3R-1012

Release Report/ General Correspondence

Enterprise RA

Date: Oct-Dec 2015

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

OCT 0 2 2015

OIL CONS. DIV DIST. 3

Form C-141 Revised August 8, 2011

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

Santa Fe NM 87505

Oil Conservation Division 1220 South St. Francis Dr.

			keleas	e Notific	catio	n and C	orrective	ACU	on				
					0	PERATO	R		Initial	Report		Final Rep	
Name of C	ompany:	Enterprise I	Field Ser	vices LLC			homas Long						
Address: 6	14 Reilly A	ve, Farmin	gton, NN	87401			No. 505-599						
Facility Na	me: Latera	al 2C-56				Facility Type: Natural Gas Gathering Pipeline							
Surface Ov	wner: Jica	rilla Apach	e Tribe	Mineral	Owne	r: Jicarilla /	Apache Tribe)	API N	0.			
				LOC	ATIO	N OF RE	LEASE						
Unit Letter	Section	Township	Range	Feet from	_	rth/South	Feet from	East	Vest	County			
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						OF REL		_				•	
Type of Rela	ease: Natur	al Gas and N	Natural Ga		OIL		Release Unkno	wn	Volume	Recovere	d: Non	e c	
	Type of Release: Natural Gas and Natural Gas Liquids Source of Release: Suspected Internal Corrosion						our of Occurre			d Hour of			
						9/21/15 @	12:15 p.m.		9/21/15	@ 1:00 a.	.m.		
Was Immed	iate Notice					If YES, To \	Whom? Hobso	Sando	val – JAE	PO; Cory	Smith -	NMOCD	
D		Ye	s 🗌 No	Not									
Required													
By Whom?							ime 9/21/15 3:0						
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District I 1625 N. French Dr., Hobbs, NM 88240 District II

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Flobbs, 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

Release Notification and Corrective Action

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

					OP	ERATO	R] Initial	Report			
		Enterprise f					homas Long						
		Ave, Farmin	gton, NN	87401		Telephone No. 505-599-2286 Facility Type: Natural Gas Gathering Pipeline							
Facility Na	me: Later	al 2C-143				Facility Ty	pe: Natural G	as Gat	hering I	Pipeline			
Surface O	wner: Jica	rilla Apach	e Tribe	Mineral (Owner:	Jicarilla	Apache Tribe)	APIN	lo.			
	ands.			LOCA	ATION	OF RE	LEASE						
Unit Letter G	Section 31	Township 24N	Range 4W	Feet from the	North Line	n/South	Feet from the	East	West	County Rio Arriba			
	P		Li	atitude 36.2	66286	_Longitu	ude 107.2929	940					
L sa kha					URE	OF REL							
Type of Rel	ease: Natur	ral Gas and N	Natural Ga	s Liquids			of Release: 451 BBLs Natural		Volume	Recovered: None			
Source of F	Source of Release: Internal corrosion						Hour of Occur 5 @ 11:25 p.m			nd Hour of Discovery: 115 @ 5:00 p.m.			
Was Immed	diate Notice		s 🗌 No	Not Red	quired		o Whom? Cou Sandoval - JA		tification t	o Cory Smith - NMOCD;			
By Whom?	Thomas Lo	ong					Hour 6/12/20						
Was a Wate				⊠ No		If YES, V	olume Impaction	ng the W	atercours	se			
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Signature:	Jo.	Pu	elds						1	1			
Printed Nar	ne: Jon E. F	Fields			- 4	Approved I	y Environment	al Speci	alist	browley			
Title: Direct	or, Environ	mental				Approval D	ate:		Expiratio	n Date:			
E-mail Add	ress:jefields	@eprod.com	1			Conditions	of Approval:			Attached			
Date: Attach Add	itional She	20/5 eets If Neces		ne: (713)381-6	684	() <	158952	180					

Lateral 2C-143 Pipeline Release Report

Unit Letter L, Sec 31, Township 24 North, Range 4 West Rio Arriba County, New Mexico

September 1, 2015

Prepared for: Enterprise Field Services, LLC 614 Reilly Avenue Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401



Enterprise Field Services, LLC Lateral 2C-143 Pipeline Release Report

Prepared for:

Enterprise Field Services, LLC 614 Reilly Avenue Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC 501 Airport Drive, Suite 205 Farmington, New Mexico 87401

Heather M. Woods
Heather M. Woods, P.G., Area Manager

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

September 1, 2015

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Appendix B Photograph Log

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1.0 Introduction

The Enterprise Field Services, LLC (Enterprise) Lateral 2C-143 pipeline release site is located in Unit Letter L, Section 31, Township 24 North, Range 4 West, in Rio Arriba County, New Mexico. The release resulted from a corrosion hole in the pipeline discovered on June 12, 2015, by Enterprise personnel.

On July 6, 2015, Enterprise initiated repair activities at the location. The release consisted of an unknown quantity of natural gas and condensate. Site work included replacement of the segment of compromised pipeline with new pipe and excavation of hydrocarbon impacted soils.

A topographic map of the location is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name: Lateral 2C-143 Pipeline Release

Location: Unit Letter L, Section 31, Township 24 North, Range 4 West Release Latitude/Longitude: N36.26186 and W107.30438, respectively

Land Jurisdiction: Jicarilla Apache Nation Date Release Discovered: June 12, 2015

Agency Notification: New Mexico Oil Conservation Division (NMOCD) and Jicarilla

Apache Nation Environmental Protection Office (JANEPO)

Diameter of Pipeline: 6-inch Source of Release: Corrosion hole

Release Contents: Natural gas and condensate

Release Volume: Unknown NMOCD Site Ranking: 10

Contractor(s): West States Energy Contractors, Inc. (West States)

Disposal Facility: T-n-T Land Farm (Permit #NM-01-0008)

Volume of Soil Transported for Disposal/Remediation: 240 cubic yards

3.0 JANEPO/NMOCD Site Ranking

The release site is located on the Jicarilla Apache Nation under the jurisdiction of JANEPO. Based on JANEPO recommendations, remediation of soils releases sites are assigned a default site rank of 20 in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993). Based on the ranking score of 20, action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).



Depth to groundwater at the site is estimated to be between 50 and 100 feet below grade surface (bgs). An unnamed wash is located approximately 50 north of the release location. A review was completed of the New Mexico Office of the State Engineer online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 foot radius of the location.

4.0 Field Activity

On July 6, 2015, Enterprise, West States, and Rule Engineering, LLC (Rule) personnel were onsite for the initiation of pipeline repair activities. West States provided heavy equipment operation and pipeline repair support. Rule personnel provided excavation guidance and collected confirmation samples from the resultant excavation. The repair included the replacement of the segment of compromised pipeline with new pipe. Approximately 240 cubic yards of hydrocarbon impacted soils were removed from an area of excavation measuring approximately 44 feet x 12 feet x 7 feet in depth.

A depiction of the excavation with sample locations and summary of analytical results is included as Figure 3. A copy of the executed C-138 Solid Waste Acceptance Form is included in Appendix A and a photograph log is included in Appendix B.

5.0 Soil Sampling

Rule collected confirmation soil samples from the sidewalls and base of the excavation. Soil samples SC-1 through SC-8 were collected on July 7 and 8, 2015. Each confirmation soil sample is a representative composite of material collected from separate locations within the sample area.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B and TPH (GRO/DRO) per USEPA 8015D. Laboratory analytical results are summarized in Table 1, and the analytical laboratory report is included in Appendix C.

A portion of each samples was also field screened for volatile organic compounds (VOCs). Field screening for VOC vapors was conducted with a photoionization detector (PID). Before beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field screening results are summarized in Table 1.

6.0 Laboratory Analytical Results

Laboratory analytical results for confirmation samples SC-1 through SC-8 reported benzene concentrations below the laboratory reporting limits, which are below the

Rule

JANEPO action level of 10 mg/kg. Total BTEX concentrations for confirmation samples SC-1 through SC-8 ranged from below the laboratory reporting limits to 0.34 mg/kg, which are below the JANEPO action level of 50 mg/kg. Total TPH (GRO/DRO) concentrations for confirmation samples SC-1 through SC-8 ranged from below laboratory reporting limits to 79 mg/kg, which are below the JANEPO action level of 100 mg/kg. Laboratory analytical results are summarized in Table 1.

7.0 Conclusions

The Enterprise Lateral 2C-143 pipeline release site is located in Unit Letter L, Section 31, Township 24 North, Range 4 West, in Rio Arriba County, New Mexico, on the Jicarilla Apache Nation. The release resulted from a corrosion hole in the pipeline discovered on June 12, 2015, by Enterprise personnel. Subsequent to pipeline repair, approximately 240 cubic yards of hydrocarbon impacted soils were excavated and transported to the T-n-T Landfarm. Confirmation samples were collected from the sidewalls and base of the resultant excavation which measured approximately 44 feet x 12 feet x 7 feet in depth. Laboratory analytical results for the soil confirmation samples (SC-1 through SC-8) reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below JANEPO action levels.

Based on laboratory analytical results of the confirmation soil samples, no further work is recommended.

8.0 Closure and Limitations

This report has been prepared for the exclusive use of Enterprise and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Enterprise. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.



Table

Table 1. Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH Enterprise Field Services, LLC Lateral 2C-143 Pipeline Release Rio Arriba County, New Mexico

Sample Name	Date	Location	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
A STATE OF THE STA	JANEPO Action Leve		PO Action Level*	100	10	NE	NE	NE	50	100**	
SC-1	7/8/2015	North Wall (west)	1 to 7	4.9	<0.049	<0.049	<0.049	<0.098	ND	<4.9	<9.8
SC-2	7/7/2015	South Wall (west)	1 to 7	3.00	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.9
SC-3	7/7/2015	East Wall	1 to 7	2.6	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<10
SC-4	7/7/2015	West Wall	1 to 7	5.2	< 0.050	< 0.050	<0.050	<0.10	ND	7.0	<9.7
SC-5	7/7/2015	Base (west)	7	70.0	<0.049	<0.049	<0.049	0.34	0.34	14	65
SC-6	7/7/2015	North Wall (east)	1 to 7	1.6	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.8
SC-7	7/8/2015	South Wall (east)	1 to 7	5.6	<0.049	< 0.049	<0.049	<0.098	ND	<4.9	<9.8
SC-8	7/8/2015	Base (east)	7	4.0	< 0.048	<0.048	<0.048	< 0.096	ND	<4.8	<9.7

Notes: VOCs - volatile organic compounds

PID - photoionization detector

ft bgs - feet below grade surface

ppm - parts per million

mg/kg - milligrams/kilogram

NE - not-established

ND - not-detected above laboratory reporting limits

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

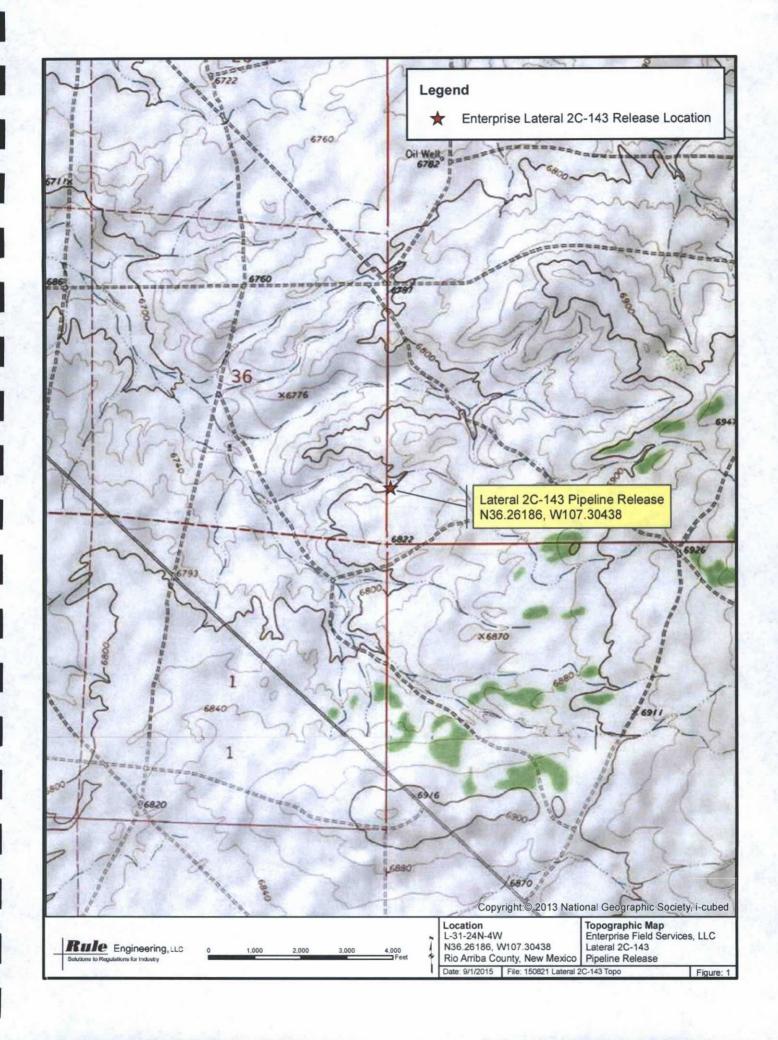
JANEPO - Jicarilla Apache Nation Environmental Protection Office

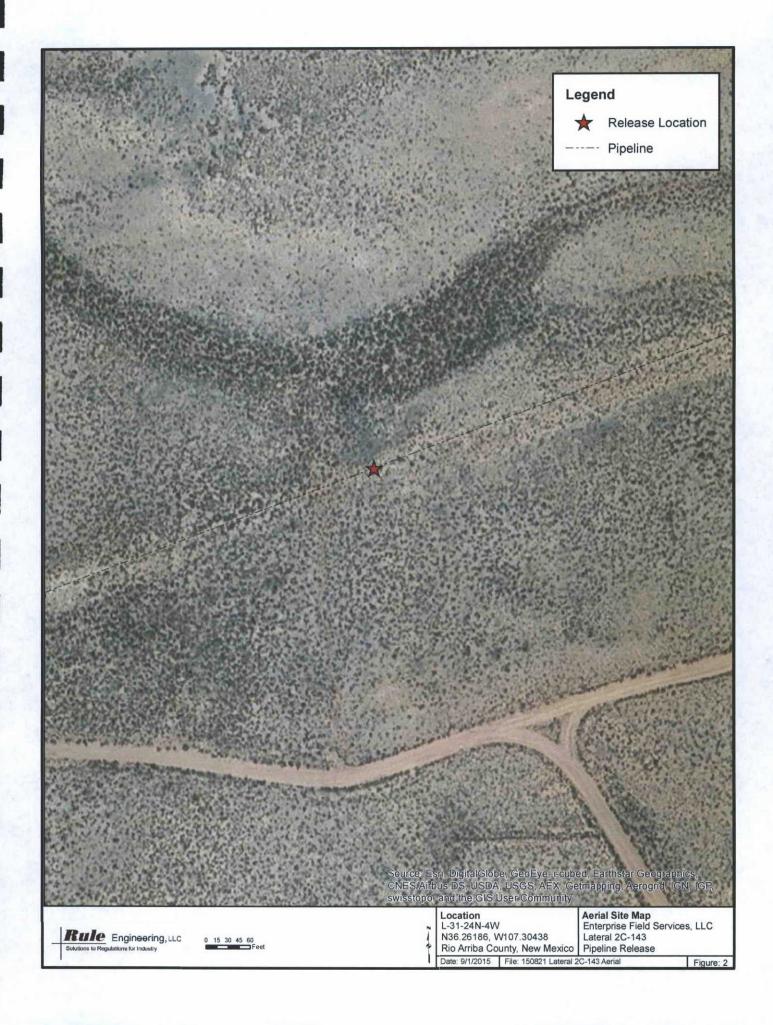
*Based on the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

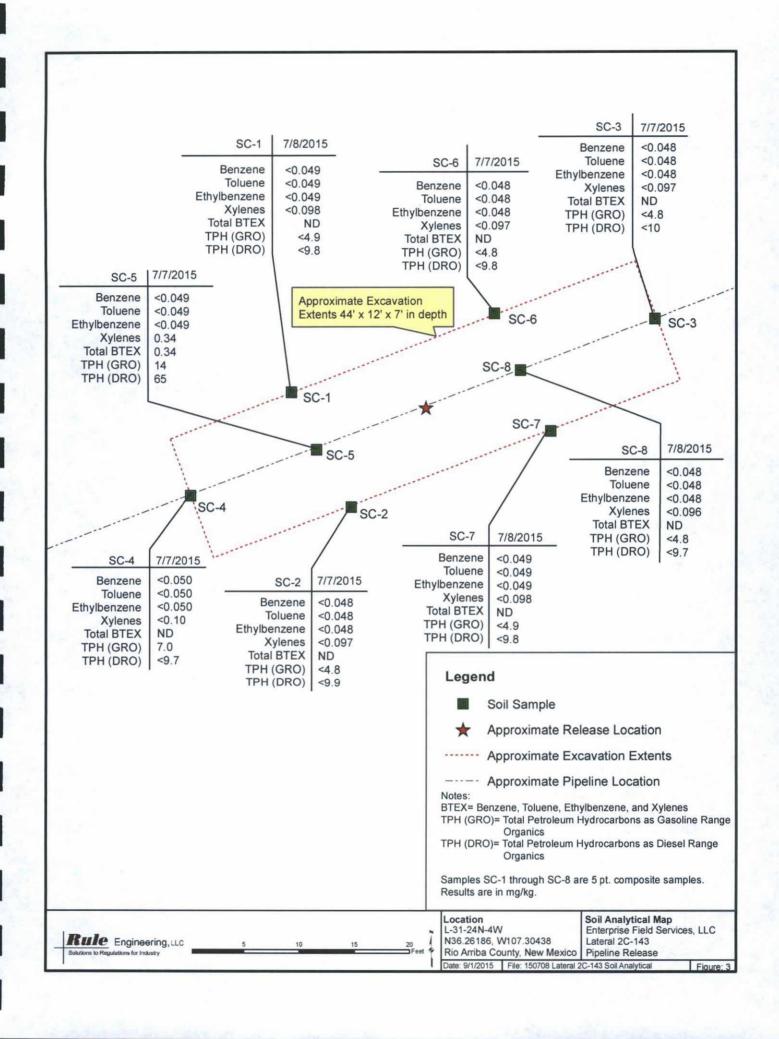
**Based on a site ranking of 20.

