter		Analyte detected below quantitation limits Page 11 of 16
	ND Not Detected at the Reporting Limit		Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/21/2016

CLIENT: APEX TITAN			Client Sampl	e ID: CS	-12		
Project: Lateral C-11 2013	Collection Date: 11/15/2016 1:35:00 PM						
Lab ID: 1611791-012	Matrix:	SOIL	Received	Date: 11/	16/2016 8:00:00 AM		
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 8015M/D: DIESEL RANG		S			Analyst	JME	
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/17/2016 4:28:42 PM	28701	
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	11/17/2016 4:28:42 PM	28701	
Surr: DNOP	86.2	70-130	%Rec	1	11/17/2016 4:28:42 PM	28701	
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	NSB	
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/17/2016 9:04:49 PM	28714	
Surr: BFB	93.1	68.3-144	%Rec	1	11/17/2016 9:04:49 PM	28714	
EPA METHOD 8021B: VOLATILES					Analyst	NSB	
Benzene	ND	0.024	mg/Kg	1	11/17/2016 9:04:49 PM	28714	
Toluene	ND	0.047	mg/Kg	1	11/17/2016 9:04:49 PM	28714	
Ethylbenzene	ND	0.047	mg/Kg	1	11/17/2016 9:04:49 PM	28714	
Xylenes, Total	ND	0.095	mg/Kg	1	11/17/2016 9:04:49 PM	28714	
Surr: 4-Bromofluorobenzene	99.9	80-120	%Rec	1	11/17/2016 9:04:49 PM	28714	

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В
	D	Sample Diluted Due to Matrix	E
	Н	Holding times for preparation or analysis exceeded	J
	ND	Not Detected at the Reporting Limit	Р
	R	RPD outside accepted recovery limits	RL

- S % Recovery outside of range due to dilution or matrix
- 3 Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 16
- 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.

Xylenes, Total

Surr: 4-Bromofluorobenzene

Date Reported: 11/21/2016

11/17/2016 9:29:09 PM 28714

11/17/2016 9:29:09 PM 28714

CLIENT: APEX TITAN Project: Lateral C-11 2013			Client Sampl		-13 /15/2016 1:45:00 PM	
j		0.011				
Lab ID: 1611791-013	Matrix:	SOIL	Received	Date: 11	/16/2016 8:00:00 AM	×.
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN		s			Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	11/17/2016 1:27:29 PM	28701
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	11/17/2016 1:27:29 PM	28701
Surr: DNOP	82.5	70-130	%Rec	1	11/17/2016 1:27:29 PM	28701
EPA METHOD 8015D: GASOLINE RAM	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/17/2016 9:29:09 PM	28714
Surr: BFB	92.5	68.3-144	%Rec	1	11/17/2016 9:29:09 PM	28714
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	11/17/2016 9:29:09 PM	28714
Toluene	ND	0.048	mg/Kg	1	11/17/2016 9:29:09 PM	28714
Ethylbenzene	ND	0.048	mg/Kg	1	11/17/2016 9:29:09 PM	28714

0.095

80-120

mg/Kg

%Rec

1

1

ND

101

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

- 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 16
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

APEX TITAN

Client:

WO#: 1611791 21-Nov-16

Hall Environmental Analysis Laboratory, Inc.

Project: Lateral C-11 2013 Sample ID MB-28701 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: PBS Batch ID: 28701 RunNo: 38768 Prep Date: 11/16/2016 Analysis Date: 11/17/2016 SeqNo: 1211355 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 8.9 10.00 89.1 70 130 Sample ID LCS-28701 TestCode: EPA Method 8015M/D: Diesel Range Organics SampType: LCS Client ID: LCSS Batch ID: 28701 RunNo: 38768 Analysis Date: 11/17/2016 SeqNo: 1211490 Units: mg/Kg Prep Date: 11/16/2016 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 42 10 50.00 0 83.8 62.6 124 Surr: DNOP 4.2 5.000 83.6 70 130

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1611791 21-Nov-16

Client: APEX T Project: Lateral C	TTAN C-11 2013									
Sample ID MB-28714	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch	ID: 28	714	F	RunNo: 3	8798				
Prep Date: 11/16/2016	Analysis D	ate: 11	1/17/2016	S	SeqNo: 1	212132	Units: mg/M	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	950		1000		94.6	68.3	144			
Sample ID LCS-28714	SampT	ype: LC	S	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch	ID: 28	714	R	RunNo: 3	8798				
Prep Date: 11/16/2016	Analysis D	ate: 11	1/17/2016	S	SeqNo: 1	212133	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.9	74.6	123			
Surr: BFB	1000		1000		102	68.3	144			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W
- Page 15 of 16