Figures









Appendix A

Executed C-138 Solid Waste Acceptance Form



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

State of New Mexico Energy Minerals and Natural Resources

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

Form C-138

Revised August 1, 2011

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

	itor Name and Address: ise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
	ating Site: al 2C-143 Pipeline
	on of Material (Street Address, City, State or ULSTR): .etter G Section 31 Township 24 North Range 4 West; 36.266286, -107.29240.
	ted Volume50yd³ bbls Known Volume (to be entered by the operator at the end of the haul)Q_Yoyd/ bbls
5.	GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas	Long representative or authorized agent for Enterprise Field Services, LLC do hereby
certify that	according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 determination, the above described waste is: (Check the appropriate classification)
	CRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-twaste. Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load
charac subpar	CRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by teristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, t D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check propriate items)
☐ MSDS	Information
	GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I, Generator Si	7-6-15 , representative for <u>Enterprise Field Services</u> , <u>LLC</u> authorize TNT Land Farm. to
	he required testing/sign the Generator Waste Testing Certification.
are attache	ste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform fic requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples d to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Trans	porter: West States Energy Contractor
Address of Fac	ility Permit #: TNT Evap Pond/Landfarm, NM01-0008 ility: 70 CR 405, Lindrith NM atment and/or Disposal:
	□ Evaporation □ Injection □ Treating Plant □ Landfarm □ Landfill □ Other
v aste Acce	ptance Status: APPROVED DENIED (Must Be Maintained As Permanent Record)
PRINT NAM	IE: Crang Schutz TITLE: Dr.s. DATE: 7-10-15
SIGNATUR	E: TELEPHONE NO.: 505-920-2737 505-320-3430 Surface Waste Management Facility Authorized Agent

Appendix B Photograph Log



Photograph Log Lateral 2C-143 Pipeline Release Enterprise Field Services, LLC

Photograph #1

Client: Enterprise

Site Name:

Lateral 2C-143 Pipeline Release

Date Photo Taken: July 8, 2015

Release Location: N36.26186, W107.30438

L-31-24N-4W Rio Arriba County, NM

Photo Taken by: Deborah Watson



Description: Facing E, view of final excavation and repaired pipeline.

Photograph #2

Client: Enterprise

Site Name:

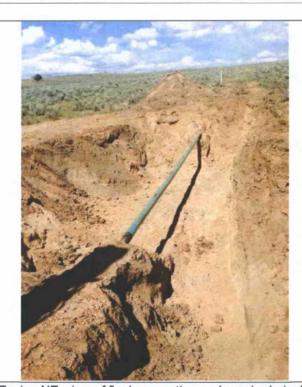
Lateral 2C-143 Pipeline Release

Date Photo Taken: July 8, 2015

Release Location: N36.26186, W107.30438

L-31-24N-4W Rio Arriba County, NM

Photo Taken by: Deborah Watson



Description: Facing NE, view of final excavation and repaired pipeline

Appendix C Analytical Laboratory Report





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

July 13, 2015

Deborah Watson Rule Engineering LLC 501 Airport Dr., Ste 205 Farmington, NM 87401 TEL: (505) 860-2712

FAX

RE: Lateral 2C-143 OrderNo.: 1507338

Dear Deborah Watson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 7/9/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Lateral 2C-143

Lab ID: 1507338-001

Client Sample ID: SC-1

Collection Date: 7/8/2015 9:45:00 AM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s			Analyst	KJH
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/10/2015 7:46:33 PM	20177
Surr: DNOP	116	57.9-140	%REC	1	7/10/2015 7:46:33 PM	20177
EPA METHOD 8015D: GASOLINE RA	ANGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/10/2015 3:16:01 PM	20173
Surr: BFB	91.9	75.4-113	%REC	1	7/10/2015 3:16:01 PM	20173
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.049	mg/Kg	1	7/10/2015 3:16:01 PM	20173
Toluene	ND	0.049	mg/Kg	1	7/10/2015 3:16:01 PM	20173
Ethylbenzene	ND	0.049	mg/Kg	1	7/10/2015 3:16:01 PM	20173
Xylenes, Total	ND	0.098	mg/Kg	1	7/10/2015 3:16:01 PM	20173
Surr: 4-Bromofluorobenzene	98.9	80-120	%REC	1	7/10/2015 3:16:01 PM	20173

Matrix: SOIL

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: Lateral 2C-143

Collection Date: 7/7/2015 4:50:00 PM

Lab ID: 1507338-002

Matrix: SOIL

Received Date: 7/9/2015 7:00:00 AM

nalyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
PA METHOD 8015M/D: DIESEL RANGE	ORGANIC	s			Analyst:	КЈН
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/10/2015 8:51:14 PM	20177
Surr: DNOP	109	57.9-140	%REC	1	7/10/2015 8:51:14 PM	20177
PA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/10/2015 10:27:12 PM	20173
Surr: BFB	103	75.4-113	%REC	1	7/10/2015 10:27:12 PM	20173
PA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.048	mg/Kg	1	7/10/2015 10:27:12 PM	20173
Toluene	ND	0.048	mg/Kg	1	7/10/2015 10:27:12 PM	20173
Ethylbenzene	ND	0.048	mg/Kg	1	7/10/2015 10:27:12 PM	20173
Xylenes, Total	ND	0.097	mg/Kg	1	7/10/2015 10:27:12 PM	20173
Surr: 4-Bromofluorobenzene	99.3	80-120	%REC	1	7/10/2015 10:27:12 PM	20173

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Lateral 2C-143

Lab ID: 1507338-003

Client Sample ID: SC-3

Collection Date: 7/7/2015 4:55:00 PM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	s			Analyst	КЈН
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/10/2015 9:12:54 PM	20177
Surr: DNOP	107	57.9-140	%REC	1	7/10/2015 9:12:54 PM	20177
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/10/2015 10:55:54 PM	20173
Surr: BFB	96.1	75.4-113	%REC	1	7/10/2015 10:55:54 PM	20173
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.048	mg/Kg	1	7/10/2015 10:55:54 PM	20173
Toluene	ND	0.048	mg/Kg	1	7/10/2015 10:55:54 PM	20173
Ethylbenzene	ND	0.048	mg/Kg	1	7/10/2015 10:55:54 PM	20173
Xylenes, Total	ND	0.097	mg/Kg	1	7/10/2015 10:55:54 PM	20173
Surr: 4-Bromofluorobenzene	97.6	80-120	%REC	1	7/10/2015 10:55:54 PM	20173

Matrix: SOIL

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

oject: Lateral 2C-143

Lab ID: 1507

1507338-004

Client Sample ID: SC-4

Collection Date: 7/7/2015 5:00:00 PM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/10/2015 9:34:27 PM	20177
Surr: DNOP	109	57.9-140	%REC	1	7/10/2015 9:34:27 PM	20177
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	7.0	5.0	mg/Kg	1	7/10/2015 11:24:34 PM	20173
Surr: BFB	108	75.4-113	%REC	1	7/10/2015 11:24:34 PM	20173
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	7/10/2015 11:24:34 PM	20173
Toluene	ND	0.050	mg/Kg	1	7/10/2015 11:24:34 PM	20173
Ethylbenzene	ND	0.050	mg/Kg	1	7/10/2015 11:24:34 PM	20173
Xylenes, Total	ND	0.10	mg/Kg	1	7/10/2015 11:24:34 PM	20173
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	7/10/2015 11:24:34 PM	20173

Matrix: SOIL

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 4 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Lateral 2C-143

Lab ID: 1507338-005

Client Sample ID: SC-5

Collection Date: 7/7/2015 5:05:00 PM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S				Analyst	KJH
Diesel Range Organics (DRO)	65	9.9		mg/Kg	1	7/10/2015 9:56:03 PM	20177
Surr: DNOP	109	57.9-140		%REC	1	7/10/2015 9:56:03 PM	20177
EPA METHOD 8015D: GASOLINE R	ANGE					Analyst	NSB
Gasoline Range Organics (GRO)	14	4.9		mg/Kg	1	7/10/2015 11:53:12 PM	20173
Surr: BFB	116	75.4-113	S	%REC	1	7/10/2015 11:53:12 PM	20173
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.049		mg/Kg	1	7/10/2015 11:53:12 PM	20173
Toluene	ND	0.049		mg/Kg	1	7/10/2015 11:53:12 PM	20173
Ethylbenzene	ND	0.049		mg/Kg	1	7/10/2015 11:53:12 PM	20173
Xylenes, Total	0.34	0.097		mg/Kg	1	7/10/2015 11:53:12 PM	20173
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	7/10/2015 11:53:12 PM	20173

Matrix: SOIL

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-6

Project: Lateral 2C-143

Lab ID:

Collection Date: 7/7/2015 5:08:00 PM Received Date: 7/9/2015 7:00:00 AM

1507338-006 Matrix: SOIL

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Lateral 2C-143

Lab ID: 1507338-007

Matrix: SOIL

Client Sample ID: SC-7

Collection Date: 7/8/2015 9:50:00 AM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL	Qual U	Inits	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Hall	Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/10/2015 10:39:11 PM	20177
Surr: DNOP	120	57.9-140	C	%REC	1	7/10/2015 10:39:11 PM	20177
EPA METHOD 8015D: GASOLINE RAN	IGE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	r	mg/Kg	1	7/11/2015 12:50:40 AM	20173
Surr: BFB	91.8	75.4-113	(%REC	1	7/11/2015 12:50:40 AM	20173
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.049	r	mg/Kg	1	7/11/2015 12:50:40 AM	20173
Toluene	ND	0.049	ı	mg/Kg	1	7/11/2015 12:50:40 AM	20173
Ethylbenzene	ND	0.049	r	mg/Kg	1	7/11/2015 12:50:40 AM	20173
Xylenes, Total	ND	0.098	ı	mg/Kg	1	7/11/2015 12:50:40 AM	20173
Surr: 4-Bromofluorobenzene	98.6	80-120		%REC	1	7/11/2015 12:50:40 AM	20173

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

Qualifiers:

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

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

Lab Order 1507338

Date Reported: 7/13/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Lateral 2C-143

Lab ID: 1507338-008

Client Sample ID: SC-8

Collection Date: 7/8/2015 10:20:00 AM

Received Date: 7/9/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	7/10/2015 11:00:38 PM	20177
Surr: DNOP	114	57.9-140	%REC	1	7/10/2015 11:00:38 PM	20177
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/11/2015 1:19:23 AM	20173
Surr: BFB	91.8	75.4-113	%REC	1	7/11/2015 1:19:23 AM	20173
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.048	mg/Kg	1	7/11/2015 1:19:23 AM	20173
Toluene	ND	0.048	mg/Kg	1	7/11/2015 1:19:23 AM	20173
Ethylbenzene	ND	0.048	mg/Kg	1	7/11/2015 1:19:23 AM	20173
Xylenes, Total	ND	0.096	mg/Kg	1	7/11/2015 1:19:23 AM	20173
Surr: 4-Bromofluorobenzene	98.1	80-120	%REC	1	7/11/2015 1:19:23 AM	20173

Matrix: SOIL

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

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1507338

13-Jul-15

Client:

Rule Engineering LLC

Sample ID	MB-20177	SampT	ype: M	BLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	1 10
Client ID:	PBS	200	ID: 20			RunNo: 2				3	
Prep Date:	7/9/2015	Analysis D	ate: 7	/10/2015		SeqNo: 8		Units: mg/k	(a		
Analyte		Result	PQL		SPK Ref Val			HighLimit	%RPD	RPDLimit	Qual
	Organics (DRO)	ND	10	Of It value	OF IN INCI VAL	MILLO	LOWLITTIC	riigriciiiit	7011111	Krbeiliit	Quai
Surr: DNOP		11		10.00		112	57.9	140			
Sample ID	LCS-20177	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	LCSS	Batch	ID: 20	177	F	RunNo: 2	7406				
Prep Date:	7/9/2015	Analysis D	ate: 7	/10/2015	5	SeqNo: 8	22309	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	53	10	50.00	0	106	57.4	139			
Surr: DNOP		4.6		5.000		92.2	57.9	140			
Sample ID	LCS-20189	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	sel Rang	e Organics	
Client ID:	LCSS	Batch	ID: 20	189	F	RunNo: 2	7406				
Prep Date:	7/9/2015	Analysis D	ate: 7	10/2015	5	SeqNo: 8	22697	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.6		5.000		113	57.9	140			
Sample ID	1507338-001AMS	SampT	ype: M	3	Tes	tCode: E	PA Method	8015M/D: Die	sel Range	e Organics	
Client ID:	SC-1	Batch	ID: 20	177	F	RunNo: 2	7406				
Prep Date:	7/9/2015	Analysis D	ate: 7	10/2015	S	SeqNo: 8	22703	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	48	9.9	49.36	0	98.2	42.3	146			
Surr: DNOP		4.8		4.936		97.9	57.9	140			
Sample ID	1507338-001AMS	SampT	ype: MS	SD	Tes	tCode: E	PA Method	8015M/D: Die	sel Range	e Organics	
SC 201				4			7400				
Client ID:	SC-1	Batch	ID: 20	177	1	RunNo: 2	7406				

SPK value SPK Ref Val %REC

0

48.08

4.808

Qualifiers:

Analyte

Surr: DNOP

Diesel Range Organics (DRO)

Value exceeds Maximum Contaminant Level.

Result

51

5.0

PQL

9.6

- E Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank B
- Holding times for preparation or analysis exceeded H

LowLimit

42.3

57.9

HighLimit

146

140

%RPD

4.70

RPDLimit

28.9

Qual

Not Detected at the Reporting Limit

106

104

- Sample pH Not In Range
- Reporting Detection Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507338 13-Jul-15

Client:

Rule Engineering LLC

Sample ID MB-20173	SampType: I	MBLK	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: PBS	Batch ID:	20173	F	RunNo: 2	7422				
Prep Date: 7/9/2015	Analysis Date:	7/10/2015	5	SeqNo: 8	22735	Units: mg/k	Kg		
Analyte	Result PQI		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.	0 1000		89.3	75.4	113			
Sample ID LCS-20173	SampType: I	cs	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LCSS	Batch ID:	20173	F	RunNo: 2	7422				
Prep Date: 7/9/2015	Analysis Date:	7/10/2015		SeqNo: 8	22736	Units: mg/k	Kg		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	24 5. 960	0 25.00 1000	0	94.2 95.9	64 75.4	130 113			
Sample ID 1507338-001AN	IS SampType: I	MS	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	e	
Client ID: SC-1	Batch ID:	20173	F	RunNo: 2	7422				
Prep Date: 7/9/2015	Analysis Date:	7/10/2015	5	SeqNo: 8	22747	Units: mg/k	Kg		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	25 4. 970	9 24.27 970.9	0	102 100	62.5 75.4	151 113			
Sample ID 1507338-001AN	ISD SampType: I	MSD	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	е	
Client ID: SC-1	Batch ID:	20173	F	RunNo: 2	7422				
Prep Date: 7/9/2015	Analysis Date:	7/10/2015	\$	SeqNo: 8	22748	Units: mg/l	K g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24 4.		0	97.1	62.5	151	4.63	22.1	
Surr: BFB	960	972.8		98.2	75.4	113	0	0	

Qualifiers:

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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1507338

13-Jul-15

Client:

Rule Engineering LLC

Project:

Lateral 2C-143

Sample ID MB-20173	Samp	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles						
Client ID: PBS	Batch ID: 20173			F	RunNo: 2	7422					
Prep Date: 7/9/2015	Analysis [Date: 7/	10/2015	8	SeqNo: 8	22778	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	0.96		1.000		95.9	80	120				

Sample ID LCS-20173	SampT	ype: LC	S	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batcl	h ID: 20	173	F	RunNo: 27422						
Prep Date: 7/9/2015	Analysis E	Date: 7/	10/2015	\$	SeqNo: 8	22779	Units: mg/h	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.0	0.050	1.000	0	102	76.6	128				
Toluene	0.98	0.050	1.000	0	97.6	75	124				
Ethylbenzene	1.0	0.050	1.000	0	101	79.5	126				
Xylenes, Total	3.0	0.10	3.000	0	102	78.8	124				
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120				

Sample ID 1507338-002AMS	3	TestCode: EPA Method 8021B: Volatiles								
Client ID: SC-2	173	RunNo: 27422								
Prep Date: 7/9/2015	Analysis [Date: 7/	10/2015	5	SeqNo: 8	22791	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.049	0.9766	0	109	69.6	136			
Toluene	1.0	0.049	0.9766	0.03054	103	76.2	134			
Ethylbenzene	1.1	0.049	0.9766	0.01126	108	75.8	137			
Xylenes, Total	3.2	0.098	2.930	0.02914	108	78.9	133			
Surr: 4-Bromofluorobenzene	1.0		0.9766		107	80	120			

Sample ID 1507338-002AMS	SD	TestCode: EPA Method 8021B: Volatiles								
Client ID: SC-2	Batc	h ID: 20	173	F						
Prep Date: 7/9/2015	Analysis [Date: 7/	10/2015	5	SeqNo: 8	22792	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.049	0.9718	0	104	69.6	136	4.75	20	
Toluene	0.97	0.049	0.9718	0.03054	97.2	76.2	134	6.03	20	
Ethylbenzene	1.0	0.049	0.9718	0.01126	104	75.8	137	4.57	20	
Xylenes, Total	3.0	0.097	2.915	0.02914	104	78.9	133	4.54	20	
Surr: 4-Bromofluorobenzene	1.0		0.9718		106	80	120	0	0	

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H
- Not Detected at the Reporting Limit

Page 11 of 11

- Sample pH Not In Range
- RL Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: RULE ENGINEERING LL Work Order Num	mber: 1507338		RcptNo: 1	
Received by/date: 07/09/15			7	
Logged By: Lindsay Mangin 7/9/2015 7:00:00	AM	July Hogo		
Completed By: Lindsay Mangin 7/9/2015 7:22:06	AM,	Julythas		
Reviewed By:	7/09/15			
Chain of Custody	1 1			
1. Custody seals intact on sample bottles?	Yes	No 🗆	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗸	No	Not Present	
3. How was the sample delivered?	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 🗌	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:	
(Note discrepancies on chain of custody)		_		2 unless noted
13. Are matrices correctly identified on Chain of Custody?	Yes 🗸	No 🗔	Adjusted?	-
14. Is it clear what analyses were requested?	Yes 🔽	No I	Checked by:	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗆	Cribuled by.	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes	No L	NA V	
Person Natified:	ate			
7 100	,	none Fax	In Person	
Regarding:				
Client Instructions:				
17. Additional remarks:				
18. Cooler Information Cooler No Temp *C Condition Seal Intact Seal N	o Seal Date	Signed By		
1 3.3 Good Yes				

C	hain-	of-Cu	stody Record	Turn-Around						н	IA	L	E	NV	TR	20	NM	IEN	TAL	
lient:	Rule E	ingine	ering LL,	☐ Standard Project Name		3 day TAT				A	N	AL	YS	SIS	L	AE	301		OR	
/lailing	Address:	501 A	wport	Lateral	20-14	+3		www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109						109						
we	205]	almu 866	ofon NM 87401	Project #:			Tel. 505-345-3975 Fax 505-345-4107 Analysis Request													
	r Fax#:			Project Mana	ger:		1)	nly)	MRO)					04)	(0)					
LStan	Package: dard	74.000	□ Level 4 (Full Validation)	D. Was	son		(8021)	(Gas only)				SIMS)		2,PO _{4,S}	2 PCB's					
CCredi	AP	□ Othe	r	Sampler: D On Ice:	Z Yes	□ No	To the second	+ TPH	ROOD	418.1)	504.1)	or 8270	S	JO3,NO	es / 808	-	OA)			or N)
] EDD	(Type)_			Sample Temp	perature: 3	3	- 4	TBE	9		pou	100	letal	C,N	icide	(AC	ni-V			\\ \
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO.	BTEX +1	BTEX + MTBE	TPH 8015B(GRO) DRO	TPH (Method	EDB (Method	PAH's (8310	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
8-15	0945	sol	Sc-1	2-40 Zgls	X		χ													
-7-15	1650		SC-2	1		-002	X		X											
	1655		SC-3			-603	X		X									4	9	
	1700		SC-4			-004	X		X											
7-15	1705		8C-5			-005	X		X											\perp
7-15	1708		80-6		-	-006	X		×											
	0950		SC-7			-007	X		X									- (\perp
845	1020	<u>L</u>	8c-8	1		-608	X		X											
				Danied by		Date Time														
ate:	Time: 2629 Time: 203 t f necessary,	Relinquish	is Water	Received by:	14	7/09/15 0700	COSP									ted on	the an	alytical re	port.	

OIL CONS. DIV DIST. 3

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

Name of Company: Enterprise Field Services LLC

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

OCT 26 2015

Form C-141 Revised August 8, 2011

Final Report

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

Santa Fe, NM 87505

Release Notification and Corrective Action

OPERATOR

Contact: Thomas Long

Oil Conservation Division 1220 South St. Francis Dr.

Address: 6	14 Reilly A	ve, Farmin	gton, NM	87401	Telephone No. 505-599-2286								
Facility Na					F	Facility Typ	e: Natural Ga	as Ga	ther Pipe	line			
Surface O	wner: BLM			Mineral O	wner:	BLM			API No	D.			
				LOCA	TION	OF REL	FASE						
Unit Letter O	Section 19	Township 25N	Range 7W	Feet from the 1236		South	Feet from the 1874	East Line	West	County Rio Arriba			
H			La	atitude 36.38	3203	_Longitud	e 107.61250				(3.2		
				NATI	JRE	OF RELI	EASE				20		
		al Gas and C					f Release: Unki			Recovered: None			
Source of R	elease: Sus	spected Inter	nal Corros	sion			Hour of Occurre 5 @ 4:30 p.m.	ence:		d Hour of Discovery 015 @ 5:00 p.m.			
Was Immed	liate Notice		s 🗌 No	Not Requ	uired	If YES, To	Whom? Cory	Smith -	- NMOCD;	Katherina Diemer -	BLM		
By Whom?	Thomas Lo	ng				Date and	Hour 10/14/201	5@8	:41 a.m.		9.6		
, Was a Wate	ercourse Re	ached?	☐ Yes	⊠ No		If YES, Vo	olume Impacting	g the V	Vatercourse	Э	di		
If a Waterco	urse was Ir	npacted, Des	scribe Full	y.*									
2C-55 right	of way durin	olem and Reing the remeden	liation of a	previous relea	er 13, 2 ise. Th	2015, Enterpe pipeline w	orise technician vas isolated, dep	s disco pressu	overed a na rized, locke	atural gas leak in the ed out and tagged o	e Lateral ut.		
	nvironment	al contractor								onmental contractor corrective action rep			
I hereby cer rules and re which may relieve the o ground water	tify that the gulations al endanger pu pperator of I er, surface v	information of l operators a ublic health of iability should vater, humar	are require or the envir d their ope n health or	d to report and ronment. The a rations have fa the environme	or file accepta ailed to ent. In a	certain relea ance of a C- adequately addition, NN	ase notifications 141 report by the investigate and	and phe NM reme	erform cor OCD marked diate conta a C-141 rep	nd that pursuant to rective actions for reed as "Final Report" mination that pose a port does not relieve	does not a threat to		
1		1/1	/1/				OIL CON	SER	NOTTAN	DIVISION			
Signature:	/m	18. to	ul						1				
Printed Nan	ne: Jon E. F	ields			1	Approved by Environmental Specialist							
Title: Directo	or, Environn	nental			- 1	Approval Da	ite: 12/6/20	Expiration	ration Date:				
E-mail Addr	ess:jefields	@eprod.com	i		(Conditions of	of Approval:			Attached	743		
Date: /0/	21/20.	5		e: (713)381-66									
Attach Additional Sheets If Necessary NCS 153412686													

OIL CONS. DIV DIST. 3

District I 1625 N. French Dr., Hobbs, NM 88240 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

NOV 02 2015

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.

				Sa	nta Fe	e, NM 8	1505					
		F	Releas	e Notific	atior	and C	orrective	Acti	on			
					OP	ERATO	R		Initial	Report [Fina	I Repor
		Enterprise I					homas Long		1 13			
		ve, Farmin	gton, NN	1 87401			No. 505-599					
Facility Na	me: Latera	al K-31				Facility Ty	pe: Natural G	as Gat	her Pipe	eline		
Surface O	wner: BLM			Mineral (Owner:	BLM			API N	0.		41
				LOCA	ATION	OF RE	LEASE					31
Unit Letter L	Section 9	Township 25N	Range 6W	Feet from the 1674		South	Feet from the 684	Eas Line	West	County Rio Arriba		Č
			L			_Longitue	de_107.47916	<u> </u>				.0
Type of Rel	ease: Natur	al Gas and C	Condensa		OIL		of Release: Unl	known	Volume	Recovered: N	lone	-1
		spected Inter				Date and	Hour of Occur 15 @ 1:00 p.m	rence:	Date an	nd Hour of Dis 015 @ 1:30 p	covery:	100
Was Immed	liate Notice	Given?	s 🗌 No	Not Re	quired		o Whom? Cour a Diemer - BLM		tification (Cory Smith - N	IMOCD;	4
By Whom?	Thomas Lo	ng				Date and	Hour 10/26/20	15 @ 7:	43 a.m.			15.4.3
Was a Wate	ercourse Re		☐ Yes	⊠ No			olume Impactir			e		
		npacted, Des										100
Describe Co K-31 right o	ause of Prob f way. The p	olem and Re Dipeline was	medial Ad isolated, (tion: On Octol depressurized	per 15, 2 , locked	2015, Ente out and ta	rprise technicia gged out. Repa	ns disco	vered a n emediation	atural gas leal on are in progr	t in the L ess.	ateral
Describe A	as Affastad	and Classic	n Antina T	Takani Danais		na a dintina		ad 41a a s				- 77
supervised	by a third pa	arty environn	nental con	aken: Repair itractor. The t report will be s	hird part	y environn	are progress ar nental contracto 'Final" C-141.	or will col	lect samp	activities are to bles after reme	diation a	ctivities
I hereby cerules and rewhich may relieve the orground water	rtify that the egulations all endanger pu operator of li er, surface w	information of the information o	given about a re require or the envi of their open their open health or	ve is true and ed to report and ronment. The erations have the environment.	complet d/or file accepta failed to ent. In	te to the be certain rele ance of a C adequatel addition, N	est of my knowle ease notification 2-141 report by y investigate an MOCD accepta laws and/or reg	ns and po the NMC nd remed nce of a ulations.	erform co OCD mark liate conta C-141 re	rrective action ked as "Final F amination that port does not	s for rele Report" do pose a t relieve th	eases oes not hreat to
Signature:	Y	on	Ful	lel					1	N DIVISION	1	
Printed Nan	ne: Jon E. F	ields			./	Approved b	by Environment	al Specia	alist	drasa	> L	>
Title: Direct	or, Environn	nental			,	Approval D	ate: \2 7 3	215	Expiration	n Date:		
E-mail Addr	ess:jefields(@eprod.com	1		(Conditions	of Approval:			Attached		17
Date: /	0-28-2	105	Phor	ne: (713)381-6	684							137

* Attach Additional Sheets If Necessary

NCS 1534128324

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
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 OIL CONS. DIV DIST. 3

NOV 1 3 2015 Form C-141 Revised August 8, 2011

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

Release Notification and Corrective Action

Name of Company: Enterprise Field Services LLC Address: 614 Reilly Ave, Farmington, NM 87401						Contact: Thomas Long					
				87401		Telephone No. 505-599-2286					
Facility Na	me: Jicari	lla 126S #1	3			Facility Ty	/pe: Natural G	as Gat	thering F	Pipeline	
Surface O	wner: Jica	rilla Apach	e Tribe	Mineral O)wner:	: Jicarilla	Apache Tribe	9	APIN	0.	
				•		N OF RE					
Jnit Letter	Section	Township	Range	Feet from		th South	Feet from	Fast	West	County	
L	12	24 N	4W	the 031	Line		the 1200	Line		Rio Arriba	
			La	atitude <u>36.3</u> 2	23088	B_Longitu	de107.2028	324			
				NAT	URE	OF REL	EASE				
Type of Rel	lease: Natur	ral Gas Liquid	ds	10.11			Release 5-10 E	BBLS	Volume	Recovered: No	ne
	Source of Release: Leaking Valve						lour of Occurre	nce:		d Hour of Disco	very:
Was Immed	diate Notice	Given?					10:25 a.m. Whom? Courte	sv Notif		@ 11:15 a.m. Cory Smith – NM	OCD. Hobs
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	anato House		s 🗌 No	Not		Sandoval -				,	000,11000
Required											
	Thomas Lo						ime 7/29/15 9:4				
Was a Wate	ercourse Re		⊠ Yes	□ No		If YES, Vol	lume Impacting	the Wa	tercourse		
			2 100	☐ 140							
	ourse was Ir	mpacted, De	scribe Full	y.* Fluids were	relea	sed to the g	ground surface	and flow	ed down t	he hill into a sm	all ephemera
wash. Describe Cassociated	ause of Prol	blem and Re arilla 126S #	medial Ac	tion: On July 2 e. Fluids were r	8, 201 release	15, Enterpris	se technicians cound surface. T	onfirme	d a minor line was is	gas leak on a va solated, blown do	lve
wash. Describe Cassociated out and tag Describe Alapproximate were excav	ause of Pro with the Jica ged out for s rea Affected ely 33 feet le	blem and Re arilla 126S # safety and en and Cleanu ong by 24 feansported to	medial Ac 13 pipeline nvironmen p Action: 1 et wide rar	tion: On July 2: E. Fluids were retal concerns. F	8, 201 release Repairs nt mas	15, Enterprised to the grass and remedess was removed.	se technicians cound surface. To diation were controlled by mechal Approximately 3	confirme The pipel mpleted mpleted	d a minor line was is on Septer cavation. T	gas leak on a va solated, blown do	lve own, locked ion measure pacted soil
Describe And tage Describe And	ause of Proi with the Jica ged out for a rea Affected ely 33 feet le rated and tra th this "Fina rtify that the egulations a endanger properator of leer, surface versions."	blem and Re arilla 126S # safety and er I and Cleanu ong by 24 feansported to I" C-141. information Il operators a ublic health c liability shoul water, human	medial Action: 1 p Action: 1 et wide rar a New Me given aborare require or the envir	tion: On July 2: E. Fluids were restal concerns. For tall concerns. For tall concerns and the contaminating from 10 to the concerns and the c	8, 201 release Repairs nt mas to 12 fe revation complete accept failed to	ss was removed ete to the bee certain relected to the bee cardinare of a Coordinate of addition, N	se technicians of cound surface. To diation were considered by mechan approximately 3 land farm facilities of my knowlease notification C-141 report by ly investigate and surface and sur	confirmed he pipel mpleted mical exception 22 cubic ty. A the edge and put the NM and remedance of a	d a minor line was is on Septer cavation. To yards of ird party coordinate contract a C-141 re	gas leak on a va colated, blown do mber 3, 2015. The final excavat hydrocarbon imp	ion measure pacted soil report is at to NMOCI for releases port" does nose a threat
wash. Describe Coassociated out and tag Describe Anapproximate were excavincluded with the company to the comp	ause of Proi with the Jica ged out for a rea Affected ely 33 feet le rated and tra th this "Fina rtify that the egulations a endanger properator of leer, surface versions."	blem and Re arilla 126S # safety and er I and Cleanu ong by 24 feansported to I" C-141. information Il operators a ublic health c liability shoul water, human	medial Action: 1 p Action: 1 et wide rar a New Me given aborare require or the envir	tion: On July 2: E. Fluids were restal concerns. For tall concerns. For tall concerns and the contaminating from 10 to the concerns and the c	8, 201 release Repairs nt mas to 12 fe revation complete accept failed to	ss was removed ete to the bee certain relected to the bee cardinare of a Coordinate of addition, N	se technicians of cound surface. To diation were considered by mechan Approximately 3 land farm facilities of my knowle ease notification C-141 report by ly investigate and laws and/or regulary and/or regul	confirmed he pipel mpleted mical exception and put the NM and remedance of a gulations	d a minor line was is on Septer cavation. To yards of ird party control of the co	gas leak on a vascolated, blown do mber 3, 2015. The final excavate hydrocarbon imporrective action and that pursuan rective actions to the decimal of the pursuant of the decimal of the pursuant rective actions to the decimal of the	ion measure pacted soil report is at to NMOCI for releases port" does nose a threat
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wash. Describe Coassociated out and tage Describe An approximate were excavincluded with the company of the com	ause of Proi with the Jica ged out for a ged out for a rea Affected ely 33 feet le rated and tra th this "Fina rtify that the egulations a endanger properator of er, surface of responsibility	blem and Re arilla 126S # safety and er and Cleanu ong by 24 fer ansported to l" C-141. information Il operators a ublic hey althoul water, human to for complia	medial Action: 13 pipeline nvironmen p Action: 1 et wide rar a New Me given above are require or the environmen of their open health or ance with	tion: On July 2: E. Fluids were restal concerns. For tall concerns. For tall concerns and the contaminating from 10 to the concerns and the c	8, 201 release Repairs nt mas to 12 fe rervation completion completion completion completion ral, sta	ss was removed set to the best deep. An approved set, or local	se technicians of cound surface. To diation were condition were condition were condition were conditionally and farm facilities of my knowlease notification C-141 report by investigate and IMOCD acceptal laws and/or reg	nical exc 22 cubic ty. A the edge and particle NM and remediance of a gulations	d a minor line was is on Septer cavation. To yards of ird party conduction conduction conduction control care care care care care care care care	gas leak on a vascolated, blown domber 3, 2015. The final excavate hydrocarbon imporrective action and that pursuar rective actions are dean ination that perport does not reconstruction of the port does not reconstruction.	ion measure pacted soil report is to NMOCI for releases port" does no se a threat lieve the

Jicarilla 126S #13 Well Tie Pipeline Release Report

Unit Letter L, Section 12, Township 24 North, Range 4 West Rio Arriba County, New Mexico

October 14, 2015

Prepared for: Enterprise Field Services, LLC 614 Reilly Avenue Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401



Enterprise Field Services, LLC Jicarilla 126S #13 Well Tie Pipeline Release Report

Prepared for:

Enterprise Field Services, LLC 614 Reilly Avenue Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC 501 Airport Drive, Suite 205 Farmington, New Mexico 87401

Heather M. Woods, P.G., Area Manager

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

October 14, 2015

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1.0 Introduction

The Enterprise Field Services, LLC (Enterprise) Jicarilla 126S #13 well tie pipeline release site is located in Unit Letter L, Section 12, Township 24 North, Range 4 West, in Rio Arriba County, New Mexico, on the Jicarilla Apache Nation. The release resulted from a broken valve on the end-of-line riser discovered on July 29, 2015.

On August 28, 2015, Enterprise initiated repair activities at the location. The release consisted of an unknown quantity of natural gas and pipeline liquids. Site work included replacement the broken valve and excavation of hydrocarbon impacted soils.

A topographic map of the location reproduced from the United States Geological Society quadrangle map of the area is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name	Jicarilla 126S #13 W	Jicarilla 126S #13 Well Tie Pipeline Release							
Site Location Description	Unit Letter L, Section 12, Township 24 North, Range 4 West (N36.32306, W107.20283)								
Land Jurisdiction	Jicarilla Apache Nati	on							
Discovery Date	July 29, 2015	vi							
Release Report Date	July 29, 2015	Reported by	Thomas Long						
Agency Notification		servation Division (NI on Environmental Pro	and the second s						
Release Source	Valve on the end-of-	line riser	A CALL TO SERVICE						
Substance(s) Released	Natural Gas and Pipeline Liquids	Volume Released	Undetermined						
NMOCD Site Rank	30								
Distance to Surface Water		l washes 300 feet non drain to Cañada Lar							
Estimated Depth to Groundwater	Less than 50 feet below grade surface (bgs)	Distance to Water Well or Spring	Greater than 1,000 feet						
Contractor	West State Energy Contractor, Inc. (West States)	Remedial Excavation Dimensions	33 feet by 24 feet by 10 to 12 feet in depth						
Volume of Soil Transported for Disposal/Remediation	Approximately 322 cubic yards	Disposal Facility	TNT Landfarm (Permit #NM- 01-0008)						



3.0 JANEPO/NMOCD Site Ranking

The release site is located on the Jicarilla Apache Nation and follows recommendations from JANEPO. In accordance with JANEPO and NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 30 (Table 1).