QC SUMM Hall Environ				ory, Inc.					WO#:	1611791 21-Nov-16
-	APEX TITAN Lateral C-11 2013									
Sample ID MB-2871	4 Samp	Туре: МІ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Bate	ch ID: 28	714	F	RunNo: 3	8798				
Prep Date: 11/16/2	016 Analysis	Date: 1	1/17/2016	S	SeqNo: 1	212159	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-Bromofluorobenz	ene 1.0		1.000		102	80	120			
Sample ID LCS-287	14 Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Bato	ch ID: 28	714	F	RunNo: 3	8798				
Prep Date: 11/16/2	016 Analysis	Date: 1	1/17/2016	S	SeqNo: 1	212160	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	75.2	115			
Toluene	1.1	0.050	1.000	0	110	80.7	112			

0

0

102

99.6

108

78.9

79.2

80

117

115

120

0.050

0.10

1.0

3.0

1.1

1.000

3.000

1.000

Qualifiers:

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н 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
- Value above quantitation range E
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL **Reporting Detection Limit**
- Sample container temperature is out of limit as specified W

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ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-3	ntal Analysis Laborato 4901 Hawkins I Albuquerque, NM 871 975 FAX: 505–345–41 v.hallenvironmental.co	NE 09 Sam 07	ple Log-In Ch	eck List
Client Name: APEX AZTEC Work Order Num	ber: 1611791		RcptNo:	1
	(p	AD		· · · · ·
Logged By: Ashley Gallegos 11/16/2016 8:00:00		Stof		
Completed By: Ashley Gallegos 11/16/2016 8:35:23 Reviewed By: ///////////////////////////////////	3 AM	A		
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			Υ.	
4. Was an attempt made to cool the samples?	Yes 🗹	No 🛄	NA []	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	NA []	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🔽	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes	No 🗹	NA	
10.VOA vials have zero headspace?	Yes	No 🗌	No VOA Vials 🖌	
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels?	Yes 🗹	No 🗌	for pH:	>12 unless noted)
(Note discrepancies on chain of custody) 13 Are matrices correctly identified on Chain of Custody?	Yes	No 🗌	Adjusted?	- 12 Unieaa noteu)
14. Is it clear what analyses were requested?	Yes 🖌	No []		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🖌	No 🗌	Checked by:	
Special Handling (if applicable)	Yes []]	No 🗀	NA M	
16. Was client notified of all discrepancies with this order?				
Person Notified: Dat				
By Whom: Via:	eMail Pl	hone [] Fax] in Person	
Regarding: Client Instructions:				

17. Additional remarks:

1

100

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes			

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Page 1 of 1

																					CH	AIN	OF	CL	JSTODY RECOR
-															ALYS		/	/	17	1	/	/	/	/1	Lab use only Due Date:
						Laborato	ry: 1	-lall						RE	QUES	STED	1-	/ /	/ /	/	/	/	/		Due Date:
AP	FX					Address:	-			Λ						/	LIVES	/	1.	/	/ /	/ /	/ /	/	
		n Ar	ste	CIN	M											/	5	/	/	/ /	/ /	/	/		Temp. of coolers when received (C°): (, 62
						Contact:	A	Fre	eme	in						/	d'	/		/	/	/	/	1	2 3 4 5
						Phone:											¥,		/	/	/	/	/	F	Pageof 2
Project	Manag	ger K.	Sur	mme	urs	PO/SO#										10	r /	/	/	/	/ /	/ /	1		
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					ral C-118	2013				11					2	1	/	/	/	/ /	/ /				
Matrix	Date	Time	CoEp	Grab	Identifying Ma	irks of Sample	Start Depth	End	VOA	AG 1LL	al 250	Glass	P/O			'/		/		/	/		Lab	Sam	nple ID (Lab Use Only)
5 11	115/16	1145			CS-	·]:						1		X	X							14	011	17	191-001
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Turn arou		O Non		02		3 50% Rush	100%			48	hr	Pu	54			_									
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Relinquis	hed by (Signature)			Date:	Time: Re	ceived by:	(Signa	ature)			Date		Т		1		Bill	to	Tor	nl	ar	4	P	Peod
Relinquis	hed by (Signature)	£ .				ceived by:				+	Date			ime:	-		No	n A	FE	N	217	20	\$	48 hr
/											-	Det				-				-					Rush
Relinquis	ned by (Signature)			Date:	Time: Re	ceived by:	(Signa	ature)			Date	::	1	ime:									I	Friday morninu
Matrix Container		V - Wastewat A - 40 ml via			W - Water A/G - Amber / C	S - Soil SD -				- Air Ba wide mo				rcoal to	ube or other		ludge		O - Oil					-	