Depth to groundwater at the site is estimated to be less than 50 feet below grade surface (bgs) based on the elevation differential (20 feet) between the release location and the wash in Cañada Larga.

A review was completed of the New Mexico Office of the State Engineer online New Mexico Water Rights Reporting System and no water wells were identified within a 1,000 foot radius of the location. No water wells were observed within a 1,000 foot radius of the location during a visual inspection.

Two ephemeral washes traverse the area approximately 300 feet northwest and 350 feet southwest of the release location and drain to the wash in Cañada Larga.

Based on the ranking score of 30, action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

4.0 Field Activities

On August 28, 2015, Enterprise initiated repair activities at the location. West States provided heavy equipment operation and repair support. Rule Engineering, LLC (Rule) personnel provided excavation guidance and collected confirmation samples from the resultant excavation. The repair included the replacement of the valve on the end-of-line riser. Approximately 322 cubic yards of hydrocarbon impacted soils were removed from an area of excavation measuring approximately 33 feet by 24 feet by 10 to 12 feet in depth.

A depiction of the excavation with sample locations and summary of analytical results is included as Figure 3. A copy of the executed C-138 Solid Waste Acceptance Form is included in Appendix A and a photograph log is included in Appendix B.

5.0 Soil Sampling

Rule collected confirmation soil samples (SC-1 through SC-11) from the sidewalls and base of the excavation. Each confirmation soil sample is a representative composite comprised of three to five equivalent aliquots of soil collected from the sampled area.



Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B or 8260B and TPH (GRO/DRO) per USEPA 8015D. Laboratory analytical results are summarized in Table 2, and the analytical laboratory reports are included in Appendix C.

A portion of each sample was field screened for volatile organic compounds (VOCs). Field screening for VOC vapors was conducted with a photoionization detector (PID). Before beginning field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field screening results are summarized in Table 2.

6.0 Laboratory Analytical Results

Laboratory analytical results for confirmation samples SC-1 through SC-11 reported benzene, total BTEX, and TPH (GRO/DRO) concentrations below the laboratory reporting limits, which are below the applicable JANEPO action levels. Laboratory analytical results are summarized in Table 2 and presented on Figure 3.

7.0 Conclusions

The Enterprise Jicarilla 126S #13 well tie pipeline release site is located in Unit Letter L, Section 12, Township 24 North, Range 4 West, in Rio Arriba County, New Mexico, on the Jicarilla Apache Nation. The release resulted from a broken valve on the end-of-line riser discovered on July 29, 2015. Subsequent to repair, approximately 322 cubic yards of hydrocarbon impacted soils were excavated and transported to the TNT Landfarm. Confirmation samples were collected from the sidewalls and base of the resultant excavation which measured approximately 33 feet by 24 feet by 10 to 12 feet in depth. Laboratory analytical results for the soil confirmation samples (SC-1 through SC-11) reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable JANEPO action levels.

Based on laboratory analytical results of the confirmation soil samples, no further work is recommended.

8.0 Closure and Limitations

This report has been prepared for the exclusive use of Enterprise and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with Enterprise. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.



Tables

Table 1. NMOCD Site Ranking Determination Enterprise Field Services, LLC Jicarilla 126S #13 Well Tie Pipeline Release Rio Arriba County, New Mexico

Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources	
epth to Groundwater					
<50 feet	20		Elevation differential between location and wash in	NMOCD Online database,	
50-99 feet	10	20	Cañada Larga south of the release location is approximately 20 feet.	Billy Rice Canyon Quadrangle, Google Earth,	
>100 feet	0	71 7		and Visual Inspection	
/ellhead Protection Area	Yıl				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells within 1,000	NMOSE NMWRRS, Billy Rice Canyon Quadrangle,	
	0 (No)		foot radius of location.	Google Earth, and Visua Inspection	
istance to Surface Water Body					
<200 horizontal feet	20		Two unnamed, ephemeral washes located	Billy Rice Canyon	
200 to 1,000 horizontal feet	10	10	approximately 300 feet northwest and 350 feet	Quadrangle, Google Earth,	
>1,000 horizontal feet	0		southwest drain to the wash in Cañada Larga.	and Visual Inspection	



Table 2. Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH Enterprise Field Services, LLC Jicarilla 126S #13 Well Tie Pipeline Release Rio Arriba County, New Mexico

Sample Name	Date	Location	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
THE PARTY		JANEPO/NMO	CD Action Level*	100	10	NE	NE	NE	50	10	0**
SC-1	8/31/2015	Base (Southwest)	10 to 12	556	<0.035	< 0.035	< 0.035	<0.071	ND	<3.5	<9.8
SC-2	8/31/2015	Base (Southeast)	10 to 12	565	< 0.036	< 0.036	<0.036	< 0.073	ND	<3.6	<10
SC-3	8/31/2015	West Wall (Upper)	1 to 6	59	< 0.036	< 0.036	<0.036	< 0.071	ND	. <3.6	<10
SC-4	8/31/2015	West Wall (Lower)	6 to 12	376	< 0.034	< 0.034	< 0.034	<0.068	ND	<3.4	<9.9
SC-5	8/31/2015	South Wall (Upper)	1 to 5	397	< 0.034	< 0.034	<0.034	<0.068	ND	<3.4	<9.8
SC-6	8/31/2015	South Wall (Lower)	5 to 10	22	< 0.035	< 0.035	< 0.035	<0.070	ND	<3.5	<9.8
SC-7	8/31/2015	East Wall (Upper)	1 to 6	286	< 0.036	< 0.036	<0.036	< 0.073	ND	<3.6	<10
SC-8	8/31/2015	East Wall (Lower)	6 to 12	460	< 0.036	< 0.036	<0.036	< 0.073	ND	<3.6	<10
SC-9	9/3/2015	North Wall (Upper)	1 to 6	22	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.7
SC-10	9/3/2015	North Wall (Lower)	6 to 12	54	<0.048	<0.048	<0.048	<0.095	ND	<4.8	<10
SC-11	9/3/2015	Base (North Central)	12	310	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<9.8

Notes:

VOCs - volatile organic compounds

PID - photoionization detector

ft bgs - feet below grade surface

ppm - parts per million

mg/kg - milligrams per kilogram

NE - not-established

ND - not detected above laboratory reporting limits

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH - total petroleum hydrocarbons

GRO - gasoline range organics

DRO - diesel range organics

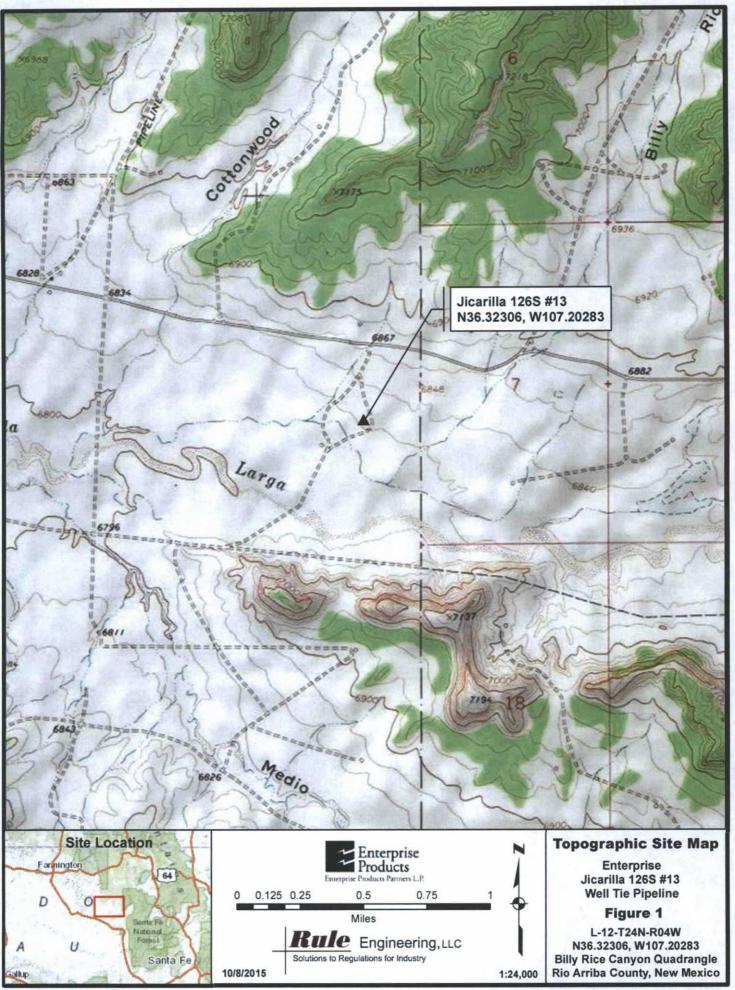
NMOCD - New Mexico Oil Conservation Division

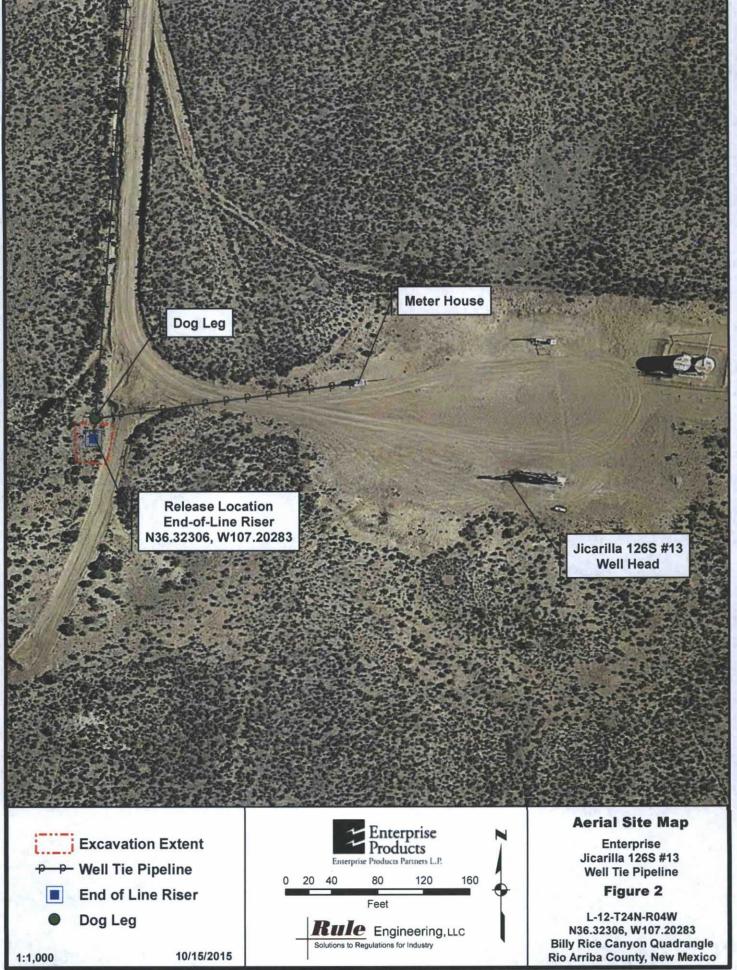
*Based on the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

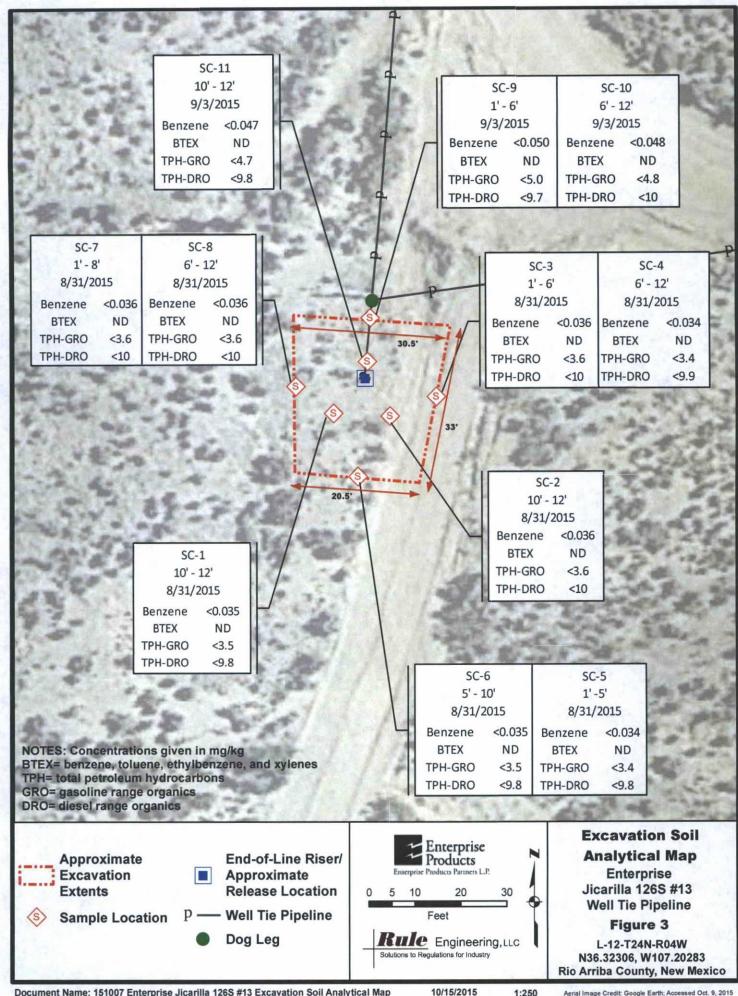
**Based on a site ranking of 10.

Figures









Appendix A

Executed C-138 Solid Waste Acceptance Form



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

State of New Mexico Energy Minerals and Natural Resources

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

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

Form C-138 Revised August 1, 2011

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: Apache 126S #13 Pipeline
3.	Location of Material (Street Address, City, State or ULSTR): Unit Letter L Section 12 Township 24 North Range 4 West; 36.323088, -107.202824
4.	Source and Description of Waste: Hydro-excavated soil impacted with hydrocarbons associated with a pipeline release. Estimated Volume 50 vd³ bbls Known Volume (to be entered by the operator at the end of the haul) 322 vd³ / bbls
5.	GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, <u>T</u>	Thomas Long Thom Log representative or authorized agent for Enterprise Field Services, LLC do hereby COMPANY NAME COMPANY NAME
cer	tify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 ulatory 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
L	8-28-15 , representative for Enterprise Field Services, LLC authorize TNT Land Farm. to
	nplete the required testing/sign the Generator Waste Testing Certification.
to t	, representative for do hereby certify that representative samples of the field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform he specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6.	Transporter: West States Energy Contractor
Addr	e and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 ess of Facility: 70 CR 405, Lindrith NM od of Treatment and/or Disposal:
Vac	☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other
vas	te Acceptance Status: APPROVED DENIED (Must Be Maintained As Permanent Record)
RIN	NT NAME: Liti Jus Schmitz TITLE: Office Mngr. DATE: 8-28-15
IGN	NATURE: Surface Waste Management Facility Authorized Agent TELEPHONE NO. 505-330-3695

Appendix B

Photograph Log



Photograph #1

Client: Enterprise

Site Name:

Jicarilla 126S #13 Well Tie Pipeline Release

Date Photo Taken: August 28, 2015

Release Location: N36.32306, W107.20283

L-12-24N-4W Rio Arriba County, NM

Photo Taken by: Heather Woods



Description: Facing south, general view of initial excavation activities and end-of-line riser.

Photograph #2

Client: Enterprise

Site Name:

Jicarilla 126S #13 Well Tie Pipeline Release

Date Photo Taken: August 31, 2015

Release Location: N36.32306, W107.20283

L-12-24N-4W Rio Arriba County, NM

Photo Taken by: Heather Woods



Description: Facing west, view of southern portion of final excavation.



Photograph #3

Client: Enterprise

Site Name:

Jicarilla 126S #13 Well Tie Pipeline Release

Date Photo Taken: August 31, 2015

Release Location: N36.32306, W107.20283

L-12-24N-4W Rio Arriba County, NM

Photo Taken by: Heather Woods



Description: Facing north, view of southern portion of final excavation.

Photograph #4

Client: Enterprise

Site Name:

Jicarilla 126S #13 Well Tie Pipeline Release

Date Photo Taken: September 8, 2015

Release Location: N36.32306, W107.20283

L-12-24N-4W Rio Arriba County, NM

Photo Taken by: Alexandra Price



Description: Facing west, view of northern portion of final excavation.





Photograph #5

Client: Enterprise

Site Name:

Jicarilla 126S #13 Well Tie Pipeline Release

Date Photo Taken: September 8, 2015

Release Location: N36.32306, W107.20283

L-12-24N-4W Rio Arriba County, NM

Photo Taken by: Alexandra Price



Description: Facing north, view of northern portion of final excavation.

Appendix C Analytical Laboratory Reports





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

OrderNo.: 1509002

September 02, 2015

Heather Woods Rule Engineering LLC 501 Airport Dr., Ste 205 Farmington, NM 87401 TEL: (505) 860-2712

FAX

RE: Enterprise Jicarilla 126S #13

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/1/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-1

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 1:40:00 PM

Lab ID: 1509002-001

Matrix: MEOH (SOIL)

Received Date: 9/1/2015 8:05:00 AM

Analyses	Res	sult	RL	Qual	Units	D	F Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE OR	GANICS	3				Analys	t: JME
Diesel Range Organics (DRO)		ND	9.8		mg/Kg	1	9/1/2015 12:01:55 PM	21079
Surr: DNOP		87.7	57.9-140		%REC	1	9/1/2015 12:01:55 PM	21079
EPA METHOD 8015D: GASOLINE RAI	NGE						Analys	t: NSB
Gasoline Range Organics (GRO)		ND	3.5		mg/Kg	1	9/1/2015 10:10:15 AM	21059
Surr: BFB		83.8	75.4-113		%REC	1	9/1/2015 10:10:15 AM	21059
EPA METHOD 8021B: VOLATILES							Analys	t: NSB
Benzene		ND	0.035		mg/Kg	1	9/1/2015 10:10:15 AM	21059
Toluene		ND	0.035		mg/Kg	1	9/1/2015 10:10:15 AM	21059
Ethylbenzene		ND	0.035		mg/Kg	1	9/1/2015 10:10:15 AM	21059
Xylenes, Total		ND	0.071		mg/Kg	1	9/1/2015 10:10:15 AM	21059
Surr: 4-Bromofluorobenzene		99.6	80-120		%REC	1	9/1/2015 10:10:15 AM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-2

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 1:45:00 PM

Lab ID: 1509002-002

Matrix: MEOH (SOIL) Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	s			Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 12:23:21 PM	21079
Surr: DNOP	94.3	57.9-140	%REC	1	9/1/2015 12:23:21 PM	21079
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	9/1/2015 10:35:35 AM	21059
Surr: BFB	84.8	75.4-113	%REC	1	9/1/2015 10:35:35 AM	21059
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.036	mg/Kg	1	9/1/2015 10:35:35 AM	21059
Toluene	ND	0.036	mg/Kg	1	9/1/2015 10:35:35 AM	21059
Ethylbenzene	ND	0.036	mg/Kg	1	9/1/2015 10:35:35 AM	21059
Xylenes, Total	ND	0.073	mg/Kg	1	9/1/2015 10:35:35 AM	21059
Surr: 4-Bromofluorobenzene	99.5	80-120	%REC	1	9/1/2015 10:35:35 AM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-3

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 2:05:00 PM

Lab ID: 1509002-003

Matrix: MEOH (SOIL)

Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 12:44:54 PM	21079
Surr: DNOP	97.0	57.9-140	%REC	1	9/1/2015 12:44:54 PM	21079
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	9/1/2015 11:00:57 AM	21059
Surr: BFB	85.5	75.4-113	%REC	1	9/1/2015 11:00:57 AM	21059
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.036	mg/Kg	1	9/1/2015 11:00:57 AM	21059
Toluene	ND	0.036	mg/Kg	1	9/1/2015 11:00:57 AM	21059
Ethylbenzene	ND	0.036	mg/Kg	1	9/1/2015 11:00:57 AM	21059
Xylenes, Total	ND	0.071	mg/Kg	1	9/1/2015 11:00:57 AM	21059
Surr: 4-Bromofluorobenzene	99.7	80-120	%REC	1	9/1/2015 11:00:57 AM	21059

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

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

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-4

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 2:10:00 PM

Lab ID: 1509002-004

Matrix: MEOH (SOIL)

Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANIC	s			Analyst:	JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/1/2015 1:06:19 PM	21079
Surr: DNOP	98.0	57.9-140	%REC	1	9/1/2015 1:06:19 PM	21079
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	9/1/2015 11:26:20 AM	21059
Surr: BFB	87.1	75.4-113	%REC	1	9/1/2015 11:26:20 AM	21059
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.034	mg/Kg	1	9/1/2015 11:26:20 AM	21059
Toluene	ND	0.034	mg/Kg	1	9/1/2015 11:26:20 AM	21059
Ethylbenzene	ND	0.034	mg/Kg	1	9/1/2015 11:26:20 AM	21059
Xylenes, Total	ND	0.068	mg/Kg	1	9/1/2015 11:26:20 AM	21059
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	9/1/2015 11:26:20 AM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-5

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 2:15:00 PM

Lab ID: 1509002-005

Matrix: MEOH (SOIL)

Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s			Analys	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/1/2015 1:27:55 PM	21079
Surr: DNOP	98.2	57.9-140	%REC	1	9/1/2015 1:27:55 PM	21079
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	9/1/2015 11:51:47 AM	21059
Surr: BFB	88.4	75.4-113	%REC	1	9/1/2015 11:51:47 AM	21059
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.034	mg/Kg	1	9/1/2015 11:51:47 AM	21059
Toluene	ND	0.034	mg/Kg	1	9/1/2015 11:51:47 AM	21059
Ethylbenzene	ND	0.034	mg/Kg	1	9/1/2015 11:51:47 AM	21059
Xylenes, Total	ND	0.068	mg/Kg	1	9/1/2015 11:51:47 AM	21059
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	9/1/2015 11:51:47 AM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Client Sample ID: SC-6

Project: Enterprise Jicarilla 126S #13

Collection Date: 8/31/2015 2:20:00 PM

Lab ID: 1509002-006

Matrix: MEOH (SOIL) Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	s			Analyst	JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/1/2015 11:26:31 AM	21079
Surr: DNOP	104	57.9-140	%REC	1	9/1/2015 11:26:31 AM	21079
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	9/1/2015 12:17:10 PM	21059
Surr: BFB	90.2	75.4-113	%REC	1	9/1/2015 12:17:10 PM	21059
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.035	mg/Kg	1	9/1/2015 12:17:10 PM	21059
Toluene	ND	0.035	mg/Kg	1	9/1/2015 12:17:10 PM	21059
Ethylbenzene	ND	0.035	mg/Kg	1	9/1/2015 12:17:10 PM	21059
Xylenes, Total	ND	0.070	mg/Kg	1	9/1/2015 12:17:10 PM	21059
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	9/1/2015 12:17:10 PM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Hall Environmental Analysis Laboratory, Inc. Date Reported: 9/2/2015

CLIENT: Rule Engineering LLC Client Sample ID: SC-7

Project: Enterprise Jicarilla 126S #13 Collection Date: 8/31/2015 2:25:00 PM

Lab ID: 1509002-007 Matrix: MEOH (SOIL) Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN		Analyst	: JME			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 11:53:51 AM	21079
Surr: DNOP	101	57.9-140	%REC	1	9/1/2015 11:53:51 AM	21079
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	9/1/2015 12:42:31 PM	21059
Surr: BFB	84.0	75.4-113	%REC	1	9/1/2015 12:42:31 PM	21059
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.036	mg/Kg	1	9/1/2015 12:42:31 PM	21059
Toluene	ND	0.036	mg/Kg	1	9/1/2015 12:42:31 PM	21059
Ethylbenzene	ND	0.036	mg/Kg	1	9/1/2015 12:42:31 PM	21059
Xylenes, Total	ND	0.073	mg/Kg	1	9/1/2015 12:42:31 PM	21059
Surr: 4-Bromofluorobenzene	96.1	80-120	%REC	1	9/1/2015 12:42:31 PM	21059

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 11
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1509002

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Enterprise Jicarilla 126S #13

Lab ID: 1509002-008

Project:

Client Sample ID: SC-8

Collection Date: 8/31/2015 2:30:00 PM

Matrix: MEOH (SOIL) Received Date: 9/1/2015 8:05:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 8015M/D: DIESEL RA		Analyst	JME				
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 12:21:10 PM	21079	
Surr: DNOP	96.1	57.9-140	%REC	1	9/1/2015 12:21:10 PM	21079	
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB	
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	9/1/2015 1:07:55 PM	21059	
Surr: BFB	89.6	75.4-113	%REC	1	9/1/2015 1:07:55 PM	21059	
EPA METHOD 8021B: VOLATILES					Analyst	: NSB	
Benzene	ND	0.036	mg/Kg	1	9/1/2015 1:07:55 PM	21059	
Toluene	ND	0.036	mg/Kg	1	9/1/2015 1:07:55 PM	21059	
Ethylbenzene	ND	0.036	mg/Kg	1	9/1/2015 1:07:55 PM	21059	
Xylenes, Total	ND	0.073	mg/Kg	1	9/1/2015 1:07:55 PM	21059	
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	9/1/2015 1:07:55 PM	21059	

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 8 of 11 J
- P Sample pH Not In Range
- Reporting Detection Limit

OC SUMMARY REPORT

Client:

Project:

Sample ID MB-21079

Diesel Range Organics (DRO)

Sample ID MB-21044

9/1/2015

Client ID: PBS

Prep Date:

Surr: DNOP

Analyte

Hall Environmental Analysis Laboratory, Inc.

Enterprise Jicarilla 126S #13

Result

ND

9.5

9 1

Result

4.3

SampType: LCS

Batch ID: 21010

Analysis Date: 9/1/2015 PQL

SampType: MBLK

Batch ID: 21079

Analysis Date: 9/1/2015

SampType: MBLK

PQL

10

10.00

Rule Engineering LLC

WO#:

RPDLimit

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

Units: mg/Kg

140

140

Units: %REC

140

%RPD

HighLimit

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

%RPD

HighLimit

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

57.9

RunNo: 28580

SegNo: 864594

95.1

SPK value SPK Ref Val %REC LowLimit

1509002

02-Sep-15

Qual

Qual

Qual

Qual

Qual

Qual

Client ID: PBS Batch ID: 21044 RunNo: 28580 Analysis Date: 9/1/2015 Units: %REC Prep Date: SeqNo: 864619 8/31/2015 SPK value SPK Ref Val %REC %RPD **RPDLimit** Analyte Result PQL LowLimit HighLimit 9.6 10.00 95.8 Surr: DNOP 57.9 140 Sample ID LCS-21079 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 21079 RunNo: 28580 SegNo: 864620 Prep Date: 9/1/2015 Analysis Date: 9/1/2015 Units: mg/Kg PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte Diesel Range Organics (DRO) 42 50.00 0 83.6 57.4 10 139 Surr: DNOP 4.7 5.000 94.2 57.9 140 TestCode: EPA Method 8015M/D: Diesel Range Organics Sample ID LCS-21044 SampType: LCS Client ID: LCSS Batch ID: 21044 RunNo: 28580 Prep Date: 8/31/2015 SeqNo: 864624 Analysis Date: 9/1/2015 Units: %REC Result SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Lowl imit Surr: DNOP 4.9 5.000 97 7 57.9 140 Sample ID MB-21010 SampType: MBLK TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: Batch ID: 21010 RunNo: 28580 PRS Prep Date: SeqNo: 865408 Units: %REC 8/27/2015 Analysis Date: 9/1/2015 HighLimit %RPD **RPDLimit** SPK value SPK Ref Val %REC Analyte Result PQL LowLimit

10.00

5.000

SPK value SPK Ref Val %REC

Qualifiers:

Surr: DNOP

Client ID:

Analyte

Sur: DNOP

Sample ID LCS-21010

Prep Date: 8/27/2015

LCSS

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

LowLimit

57.9

E Value above quantitation range

91.5

RunNo: 28580 SeqNo: 865620

85.2

- Analyte detected below quantitation limits 1
- P Sample pH Not In Range
- RL Reporting Detection Limit

Page 9 of 11

RPDLimit

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1509002

02-Sep-15

Client:

Rule Engineering LLC

Project:

Enterprise Jicarilla 126S #13

Sample ID MB-21059

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

PBS

Batch ID: 21059

RunNo: 28590

Prep Date:

SeqNo: 865117

Units: mg/Kg

8/31/2015

Analysis Date: 9/1/2015

Gasoline Range Organics (GRO)

PQL ND 5.0 SPK value SPK Ref Val %REC HighLimit

Qual

RPDLimit

Surr: BFB

Client ID:

Prep Date:

870

1000

86.7

113

%RPD

Sample ID LCS-21059

LCSS

8/31/2015

SampType: LCS Batch ID: 21059 TestCode: EPA Method 8015D: Gasoline Range RunNo: 28590

75.4

LowLimit

Analysis Date: 9/1/2015

SeqNo: 865118

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Result

25

940

PQL

SPK value SPK Ref Val 0

%REC LowLimit 98.7

HighLimit 122 %RPD **RPDLimit**

Qual

Surr: BFB

5.0 25.00 1000

93.8

79.6 75.4

113

Qualifiers:

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

Value exceeds Maximum Contaminant Level.

Not Detected at the Reporting Limit

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

E Value above quantitation range J Analyte detected below quantitation limits

P Sample pH Not In Range RL Reporting Detection Limit Page 10 of 11

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1509002

02-Sep-15

Client:

Rule Engineering LLC

Project:

Enterprise Jicarilla 126S #13

Sample ID MB-21059 SampType: MBLK Client ID: PBS Batch ID: 21059			BLK	TestCode: EPA Method 8021B: Volatiles									
			059	F	RunNo: 2	8590							
Prep Date: 8/31/2015	Analysis Date: 9/1/2015			SeqNo: 865148			Units: mg/k	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	ND	0.050											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120						

Sample ID LCS-21059	Samp	ype: LC	s	Tes							
Client ID: LCSS	Batc	h ID: 21	059	F	RunNo: 2						
Prep Date: 8/31/2015	Analysis Date: 9/1/2015			8	SeqNo: 8	65149	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.94	0.050	1.000	0	93.7	80	120				
Toluene	0.91	0.050	1.000	0	91.1	80	120				
Ethylbenzene	0.95	0.050	1.000	0	95.1	80	120				
Xylenes, Total	2.9	0.10	3.000	0	95.1	80	120				
Surr 4-Bromofluorobenzene	1.1		1 000		106	80	120				

Qualifiers:

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

Page 11 of 11



Hali Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

RcptNo: 1 Work Order Number: 1509002 RULE ENGINEERING LL Client Name: 09/01/15 Received by/date: Celin Som 9/1/2015 8:05:00 AM Celina Sessa Logged By: alin Som 9/1/2015 8:51:/11 AM Celing Sessa Completed By: Reviewed By: Chain of Custody Not Present No _ 1. Custody seals intact on sample bottles? Yes _ Not Present Yes V No 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In No 🗌 NA __ Yes V 4. Was an attempt made to cool the samples? NA | No 5. Were all samples received at a temperature of >0° C to 6.0°C Yes V No Sample(s) in proper container(s)? No Yes V 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? No V NA . 9. Was preservative added to bottles? Yes No [No VOA Viais 10, VOA vials have zero headspace? No V 11. Were any sample containers received broken? # of preserved bottles checked No for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by: No . 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No NA V 16. Was client notified of all discrepancies with this order? Person Notified: Date [By Whom: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C | Condition | Seal Intact | Seal No | Seal Date 2.5 Good

Chain-of-Custody Record Client: Rule Engineering LLC Mailing Address: 501 Airport Drive, Suite 20 Favmington, NM 87401 Phone #: (505) 716-2787 email or Fax#: hunds@ruleengineering. Com				Project#:	ard ARus ame: oprise Jicari	In Same Day		Te	1. 50	Aawki	www ns N	AL v.hal NE -	lenv Alb	rironr auque ax sis	ment erque	AE tal.co	30 om M 87 4107	R 4	NT	AL	
QA/QC P XStand	ackage: dard		☐ Level 4 (Full Validation)		ther Wood	IS	HB*s (8021)	TPH (Gas only)	DRO /	_	_	O SIMIS)		CI,NO3,NO2,PO4,SO4)	8082 PCB's						
□ NELAP □ Other		On Ice: Yes No Sample Temperature: Zte O. Ice = Z.5				1	0	18.1	1.40	8270		3,N	-		8				Z		
						MTBE	(6	9d 4	3d 5	0 or	stals	N.	ides	8	9			2.0	2		
Date	Time	Matrix	Sample Request ID	Contain Type and	d# Type	HEAL No.	BTEX + WILDE	BTEX + MT	TPH 8015B (GRO / DRO / 4459)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,C	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles
131/15	1340	Soil	Se-1	402 Glas (1) Non /MacH		+ -001	X		X												
1/31/15	1345	Soil	SC-2	1	1	-002	X		Х												
131/15	1405	Soil	SC-3			-003	X		X								-				
131/15	1410	5011	50-4			-004	X		χ												
3/31/15	1415	Soil	50-5			-005	X		x					4							
131/15	1420	Soil	5C-6			-006	X		X	-											
/31/15	1425	Soil	5c-7			-007	X		X										1		
131/15	1430	5611	SC-B	1	1	-008	X		X			-									
																			7 .	-	
31/15 Date:	1806 Time: 1845	Relinquish Relinquish samples sub	the M. Woods	Received by Received by Contracted to other	tubai	Date Time 8/31/15 1800 Date Time May 15 0805 Tries. This serves as notice of the	0		S: D:									nalytica	al report.		



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

September 14, 2015

Heather Woods Rule Engineering LLC 501 Airport Dr., Ste 205 Farmington, NM 87401 TEL: (505) 860-2712 FAX

RE: Enterprise Jicarilla 126S #13

OrderNo.: 1509248

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/4/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1509248

Date Reported: 9/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Enterprise Jicarilla 126S #13

Lab ID: 1509248-001

Client Sample ID: SC-9

Collection Date: 9/3/2015 1:15:00 PM

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: AG
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/9/2015 4:30:24 PM	21177
Surr: BFB	109	70-130	%REC	1	9/9/2015 4:30:24 PM	21177
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	s			Analys	t: KJH
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/10/2015 9:32:46 PM	21185
Surr: DNOP	95.8	57.9-140	%REC	1	9/10/2015 9:32:46 PM	21185
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: AG
Benzene	ND	0.050	mg/Kg	1	9/9/2015 4:30:24 PM	21177
Toluene	ND	0.050	mg/Kg	1	9/9/2015 4:30:24 PM	21177
Ethylbenzene	ND	0.050	mg/Kg	1	9/9/2015 4:30:24 PM	21177
Xylenes, Total	ND	0.099	mg/Kg	1	9/9/2015 4:30:24 PM	21177
Surr: 1,2-Dichloroethane-d4	96.5	70-130	%REC	1	9/9/2015 4:30:24 PM	21177
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	9/9/2015 4:30:24 PM	21177
Surr: Dibromofluoromethane	104	70-130	%REC	1	9/9/2015 4:30:24 PM	21177
Surr: Toluene-d8	90.0	70-130	%REC	1	9/9/2015 4:30:24 PM	21177

Matrix: SOIL

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

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

Lab Order 1509248

Date Reported: 9/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Enterprise Jicarilla 126S #13

Lab ID: 1509248-002

Client Sample ID: SC-10

Collection Date: 9/3/2015 12:30:00 PM

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	AG
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/9/2015 5:56:40 PM	21177
Surr: BFB	107	70-130	%REC	1	9/9/2015 5:56:40 PM	21177
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/10/2015 9:54:26 PM	21185
Surr: DNOP	106	57.9-140	%REC	1	9/10/2015 9:54:26 PM	21185
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	AG
Benzene	ND	0.048	mg/Kg	1	9/9/2015 5:56:40 PM	21177
Toluene	ND	0.048	mg/Kg	1	9/9/2015 5:56:40 PM	21177
Ethylbenzene	ND	0.048	mg/Kg	1	9/9/2015 5:56:40 PM	21177
Xylenes, Total	ND	0.095	mg/Kg	1	9/9/2015 5:56:40 PM	21177
Surr: 1,2-Dichloroethane-d4	95.1	70-130	%REC	1	9/9/2015 5:56:40 PM	21177
Surr: 4-Bromofluorobenzene	96.2	70-130	%REC	1	9/9/2015 5:56:40 PM	21177
Surr: Dibromofluoromethane	99.7	70-130	%REC	1	9/9/2015 5:56:40 PM	21177
Surr: Toluene-d8	88.2	70-130	%REC	1	9/9/2015 5:56:40 PM	21177