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

				CHAIN OF CUSTODY RECORD
Rance Deechilly -	Laboratory: Hall Address: ABD Contact: A.Free Phone: PO/SO #: Signature Sampler's Signature MALL	man	ANALYSIS REQUESTED	Lab use only Due Date:
Luteral C-11			- / / /	
Pb	rks of Sample(s)	VOA 1 Lt. 1 Lt. 250 250 Jar Jar	2 / / / /	Lab Sample ID (Lab Use Only)
5 11/15/14 1325 CS-	-11	1	XX	1611791-001
1 1335 CS	-12		XX	-602
	-13		XX	-003
	->			
	TARS			
	50% Rush 100% Rush Time: Received by: (Signa O Image: Comparison of the second	48 hr Push ture) Date: 11/15/1	Time: NOTES	S:
Relinquished by (Signature) Date: Advante III/5/16 18	Time: Received by: 6 igna	ture) Date:	Time: 6 0800	Bill to Tom Long (EPPOD) Non AFE N21720 RUSh
Relinquished by (Signature) Date:	Time: Received by: (Signa	ture) Date:	Time:	Non APE N21720 Russ
Relinquished by (Signature) Date:	Time: Received by: (Signa	ture) Date:	Time:	Friday morning
Matrix WW - Wastewater W - Water Container VOA - 40 ml vial A/G - Amber / O	S - Soil SD - Solid L - Liquid r Glass 1 Liter 250 ml -		harcoal tube SL - slud Plastic or other	

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

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

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

i i		F	Releas	e Notifica	tior	n and C	orrective	Actio	on			
			2			ERATO		\boxtimes		Report 🔲 Final Report		
		Enterprise I					nomas Long/R		eale			
Address: 6	14 Reilly A	Ave, Farmin	igton, NN	87401		Telephone	No. 505-599-2	2286				
Facility Na	me: MB-1 8	8 Pipeline				Facility Typ	e: Natural Ga	s Gath	nering P	ipeline		
Surface Ov	wner: Priva	ate		Mineral Ov	vner:	BLM			API No	D. NA		
				LOCAJ	101	LOF REL	EASE					
Unit Letter F	Section 20	Township 31N	Range 8W	Feet from the	North	South	Feet from the	East/V Line	Vest	County San Juan		
				1612	LIIIO		1682					
			l of	ituda 20.000		Longitud	407 704055			OIL CONS. DIV DIST. 3		
			Lat	itude <u>36.8860</u>	80	Longitude	<u>-107.701957</u>			MAY 08 2017		
				NATU	RF		ASE			100 2017		
		al Gas and N		s Liquids		Volume of	Release: Unkr			Recovered: None		
Source of R	elease: Sus	spected inter	nal corros	ion			Hour of Occurre @ 1:10 a.m.	ence:		d Hour of Discovery: 7 @ 1:10 a.m.		
Was Immed	iate Notice							esy Noti				
Du Whom?	Was Immediate Notice Given? If YES, To Whom? Courtesy Notification: Vanessa Fields – NMOCI By Whom? Thomas Long Date and Hour May 1, 2017 @ 12:35 p.m.											
Was a Wate		ached?					blume Impacting					
			Yes	🖾 No								
		npacted, De										
										ase on the MB-18 pipeline. April 28, 2017 and		
Enterprise d	letermined	this release i	s reportab	le per NMOCD r	regula	ation on May	1, 2017, due to	the vol	ume of si	ubsurface impacts.		
				aken.* Repairs a A third party co						ise will remove the al." C-141.		
										nd that pursuant to NMOCD		
										rective actions for releases ed as "Final Report" does not		
relieve the c	perator of I	iability shoul	d their ope	erations have fail	led to	adequately	investigate and	remedi	ate conta	mination that pose a threat to port does not relieve the		
operator of	responsibili	for complia	ance with a	any other federa	l, stat	e, or local la	ws and/or regul	lations.				
	()	61	1				OIL CON	SERV	ATION	DIVISION		
Signature:	M	1. Au	M					_	1	(2)		
Printed Nam	ne: Jon E. F	ields				Approved by	/ Environmental	Specia	list:			
Title: Directo	or, Environn	nental				Approval Da	te:5/11/20	JT E	Expiration	Date:		
E-mail Addr	ess:jefields	@eprod.com	1		-	Conditions of	of Approval:	ÚCH	F	Attached		
Date: 5/			Phon	e: (713)381-668	4	NVET	11315179	23				
* Attach Addi	tional She	ets If Neces	ssary		S	200 010	Aroc S	2015	80	21 MRO Range 3		
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			U	Ann	nila	1-) -	-nOu	LOK	and the second		
				1 Jobe	200					3		

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 51311 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number ______ has been assigned. Please refer to this case number in all future correspondence. NVFIII3V5II92

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District III office in 30 days_ on or before (a). If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

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• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

1000 Rio Braz <u>District IV</u> 1220 S. St. Fra				1220 \$	South	vation Di St. Fran e, NM 87	cis Dr.		in acc	ordance with 1	9.15.2	9 NMAC.
Ber		F	Releas	e Notifica	atio	n and C	orrective	Acti	on			
					OF	PERATO	R	Ď	Initial	Report] Fir	nal Report
Name of C	company:	Enterprise I	Field Ser	vices LLC			homas Long/F	Runell				
Address: 6	14 Reilly A	Ave, Farmin	gton, NN	87401		Telephone	No. 505-599-	2286/5	505-599-2	2124		
Facility Na	me: Gorde	on #3				Facility Typ	be: Natural G	as Gat	hering P	Pipeline		'41
Surface O	wner: BLN	1		Mineral O	wner:	BLM			API N	o. NA		011-
2.5				LOCA			EASE				<u>11</u>	SIL MAC.
Unit Letter P	Section 23	Township 27N	Range 10W	Feet from the 767		South	Feet from the 953	East	Vest	County San Juan	-	P
			Lati	tude 36,555	5580	Longitud	le -107.85930)6	8			
1.1												oport
N				NAT	URE	OF RELI	EASE					 Protocol and a statement
		al Gas and N					f Release: Unk			Recovered: No		
Source of R	elease: Sus	spected inter	nal corros	on			Hour of Occurr @ 3:00 p.m.	ence:		d Hour of Disco 17 @ 3:00 p.m		41
Was Immed	liate Notice		_			If YES, To	Whom? Court	esy Not				IOCD Contraction
25		Yes	s 🗌 No	🛛 Not Req	uired		homas-BLM				-1	fice
By Whom? Was a Wate							Hour April 6, 20 plume Impacting					
Describe Ca during. Enter remediation	ause of Prob erprise techr are current	nician verified	medial Act the leak s and Ente	tion: On March and the pipelin	e was	isolated, de	ise responded t pressurized, loo se is reportable	cked our	t and tagg	ed out. Repairs	s and	: eport
<u> </u>												
							are currently in port will be inclu				the	1. <u>2.1</u> 3477
rules and re which may e relieve the c ground wate	gulations al endanger pu operator of li er, surface v	ll operators a ublic health o iability should vater, human	re require r the envir d their ope health or	d to report and onment. The a rations have fa the environme	/or file accept ailed to nt. In	certain relea ance of a C- adequately addition, NM	t of my knowled ase notifications 141 report by the investigate and AOCD acceptant aws and/or regu	s and per he NMC d remed nce of a llations.	erform cor OCD mark liate conta C-141 rej	rective actions ed as "Final Re mination that p port does not re	for rel port" ose a	does not threat to
10	(14 1	1.				OIL CON	SER\		DIVISION		- <u>C</u>
Signature:	m	1. tu				Approved by	/ Environmenta	I Specia	alist:	\mathcal{P}		- He
Printed Nam	ne: Jon E. F	ields				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				all		and the second
Title: Directo	or, Environn	nental				Approval Da	te: 412413	M	Expiration	Date:		
E-mail Addr	ess:jefields(@eprod.com					of Approval:⊶		-	Attached	Ż	in the second
Date: 41	18/2017	,		e: (713)381-66			CONS. DIV I			V	2	0.2 -36 ()
Attach Addi	tional She	ets If Neces	sary				APR 1 4 20)17-	2044			ne nt to
Re-					1	NEV	711435	58	33			3

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _04/14/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number nVF1711435283 has been assigned. Please refer to this case number in all future correspondence.

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