Matrix: SOIL

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

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

Lab Order 1509248

Date Reported: 9/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC

Project: Enterprise Jicarilla 126S #13

Lab ID: 1509248-003

Client Sample ID: SC-11

Collection Date: 9/3/2015 12:20:00 PM

Received Date: 9/4/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/9/2015 6:25:25 PM	21177
Surr: BFB	112	70-130	%REC	1	9/9/2015 6:25:25 PM	21177
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	s			Analys	t: KJH
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/10/2015 10:16:13 PM	1 21185
Surr: DNOP	102	57.9-140	%REC	1	9/10/2015 10:16:13 PM	1 21185
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: AG
Benzene	ND	0.047	mg/Kg	1	9/9/2015 6:25:25 PM	21177
Toluene	ND	0.047	mg/Kg	1	9/9/2015 6:25:25 PM	21177
Ethylbenzene	ND	0.047	mg/Kg	1	9/9/2015 6:25:25 PM	21177
Xylenes, Total	ND	0.093	mg/Kg	1	9/9/2015 6:25:25 PM	21177
Surr: 1,2-Dichloroethane-d4	91.8	70-130	%REC	1	9/9/2015 6:25:25 PM	21177
Surr: 4-Bromofluorobenzene	95.7	70-130	%REC	1	9/9/2015 6:25:25 PM	21177
Surr: Dibromofluoromethane	98.9	70-130	%REC	1	9/9/2015 6:25:25 PM	21177
Surr: Toluene-d8	89.3	70-130	%REC	1	9/9/2015 6:25:25 PM	21177

Matrix: SOIL

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

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

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1509248

14-Sep-15

Client:

Rule Engineering LLC

Project:

Enterprise Jicarilla 126S #13

Sample ID MB-21185

SampType: MBLK

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

Client ID:

PBS

Batch ID: 21185

10

RunNo: 28740

Prep Date: 9/8/2015 Analysis Date: 9/10/2015

SeqNo: 871391

Units: mg/Kg

Analyte Diesel Range Organics (DRO)

PQL ND 11

10.00

LowLimit

LowLimit

57.9

HighLimit

140

%RPD **RPDLimit** Qual

Surr: DNOP Sample ID LCS-21185

SampType: LCS

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

Client ID: LCSS Batch ID: 21185

Result

RunNo: 28740

110

HighLimit

Prep Date: Analyte

9/8/2015 Analysis Date: 9/10/2015

SeqNo: 871392

%REC

Units: mg/Kg

%RPD **RPDLimit** Qual

Diesel Range Organics (DRO)

55 10 50.00

PQL

139 140

Surr: DNOP

110 57.4 5.7 5.000 113 57.9

SPK value SPK Ref Val

SPK value SPK Ref Val %REC

Qualifiers:

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

Page 4 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1509248

14-Sep-15

Client:

Rule Engineering LLC

Project: Enterprise Jicarilla 126S #13

Sample ID 1509248-001ams	Samp	Type: MS	3	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	t List	
Client ID: SC-9	Batc	h ID: 21	177	7 RunNo: 28737						
Prep Date: 9/8/2015	Analysis [Date: 9/	9/2015		SeqNo: 871535 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	0.9950	0	109	70	130			
Toluene	0.97	0.050	0.9950	0	97.3	65	138			
Ethylbenzene	1.1	0.050	0.9950	0	107	70	130			
Xylenes, Total	3.2	0.10	2.985	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.4975		95.1	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.4975		95.1	70	130			
Surr: Dibromofluoromethane	0.50		0.4975		99.9	70	130			
Surr: Toluene-d8	0.44		0.4975		88.8	70	130			

Sample ID 1509246-00 lams	su Samp	ype. IN	50	165	Code. El	A Metriou	ozoub. Voia	illes Short	LIST	
Client ID: SC-9	Batc	h ID: 21	177	F	RunNo: 2	8737				
Prep Date: 9/8/2015	Analysis [Analysis Date: 9/9/2015			SeqNo: 871536 Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	0.9970	0	108	70	130	1.53	20	
Toluene	0.98	0.050	0.9970	0	98.5	65	138	1.52	20	
Ethylbenzene	1.0	0.050	0.9970	0	105	70	130	1.61	0	
Xylenes, Total	3.2	0.10	2.991	0	107	70	130	0.480	0	
Surr: 1,2-Dichloroethane-d4	0.49		0.4985		98.1	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.48		0.4985		95.6	70	130	0	0	
Surr. Dibromofluoromethane	0.51		0.4985		103	70	130	0	0	
Surr: Toluene-d8	0.46		0.4985		91.8	70	130	0	0	

Sample ID Ics-21177	Samp	Type: LC	S	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batc	h ID: 21	177	F	RunNo: 2	8737				
Prep Date: 9/8/2015	Analysis [Date: 9/	9/2015	15 SeqNo: 871550 Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	103	70	130			
Toluene	0.88	0.050	1.000	0	87.9	70	130			
Ethylbenzene	0.95	0.050	1.000	0	94.7	70	130			
Kylenes, Total	2.9	0.10	3.000	0	96.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.4	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.0	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		90.1	70	130			

Qualifiers:

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

Page 5 of 7

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1509248

14-Sep-15

Client:

Rule Engineering LLC

Project:

Enterprise Jicarilla 126S #13

Sample ID mb-21177	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: PBS	Batch	h ID: 21	177	F	RunNo: 2	8737				
Prep Date: 9/8/2015	Analysis D	Date: 9/	9/2015	5	SeqNo: 8	71551	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.2	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130			
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130			
Surr: Toluene-d8	0.45		0.5000		90.1	70	130			

Qualifiers:

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

Page 6 of 7

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1509248

14-Sep-15

Client: Rule Engineering LLC Project: Enterprise Jicarilla 126S #13

Sample ID Ics-21177

Sample ID 1509248-002ams TestCode: EPA Method 8015D Mod: Gasoline Range SampType: MS Client ID: SC-10 Batch ID: 21177 RunNo: 28737 Prep Date: 9/8/2015 Analysis Date: 9/9/2015 SeqNo: 871406 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Gasoline Range Organics (GRO) 23.92 102 131 Surr: BFB 530 478.5 112 70 130 Sample ID 1509248-002amsd SampType: MSD TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: SC-10 Batch ID: 21177 RunNo: 28737 Prep Date: 9/8/2015 Analysis Date: 9/9/2015 SeqNo: 871407 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 23 20 Gasoline Range Organics (GRO) 48 23.90 97.0 54.9 131 5.00 Surr: BFB 540 478.0 70 130 0 112

SampType: LCS Client ID: LCSS Batch ID: 21177 RunNo: 28737 Prep Date: 9/8/2015 Analysis Date: 9/9/2015 SeqNo: 871419 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 23 5.0 25.00 90.2 70 123 Gasoline Range Organics (GRO) 0 540 500.0 109 70 130 Surr: BFB

TestCode: EPA Method 8015D Mod: Gasoline Range

TestCode: EPA Method 8015D Mod: Gasoline Range Sample ID mb-21177 SampType: MBLK Batch ID: 21177 RunNo: 28737 Client ID: **PBS** Prep Date: 9/8/2015 Analysis Date: 9/9/2015 SeqNo: 871420 Units: mg/Kg SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Qual Result PQL LowLimit ND 5.0 Gasoline Range Organics (GRO) Surr: BFB 550 500.0 130 109 70

Sample ID Ics-21199 SampType: LCS TestCode: EPA Method 8015D Mod: Gasoline Range Client ID: LCSS Batch ID: 21199 RunNo: 28788 Prep Date: 9/9/2015 Analysis Date: 9/10/2015 SeqNo: 873066 Units: %REC %RPD **RPDLimit** Qual Analyte Result SPK value SPK Ref Val %REC Lowl imit **HighLimit** Surr: BFB 550 500.0 109 70 130

TestCode: EPA Method 8015D Mod: Gasoline Range Sample ID mb-21199 SampType: MBLK Client ID: PBS Batch ID: 21199 RunNo: 28788 Prep Date: Analysis Date: 9/10/2015 SeqNo: 873067 Units: %REC 9/9/2015 %REC **RPDLimit** Qual Result PQL SPK value SPK Ref Val LowLimit HighLimit %RPD Analyte 550 500.0 110 70 130 Surr: BFB

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

Page 7 of 7



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

RcptNo: 1 RULE ENGINEERING LL Work Order Number: 1509248 Client Name: Received by/date: Logged By: Lindsay Mangin 9/8/2015 7:17:17 AM Lindsay Mangin Completed By: 09/08/15 Reviewed By: Chain of Custody No 🗌 Not Present 1. Custody seals intact on sample bottles? No 🗌 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In No 🗌 NA L Yes 🏟 4. Was an attempt made to cool the samples? NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C No 🗌 6. Sample(s) in proper container(s)? No 7. Sufficient sample volume for indicated test(s)? No 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No 🛷 9. Was preservative added to bottles? Yes No T No VOA Vials 10. VOA vials have zero headspace? No 🖈 11. Were any sample containers received broken? # of preserved bottles checked No 🗌 for pH: 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗌 13. Are matrices correctly identified on Chain of Custody? No 🗆 14. Is it clear what analyses were requested? Checked by: No 🗌 Yes 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) NA Yes No 🗆 16. Was client notified of all discrepancies with this order? Person Notified: Date: eMail Phone Fax In Person By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date 4.1 Good Yes

Chair	າ-of-Cເ	ustody Record	Turn-Around	Time:		HALL ENVIRONME					4FR	ITAI							
Client: Ruly	Engin	earing, LLC	★ Standard	□ Rush	1 pm 1 141														
	0	7,	Project Name):	Mary Mary														-
Nailing Addres	s: 501 A	lirport Dr. Suite 205	Enterori	se Jicari	11a 1265 #13	www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 8						109							
		M 87401	Project #:		NO. 1		Tel. 505-345-3975 Fax 505-345-4107												
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mail or Fax#:	hwoods @	ruleing ineuring, com	Project Mana	ger:		=	(ylu	THE STATE OF THE S		ì	-		04)	60					
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Accreditation NELAP	□ Othe	er	Sampler: Hea	ather Woo	ds		TPH	0 / DF	8.1)	14.1	8270 S 3, NO ₂ , 7 8082 A)						ŝ		
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Date Time		Sample Request ID		Preservative Type		BTEX +	BTEX + MTBE	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
/3/2015 131	5 501	sc-9	4 02 Glas (1)	Non	-001	X	-	X											
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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

NOV 1 3 2015

OIL CONS. DIV DIST. 3

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

		F	Releas	e Notifica	ation	and C	orrective	Acti	on			
					OP	ERATO	2] Initial	Report	\boxtimes	Final Report
		Enterprise F					homas Long					
		Ave, Farmin	gton, NM	87401			No. 505-599-		horing D	linalina		
Facility Na	me: Later	ai K-51				-acility Ty	oe: Natural G	as Gat	nering P	ipeline		
Surface O	wner: Stat	e Of New N	lexico	Mineral O	wner:	State Of I	New Mexico		API N	0.		
				LOCA	TION	OF REI	EASE					
Unit Letter O	Section 36	Township 26N	Range 6W	Feet from the 860'	North	South	Feet from the 1450'	East/ Line	West	County Rio Arri	iba	
A POR			La			Longitud	le <u>-107.4177</u> FASE	26				
Type of Rel	ease: Natur	ral Gas and N	Natural Ga			Volume o	f Release 0.96 BBLs Liquid		Volume	Recovere	d: Non	e
		ernal Corrosio	on			7/31/15 @	Hour of Occurr 2:45 p.m.		7/31/15	d Hour of @ 3:35 p.	.m.	
Was Immed	diate Notice	Given?	s 🗌 No	Not Req	uired	If YES, To	o Whom? Cour	tesy No	tification -	- Cory Smi	th – NA	MOCD
By Whom?							Time 8/8/15 at					
Was a Wate	ercourse Re		☐ Yes	⊠ No		If YES, V	olume Impactin	g the W	atercours	е		
If a Waterco	ourse was Ir	mpacted, Des	scribe Full	v.*							TOTE	
Describe Arapproximate and transport	rea Affected ely 43 feet lo pried to a Ne	vas isolated, gust 12, 2015 I and Cleanu ong by 31 fee	blown dow 5. p Action: T et wide by	vn, locked out a	nt mass	ged out for was remo	ved by mechan 4 cubic yards of A third party of	ical exc	avation. T	rns. Repai	ccavatio	remediation on measured excavated
rules and re which may relieve the o ground water	rtify that the egulations a endanger po operator of I er, surface v	Il operators a ublic health o liability should water, human	are required or the envir d their ope n health or	d to report and ronment. The a erations have fa the environme	or file of accepta ailed to ent. In a	certain rele ance of a C adequately addition, N	st of my knowle ase notification -141 report by to investigate and MOCD acceptal aws and/or region	s and po the NMO d remed nce of a	erform cor OCD mark liate conta C-141 re	rective ac ed as "Fin amination t	tions for al Report that pos	or releases ort" does not se a threat to
Signature:	Yan	~ Fre	ldo				OIL CON			DIVISI	ON	[1
Printed Nar	ne. Jon E. F	ields			A	Approved b	y Environmenta	I Speci	alist:	re/	Vi	
Title: Direct	or, Environr	nental			A	Approval Da	ate: /2/28/	5	Expiration	Date.		
E-mail Addr	ess:jefields	@eprod.com	ı			Conditions	of Approval:			Attache	ed 🗆	
Date: /	1-6-	2015	Phon	o· (713)381_66	884							

* Attach Additional Sheets If Necessary

#DCS1523031446





CORRECTIVE ACTION REPORT

Property:

Lateral K-51 (2015) Pipeline Release SE 1/4, S36 T26N R6W Rio Arriba County, New Mexico

> September 29, 2015 Apex Project No. 7250415018

> > Prepared for:

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

Prepared by:

Ranee Deechilly Environmental Scientist

Kyle Summers, CPG

Branch Manager/Senior Geologist

Mymms

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3.0	3.1 3.2 3.3	ONSE ACTIONS2Soil Excavation Activities2Soil Sampling Program3Laboratory Analytical Methods3							
4.0	DATA 4.1	EVALUATION							
5.0	FINDIN	NGS AND RECOMMENDATIONS4							
6.0	STANI	DARD OF CARE, LIMITATIONS, AND RELIANCE							
LIST	OF AP	PENDICES							
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Appe	endix B	: Executed C-138 Solid Waste Acceptance Form							
Appe	ndix C	: Photographic Documentation							
Appe	ndix D	: Table							
Appe	ndix E	Laboratory Analytical Reports & Chain of Custody Documentation							



CORRECTIVE ACTION REPORT

Lateral K-51 (2015) Pipeline Release SE 1/4, S36 T26N R6W Rio Arriba County, New Mexico

Apex Project No. 7250415018

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral K-51 pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of Section 36 in Township 26 North and Range 6 West in rural Rio Arriba County, New Mexico (36.43886N, 107.41772W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

On July 31, 2015, a natural gas pipeline release was reported by Enterprise personnel. On August 10, 2015, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 20 feet of pipe. Natural gas was released from the pipeline as a result of internal corrosion. The surface expression of the release was characterized by distressed vegetation in the vicinity of the release.

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

1.2 Project Objective

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

2.0 SITE RANKING

In accordance with the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex TITAN, Inc. (Apex) utilized the general site characteristics obtained during the completion of corrective action activities and information available from the Office of the New Mexico Office of the State Engineer (OSE) to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



Ranking	g Criteria	No. 3 Personal State of the last of the la	Ranking Score			
	<50 feet	20				
Depth to Groundwater	50 to 99 feet	10	20			
	>100 feet	0				
Wellhead Protection Area • <1,000 feet from a water	Yes	20	0			
source, or; <200 feet from private domestic water source.	No	0				
	<200 feet	20				
Distance to Surface Water Body	200 to 1,000 feet	10	20			
	>1,000 feet 0					
Total Ran		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:

- Due to the proximity of Tapicito Creek, and based on recorded depth to groundwater from a site located at a similar proximity to Tapicito Creek and slightly over one mile to the west, depth to groundwater is anticipated to be is less than 50 feet bgs, resulting in a ranking of "20" for depth to groundwater.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking of "0".
- The release point is located approximately 200 feet from Tapicito Creek, resulting in a distance to surface water ranking of "20".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

Beginning on August 10, 2015, Enterprise initiated excavation activities at the Site to repair the subsurface leak, and remediate potential hydrocarbon impact. The pipeline was subsequently repaired. Natural gas was released from the pipeline as a result of internal corrosion. The surface expression of the release was characterized by distressed vegetation in the vicinity of the release. During corrective action activities, TRC Construction, Inc., provided heavy equipment and labor support. Kyle Summers and Ranee Deechilly, Apex environmental professionals, provided environmental support.

Excavation activities to expose the pipeline were completed on August 10, 2015, and were completed on August 12, 2015. The final excavation measured approximately 43 feet long by 31 feet wide at the maximum extents, with a total depth ranging from six (6) feet to 9.5 feet bgs. Confirmation soil samples SC-1 through SC-4 were collected from the eastern portion of the excavation on August 10, 2015, and confirmation samples C-1 through C-11 were collected from the remaining portions of the excavation on August 12, 2015.

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

A total of approximately 404 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 location of the excavated area in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix C.

3.2 Soil Sampling Program

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

Apex's soil sampling program included the collection of a fifteen (15) confirmation soil samples (SC-1 through SC-4) and (C-1 through C-11) from the resulting excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

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

3.3 Laboratory Analytical Methods

The confirmation soil samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) SW-846 Method #8021. The soil samples were also analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

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

4.0 DATA EVALUATION

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

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or laboratory reporting limits associated with the final confirmation samples (SC-1 through SC-4) and (C-1 through C-11) collected from the excavation 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 did not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL of 10 milligram per kilogram (mg/kg).



- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.30 mg/kg (C-8), which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 29 mg/kg (C-11), 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 for disposal/remediation.

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral K-51 pipeline release site is located within the Enterprise ROW in the SE ¼ of Section 36 in Township 26 North and Range 6 West in rural Rio Arriba County, New Mexico. The Site is located on land managed by the BLM. The Site is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

On July 31, 2015, a natural gas pipeline release was reported by Enterprise personnel. On August 10, 2015, Enterprise initiated excavation activities to facilitate the repair of the pipeline, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 20 feet of pipe. Natural gas was released from the pipeline as a result of internal corrosion. The surface expression of the release was characterized by distressed vegetation in the vicinity of the release.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty sand and silty clay.
- The final excavation measured approximately 43 feet long by 31 feet wide at the maximum extents, with a total depth of approximately 9.5 feet bgs.
- Prior to backfilling, fifteen (15) confirmation samples soil samples were collected from the resulting 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 404 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill, and contoured to surrounding grade.

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

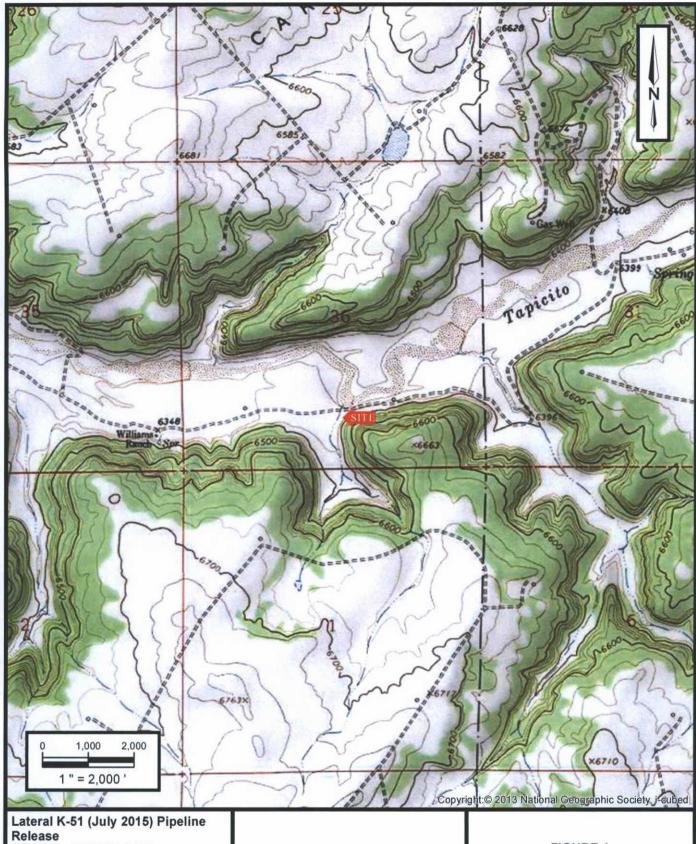


6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

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

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



SE1/4 Sec36 T26N R6W Rio Arriba County, New Mexico 36.43886N, 107.41772W



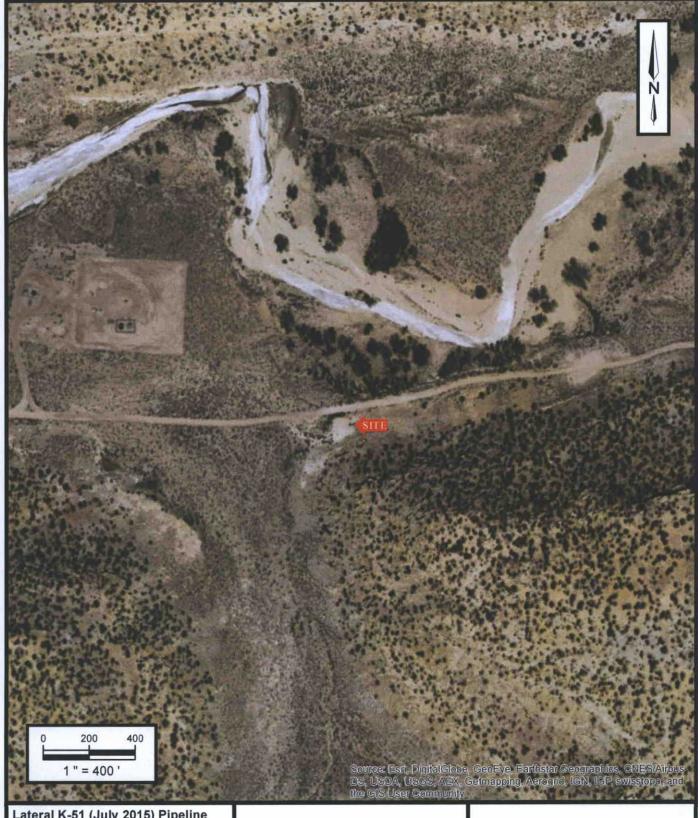
Apex TITAN, Inc.

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

FIGURE 1

Topographic Map Gonzales Mesa, NM Quadrangle 1963

Project No. 7250415018



Lateral K-51 (July 2015) Pipeline Release

SE1/4 Sec36 T26N R6W Rio Arriba County, New Mexico 36.43886N, 107.41772W

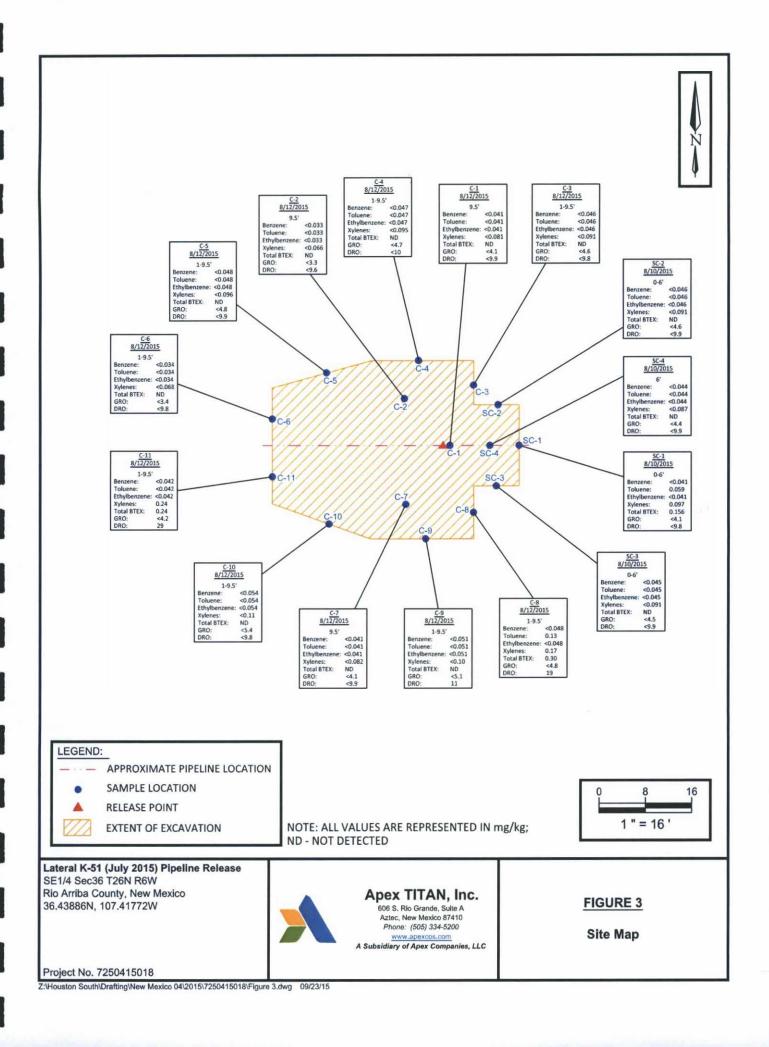


Apex TITAN, Inc. 606 South Rio Grande, Sulte A Aztec, NM 87410 Phone: (505) 334-5200 www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 2

Site Vicinity Map

Project No. 7250415018



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

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-138
Revised August 1, 2011
*Surface Waste Management Facility Operator

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site: Lateral K-51 Pipeline Aug 2015
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter O Section 36 Township 26 North Range 6 West; 36.438860, -107.417726
4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pineline. 5. Estimated Volume 50 yd bbls Known Volume (to be entered by the operator at the end of the haul) yd bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15,36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I, 8-11-15, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to
complete the required testing/sign the Generator Waste Testing Certification.
I,
6. Transporter: West State Entergy Contractors Cotant, LdC, Rock Springs, Envirotech, TRC, Kelly Oilfield, 3-E Energy, HBL
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011 Address of Facility: Hilltop, NM
Method of Treatment and/or Disposal: ☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other
Waste Acceptance Status:
APPROVED DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Liese TITLE: Land Form Administration A

Surface Wase Management Facility Authorized Agent

TELEPHONE NO.: 505-632-0615



Photograph 1

View of the partially exposed Lateral K-51 pipeline and initial excavation, facing north.



Photograph 2

View of the final excavation and repaired pipeline, facing north.



Photograph 3

View of the final excavation, facing east.





SITE PHOTOGRAPHS

Lateral K-51 (July 2015) Pipeline Release

Photograph 4

View of the final excavation, facing west.





TABLE 1 Lateral K-51 (July 2015) Pipeline Release SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
The state of the s	A CONTRACTOR OF THE PARTY OF TH	Natural Resources vision, Remediation	10	NE	NE	NE	50	1	00
				Excavation Co	nfirmation Samples			The state of the s	M MESSEL RO
SC-1	8.10.15	0 to 6	<0.041	0.059	<0.041	0.097	0.156	<4.1	<9.8
SC-2	8.10.15	0 to 6	<0.046	<0.046	<0.046	<0.091	ND	<4.6	<9.9
SC-3	8.10.15	0 to 6	<0.045	<0.045	<0.045	<0.091	ND	<4.5	<9.9
SC-4	8.10.15	6	<0.044	<0.044	<0.044	<0.087	ND	<4.4	<9.9
C-1	8.12.15	9.5	<0.041	<0.041	<0.041	<0.081	ND	<4.1	<9.9
C-2	8.12.15	9.5	< 0.033	<0.033	<0.033	<0.066	ND	<3.3	<9.6
C-3	8.12.15	1 to 9.5	<0.046	<0.046	<0.046	<0.091	ND	<4.6	<9.8
C-4	8.12.15	1 to 9.5	<0.047	<0.047	<0.047	< 0.095	ND	<4.7	<10
C-5	8.12.15	1 to 9.5	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.9
C-6	8.12.15	1 to 9.5	<0.034	<0.034	<0.034	<0.068	ND	<3.4	<9.8
C-7	8.12.15	9.5	<0.041	<0.041	<0.041	<0.082	ND	<4.1	<9.9
C-8	8.12.15	1 to 9.5	<0.048	0.13	<0.048	0.17	0.30	<4.8	19
C-9	8.12.15	1 to 9.5	<0.051	<0.051	<0.051	<0.10	ND	<5.1	11
C-10	8.12.15	1 to 9.5	<0.054	<0.054	<0.054	<0.11	ND	<5.4	<9.8
C-11	8.12.15	1 to 9.5	< 0.042	<0.042	<0.042	0.24	0.24	<4.2	29

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

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established



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

August 12, 2015

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

FAX

RE: K-51 (2015)

OrderNo.: 1508403

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/11/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1508403

Date Reported: 8/12/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: K-51 (2015)

Lab ID: 1508403-001

Client Sample ID: SP-1

Collection Date: 8/10/2015 2:40:00 PM

Matrix: MEOH (SOIL) Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL (Qual U	nits	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s				Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.7	m	ng/Kg	1	8/11/2015 11:05:14 AM	20702
Surr: DNOP	70.9	57.9-140	%	&REC	1	8/11/2015 11:05:14 AM	20702
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	NSB
Gasoline Range Organics (GRO)	4.6	4.4	m	ng/Kg	1	8/11/2015 10:35:15 AM	20686
Surr: BFB	96.5	75.4-113	%	&REC	1	8/11/2015 10:35:15 AM	20686
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.044	m	ng/Kg	1	8/11/2015 10:35:15 AM	20686
Toluene	0.11	0.044	m	ng/Kg	1	8/11/2015 10:35:15 AM	20686
Ethylbenzene	0.050	0.044	m	ng/Kg	1	8/11/2015 10:35:15 AM	20686
Xylenes, Total	0.65	0.087	m	ng/Kg	1	8/11/2015 10:35:15 AM	20686
Surr: 4-Bromofluorobenzene	96.0	80-120	%	&REC	1	8/11/2015 10:35:15 AM	20686

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508403

12-Aug-15

Client:

APEX TITAN

Project:

K-51 (2015)

Sample ID MB-20686

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

Client ID:

Analyte

Surr: BFB

PBS

Batch ID: 20686

RunNo: 28106

SPK value SPK Ref Val

SPK value SPK Ref Val

0

HighLimit

Prep Date: 8/10/2015

Analysis Date: 8/11/2015

Result

ND

900

SeqNo: 846886

Units: mg/Kg

113

RPDLimit

Gasoline Range Organics (GRO)

5.0 1000

89.6

%REC

75.4

%RPD

Qual

Sample ID LCS-20686

SampType: LCS

PQL

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS

Batch ID: 20686

RunNo: 28106

Prep Date: 8/10/2015

Analysis Date: 8/11/2015

PQL

5.0

SeqNo: 846887 %REC

Units: mg/Kg

HighLimit %RPD **RPDLimit** Qual

Analyte Gasoline Range Organics (GRO) Surr: BFB

24 1000

Result

25.00 1000 97.8 99.7

79.6 75.4

LowLimit

122

113

Qualifiers:

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

Page 2 of 3

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508403

12-Aug-15

Qual

Qual

Client:

APEX TITAN

Project:

K-51 (2015)

Sample ID MB-20686 Client ID: PBS Prep Date: 8/10/2015 SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

RunNo: 28106

Batch ID: 20686 Analysis Date: 8/11/2015

SeqNo: 846916

LowLimit

80

Units: mg/Kg

%RPD **RPDLimit** HighLimit

PQL SPK value SPK Ref Val %REC Analyte Result 0.050 Benzene ND ND 0.050 Toluene ND 0.050 Ethylbenzene Xylenes, Total ND 0.10

Surr: 4-Bromofluorobenzene Sample ID LCS-20686

Client ID: LCSS

SampType: LCS

Batch ID: 20686

0.95

TestCode: EPA Method 8021B: Volatiles

RunNo: 28106

95.5

Prep Date: 8/10/2015 Analysis Date: 8/11/2015

1.000

SeqNo: 846917

Units: mg/Kg

120

SPK value SPK Ref Val PQL %REC %RPD **RPDLimit** Analyte Result LowLimit HighLimit Benzene 1.0 0.050 1.000 0 103 76.6 128 Toluene 1.0 0.050 1.000 0 101 75 124 Ethylbenzene 1.0 0.050 1.000 0 99.8 79.5 126 Xylenes, Total 3.2 0.10 3.000 0 107 78.8 124 0.98 Surr: 4-Bromofluorobenzene 1.000 98.0 80 120

Qualifiers:

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

Page 3 of 3



Hali Environmental Analysis Laboratory 4961 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: APEX AZTEC	Work Order Number:	1508403		RoptNo	1
Received by/date: AG	08/11/15				
Logged By Ashley Gallegos	8/11/2015 7:40:00 AM		A		
Completed By: Ashley Gallegos	8/11/2015 8:07:01 AM		A T		
Reviewed By:	08/11/15		U		
Chain of Custody	coffet)				
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 sample:	5?	Yes 🗹	No 🗆	NA 🗆	
5. Were all samples received at a temperatu	re 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	i(s)?	Yes 🗸	No 🗌		
8. Are samples (except VOA and ONG) prop	erly 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 bro	ken?	Yes	No V	# of preserved	
				bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No 🗔	for pH: (<2 c	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	n this order?	Yes	No 🗆	NA 🗸	
Person Notified: By Whom:	Date	eMail	Phone Fax	In Person	
Regarding	VIO. 1	1 CHILLIA			
Client Instructions:					
17. Additional remarks:					
18. Cooler Information					
	Seal Intact Seal No	Seal Date	Signed By		
1 1.0 Good Y	es				

			CHAIN OF CUSTODY RECORD
Project Manager Summer 1 Sampler's Name Summer 1	Sampler's/Signature	ANALYSIS REQUESTED	Lab use only Due Date: Temp. of coolers when received (C°): 1 2 3 4 5 Page of
Proj. No. Project Name	(2015) No/Type of Containers	1 KW 1 1 1 1 1	
	Lks of Samble(s) Start A AG VA AG Start A AG O Puth AG O	66////	Lab Sample ID (Lab Use Only)
3 0/16/10 Y SF-			1508403 -001
	ALEA		
	NFS		
	MS		
Turn around time Normal 25% Rush	350% Rush 2 100% Rush Same Day		
Reindurshed by (Signature)	Time: Received by: (Signature) Date: / SILIK	Time: NOTES: 11 Tan	N22228
Rindrickel 8/10/15/17	Time: Received by: (Signature) Date: 8/10/15		N22228
Relinquished by (Signature) Relinquished by (Signature) Date: Date:	Time: Received by: (Signature) Amyallas OS/11/15 Time: Received by: (Signature) Date:	Time: PMCH	
Matrix WW - Wastewater W - Water	S - Soil SD - Solid L - Liquid A - Air Bag C - Cha	rcoal tube SL - studge 0 - Oil	



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

August 12, 2015

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

FAX

RE: K-51 (2015)

OrderNo.: 1508406

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/11/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1508406

Date Reported: 8/12/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SC-1

Project: K-51 (2015)

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

Lab ID:

1508406-001

Matrix: MEOH (SOIL) Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANIC	s			Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/11/2015 11:26:38 AM	20702
Surr: DNOP	86.2	57.9-140	%REC	. 1	8/11/2015 11:26:38 AM	20702
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	8/11/2015 11:00:04 AM	20686
Surr: BFB	88.5	75.4-113	%REC	1	8/11/2015 11:00:04 AM	20686
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.041	mg/Kg	1	8/11/2015 11:00:04 AM	20686
Toluene	0.059	0.041	mg/Kg	1	8/11/2015 11:00:04 AM	20686
Ethylbenzene	ND	0.041	mg/Kg	1	8/11/2015 11:00:04 AM	20686
Xylenes, Total	0.097	0.083	mg/Kg	1	8/11/2015 11:00:04 AM	20686
Surr: 4-Bromofluorobenzene	94.3	80-120	%REC	1	8/11/2015 11:00:04 AM	20686

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

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

Lab Order 1508406

Date Reported: 8/12/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: K-51 (2015)

Lab ID: 1508406-002

Client Sample ID: SC-2

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

Matrix: MEOH (SOIL) Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	s			Analyst	КЈН
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/11/2015 11:47:55 AM	20702
Surr: DNOP	82.6	57.9-140	%REC	1	8/11/2015 11:47:55 AM	20702
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/11/2015 11:24:52 AM	20686
Surr: BFB	90.5	75.4-113	%REC	1	8/11/2015 11:24:52 AM	20686
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.046	mg/Kg	1	8/11/2015 11:24:52 AM	20686
Toluene	ND	0.046	mg/Kg	1	8/11/2015 11:24:52 AM	20686
Ethylbenzene	ND	0.046	mg/Kg	1	8/11/2015 11:24:52 AM	20686
Xylenes, Total	ND	0.091	mg/Kg	1	8/11/2015 11:24:52 AM	20686
Surr: 4-Bromofluorobenzene	96.7	80-120	%REC	1	8/11/2015 11:24:52 AM	20686

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

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

Lab Order 1508406

Date Reported: 8/12/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: K-51 (2015)

Lab ID: 1508406-003

Client Sample ID: SC-3

Collection Date: 8/10/2015 2:20:00 PM

Matrix: MEOH (SOIL) Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANIC	S			Analyst	: KJH
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/11/2015 12:09:26 PM	20702
Surr: DNOP	78.4	57.9-140	%REC	1	8/11/2015 12:09:26 PM	20702
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	8/11/2015 11:49:46 AM	R28106
Surr: BFB	89.0	75.4-113	%REC	1	8/11/2015 11:49:46 AM	R28106
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.045	mg/Kg	1	8/11/2015 11:49:46 AM	20686
Toluene	ND	0.045	mg/Kg	1	8/11/2015 11:49:46 AM	20686
Ethylbenzene	ND	0.045	mg/Kg	1	8/11/2015 11:49:46 AM	20686
Xylenes, Total	ND	0.091	mg/Kg	1	8/11/2015 11:49:46 AM	20686
Surr: 4-Bromofluorobenzene	95.2	80-120	%REC	1	8/11/2015 11:49:46 AM	20686

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

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

Lab Order 1508406

Date Reported: 8/12/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SC-4

Project: K-51 (2015)

Collection Date: 8/10/2015 2:30:00 PM

Lab ID: 1508406-004

Matrix: MEOH (SOIL) Received Date: 8/11/2015 7:40:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	NGE ORGANIC	s			Analyst:	КЈН
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/11/2015 12:30:47 PM	20702
Surr: DNOP	81.3	57.9-140	%REC	1	8/11/2015 12:30:47 PM	20702
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	8/11/2015 12:14:37 PM	R28106
Surr: BFB	87.9	75.4-113	%REC	1	8/11/2015 12:14:37 PM	R28106
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.044	mg/Kg	1	8/11/2015 12:14:37 PM	20686
Toluene	ND	0.044	mg/Kg	1	8/11/2015 12:14:37 PM	20686
Ethylbenzene	ND	0.044	mg/Kg	1	8/11/2015 12:14:37 PM	20686
Xylenes, Total	ND	0.087	mg/Kg	1	8/11/2015 12:14:37 PM	20686
Surr: 4-Bromofluorobenzene	93.4	80-120	%REC	1	8/11/2015 12:14:37 PM	20686

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

ysis Laboratory, Inc.

WO#:

1508406

12-Aug-15

Client: APEX TITAN
Project: K-51 (2015)

Sample ID MB-20686 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: 20686 RunNo: 28106

Prep Date: 8/10/2015 Analysis Date: 8/11/2015 SeqNo: 846886 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Gasoline Range Organics (GRO) ND 5.0

Surr: BFB 900 1000 89.6 75.4 113

Sample ID LCS-20686 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: 20686 RunNo: 28106

Prep Date: 8/10/2015 Analysis Date: 8/11/2015 SeqNo: 846887 Units: mg/Kg

%REC HighLimit %RPD **RPDLimit** Qual Result PQL SPK value SPK Ref Val LowLimit Analyte 24 25.00 79.6 122 5.0 0 97.8 Gasoline Range Organics (GRO) Surr: BFB 1000 1000 99.7 75.4 113

Sample ID 5ML RB SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range

Client ID: PBS Batch ID: R28106 RunNo: 28106

Prep Date: Analysis Date: 8/11/2015 SeqNo: 846909 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

 Gasoline Range Organics (GRO)
 ND
 5.0

 Surr: BFB
 900
 1000
 89.9
 75.4

Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS Batch ID: R28106 RunNo: 28106

Prep Date: Analysis Date: 8/11/2015 SeqNo: 846910 Units: mg/Kg

%RPD **RPDLimit** Qual Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 25 98.3 79.6 122 Gasoline Range Organics (GRO) 5.0 25.00 1000 1000 101 75.4 113 Surr: BFB

Sample ID 1508406-003AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range

Client ID: SC-3 Batch ID: R28106 RunNo: 28106

Prep Date: Analysis Date: 8/11/2015 SeqNo: 846911 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 27 5.0 0 106 62.5 25.00 151 Surr: BFB 1000 1000 102 75.4 113

Sample ID 1508406-003AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range

Client ID: SC-3 Batch ID: R28106 RunNo: 28106

Prep Date: Analysis Date: 8/11/2015 SeqNo: 846912 Units: mg/Kg

Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 5 of 7

113

P Sample pH Not In Range

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508406

12-Aug-15

Client:

APEX TITAN

Project:

K-51 (2015)

Sample ID 1508406-003AMSD

SampType: MSD

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

SC-3

Batch ID: R28106

RunNo: 28106

Analysis Date: 8/11/2015

Prep Date:	Analysis Date: 8/11/2015		\$	SeqNo: 846912 Units: mg/h			(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.1	62.5	151	6.78	22.1		
Surr: BFB	980		1000		97.7	75.4	113	0	0		

Qualifiers:

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

Page 6 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508406

12-Aug-15

Client:

APEX TITAN

Project:

K-51 (2015)

Sample ID MB-20686

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

Client ID:

PBS

Batch ID: 20686

PQL

0.050

0.050

0.050

0.10

RunNo: 28106

Prep Date:

8/10/2015

Analysis Date: 8/11/2015

Result

ND

ND

ND

ND

0.95

SeqNo: 846916

Units: mg/Kg HighLimit

%RPD

%RPD

RPDLimit Qual

RPDLimit

Qual

Benzene Toluene

Analyte

Ethylbenzene Xylenes, Total

Surr: 4-Bromofluorobenzene

SampType: LCS

TestCode: EPA Method 8021B: Volatiles

SPK value SPK Ref Val %REC LowLimit

Sample ID LCS-20686

Client ID: LCSS

Batch ID: 20686

RunNo: 28106

95.5

80

120

Prep Date: 8/10/2015

Analysis Date: 8/11/2015

1.000

SeqNo: 846917

Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	1.0	0.050	1.000	0	103	76.6	128
Toluene	1.0	0.050	1.000	0	101	75	124
Ethylbenzene	1.0	0.050	1.000	0	99.8	79.5	126
Xylenes, Total	3.2	0.10	3.000	0	107	78.8	124
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	80	120

Qualifiers:

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

Page 7 of 7



нин ситимпении плаузы саобыю,

4901 Hawkins NE Albuquerque, NM 87169

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

Sample Log-In Check List

RcptNo: 1 APEX AZTEC Work Order Number 1508406 Client Name: Received by/date: Logged By: Ashley Gallegos 8/11/2015 7:40:00 AM 8/11/2015 8:22:02 AM Completed By: **Ashley Gallegos** 08/11/15 Reviewed By: Chain of Custody Not Present No 1. Custody seals intact on sample bottles? Yes No 🗌 Not Present Yes V 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In No NA _ Yes V 4. Was an attempt made to cool the samples? NA [5. Were all samples received at a temperature of >0° C to 6.0°C No _ Sample(s) in proper container(s)? 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? NA 🗌 No V 9. Was preservative added to bottles? No VOA Vials No _ 10. VOA vials have zero headspace? Yes 11. Were any sample containers received broken? Yes No V # of preserved bottles checked No _ for pH: 12. Does paperwork match bottle labels? Yes V (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 13. Are matrices correctly identified on Chain of Custody? No 14. Is it clear what analyses were requested? Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes No . NA V 16. Was client notified of all discrepancies with this order? Person Notified: Date In Person By Whom: Via: eMail Phone Fax Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition | Seal Intact | Seal No | Seal Date 1.0 Good Yes

			CHAIN OF CUSTODY RECORD
APEX Office Location Az lec Project Manager Sampler's Name Ny & Summers	Laboratory: HALL Address: AEQ Contact: And Freering a Phone: PO/SO#: 7250415018 Sampler's Signature	ANALYSIS REQUESTED A CO	Lab use only Due Date: Temp. of coolers / O when received (C°): 1 2 3 4 5 Page of of
Proj. No. Project Name 5/	(2015) No/Type of Containers		
	arks of Samble(s) Start Coop th Obepth Coop the		Lab Sample ID (Lab Use Only)
5 8/10/15 1400 X SC-1	1 1 3	1 XX	1508404-001
1410 SC-2			-003
1420 56-3			-003
W 4 14304 5C-4		44	-004
	VFS		
	43		
	350% Rush A100% Rush Same Oa	1 - 1	
(10115)	Time: Received by: (Signature) Date: 8/0/1)	Time: NOTES: 8:11 To	OM LANG 3
	Time: Recaived by: (Signature)/ Date: 750 Nut Walt: 8/14/15	1750 NONAFE#	on Long +N22228
Relinquished by (Signature) Date: Nuet Lice to 8/10/15 ZC	Time: (Received by: (Signature) 08 pate: 08 11 15	10740 Rush	
Relinquished by (Signature) Date:	Time: Received by: (Signature) Date:	Time:	
Matrix WW - Wastewater W - Water	S - Soil SD - Solid L - Liquid A - Air Bag C - Cl	narcoal tube SL - sludge O - Oil	



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

August 14, 2015

Kyle Summers

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Lateral K-51 (2015)

OrderNo.: 1508593

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 11 sample(s) on 8/13/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral K-51 (2015)

Lab ID: 1508593-001

Client Sample ID: C-1

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

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL Qu	nal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	8/13/2015 11:12:44 AM	R28180
Surr: BFB	107	70-130	%REC	1	8/13/2015 11:12:44 AM	R28180
EPA METHOD 8015M/D: DIESEL RA		Analyst	: KJH			
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/13/2015 10:19:25 AM	20758
Surr: DNOP	84.0	57.9-140	%REC	1	8/13/2015 10:19:25 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.041	mg/Kg	1	8/13/2015 11:12:44 AM	R28180
Toluene	ND	0.041	mg/Kg	1	8/13/2015 11:12:44 AM	R28180
Ethylbenzene	ND	0.041	mg/Kg	1	8/13/2015 11:12:44 AM	R28180
Xylenes, Total	ND	0.081	mg/Kg	1	8/13/2015 11:12:44 AM	R28180
Surr: 1,2-Dichloroethane-d4	97.1	70-130	%REC	1	8/13/2015 11:12:44 AM	R28180
Surr: 4-Bromofluorobenzene	98.5	70-130	%REC	1	8/13/2015 11:12:44 AM	R28180
Surr: Dibromofluoromethane	109	70-130	%REC	1	8/13/2015 11:12:44 AM	R28180
Surr: Toluene-d8	98.8	70-130	%REC	1	8/13/2015 11:12:44 AM	R28180

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-2

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:05:00 PM

Lab ID: 1508593-002

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst:	DJF
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/13/2015 11:40:18 AM	R28180
Surr: BFB	103	70-130	%REC	1	8/13/2015 11:40:18 AM	R28180
PA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst:	KJH
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	8/13/2015 10:40:46 AM	20758
Surr: DNOP	81.1	57.9-140	%REC	1	8/13/2015 10:40:46 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst:	DJF
Benzene	ND	0.033	mg/Kg	1	8/13/2015 11:40:18 AM	R28180
Toluene	ND	0.033	mg/Kg	1	8/13/2015 11:40:18 AM	R28180
Ethylbenzene	ND	0.033	mg/Kg	1	8/13/2015 11:40:18 AM	R28180
Xylenes, Total	ND	0.066	mg/Kg	1	8/13/2015 11:40:18 AM	R28180
Surr: 1,2-Dichloroethane-d4	108	70-130	%REC	1	8/13/2015 11:40:18 AM	R28180
Surr: 4-Bromofluorobenzene	95.6	70-130	%REC	1	8/13/2015 11:40:18 AM	R28180
Surr: Dibromofluoromethane	118	70-130	%REC	1	8/13/2015 11:40:18 AM	R28180
Surr: Toluene-d8	92.8	70-130	%REC	1	8/13/2015 11:40:18 AM	R28180

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral K-51 (2015)

Lab ID: 1508593-003

Client Sample ID: C-3

Collection Date: 8/12/2015 1:10:00 PM

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/13/2015 12:07:46 PM	A R28180
Surr: BFB	109	70-130	%REC	1	8/13/2015 12:07:46 PM	M R28180
EPA METHOD 8015M/D: DIESEL RA		Analys	t: KJH			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/13/2015 11:02:03 AM	A 20758
Surr: DNOP	80.4	57.9-140	%REC	1	8/13/2015 11:02:03 AM	A 20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.046	mg/Kg	1	8/13/2015 12:07:46 PM	A R28180
Toluene	ND	0.046	mg/Kg	1	8/13/2015 12:07:46 PM	/ R28180
Ethylbenzene	ND	0.046	mg/Kg	1	8/13/2015 12:07:46 PM	A R28180
Xylenes, Total	ND	0.091	mg/Kg	1	8/13/2015 12:07:46 PM	A R28180
Surr: 1,2-Dichloroethane-d4	109	70-130	%REC	1	8/13/2015 12:07:46 PM	/ R28180
Surr: 4-Bromofluorobenzene	93.6	70-130	%REC	1	8/13/2015 12:07:46 PM	/ R28180
Surr: Dibromofluoromethane	122	70-130	%REC	1	8/13/2015 12:07:46 PM	A R28180
Surr: Toluene-d8	99.8	70-130	%REC	1	8/13/2015 12:07:46 PM	A R28180

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-4

Project:

Lateral K-51 (2015)

Collection Date: 8/12/2015 1:15:00 PM

Lab ID:

1508593-004

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/13/2015 12:35:18 PM	1 R28180
Surr: BFB	104	70-130	%REC	1	8/13/2015 12:35:18 PM	1 R28180
PA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	t: KJH
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/13/2015 11:32:00 AM	1 20758
Surr: DNOP	80.6	57.9-140	%REC	1	8/13/2015 11:32:00 AM	1 20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.047	mg/Kg	1	8/13/2015 12:35:18 PM	R28180
Toluene	ND	0.047	mg/Kg	1	8/13/2015 12:35:18 PM	R28180
Ethylbenzene	ND	0.047	mg/Kg	1	8/13/2015 12:35:18 PM	R28180
Xylenes, Total	ND	0.095	mg/Kg	1	8/13/2015 12:35:18 PM	1 R28180
Surr: 1,2-Dichloroethane-d4	105	70-130	%REC	1	8/13/2015 12:35:18 PM	R28180
Surr: 4-Bromofluorobenzene	99.7	70-130	%REC	1	8/13/2015 12:35:18 PM	R28180
Surr: Dibromofluoromethane	117	70-130	%REC	1	8/13/2015 12:35:18 PM	1 R28180
Surr: Toluene-d8	94.9	70-130	%REC	1	8/13/2015 12:35:18 PM	1 R28180

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-5

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:20:00 PM

Lab ID: 1508593-005

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2015 1:02:48 PM	R28180
Surr: BFB	106	70-130	%REC	1	8/13/2015 1:02:48 PM	R28180
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: KJH
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/13/2015 11:53:12 AM	20758
Surr: DNOP	86.0	57.9-140	%REC	1	8/13/2015 11:53:12 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.048	mg/Kg	1	8/13/2015 1:02:48 PM	R28180
Toluene	ND	0.048	mg/Kg	1	8/13/2015 1:02:48 PM	R28180
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2015 1:02:48 PM	R28180
Xylenes, Total	ND	0.096	mg/Kg	1	8/13/2015 1:02:48 PM	R28180
Surr: 1,2-Dichloroethane-d4	106	70-130	%REC	1	8/13/2015 1:02:48 PM	R28180
Surr: 4-Bromofluorobenzene	97.7	70-130	%REC	1	8/13/2015 1:02:48 PM	R28180
Surr: Dibromofluoromethane	120	70-130	%REC	1	8/13/2015 1:02:48 PM	R28180
Surr: Toluene-d8	94.1	70-130	%REC	1	8/13/2015 1:02:48 PM	R28180

Matrix: SOIL

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-6

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:25:00 PM

Lab ID: 1508593-006

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	8/13/2015 1:30:19 PM	R28180
Surr: BFB	104	70-130	%REC	1	8/13/2015 1:30:19 PM	R28180
PA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: KJH
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/13/2015 12:14:29 PM	20758
Surr: DNOP	88.9	57.9-140	%REC	1	8/13/2015 12:14:29 PM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.034	mg/Kg	1	8/13/2015 1:30:19 PM	R28180
Toluene	ND	0.034	mg/Kg	1	8/13/2015 1:30:19 PM	R28180
Ethylbenzene	ND	0.034	mg/Kg	1	8/13/2015 1:30:19 PM	R28180
Xylenes, Total	ND	0.068	mg/Kg	1	8/13/2015 1:30:19 PM	R28180
Surr: 1,2-Dichloroethane-d4	115	70-130	%REC	1	8/13/2015 1:30:19 PM	R28180
Surr: 4-Bromofluorobenzene	99.0	70-130	%REC	1	8/13/2015 1:30:19 PM	R28180
Surr: Dibromofluoromethane	127	70-130	%REC	1	8/13/2015 1:30:19 PM	R28180
Surr: Toluene-d8	96.5	70-130	%REC	1	8/13/2015 1:30:19 PM	R28180

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral K-51 (2015)

Lab ID: 1508593-007

Client Sample ID: C-7

Collection Date: 8/12/2015 1:30:00 PM

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE		į.		Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	8/13/2015 1:57:55 PM	R28180
Surr: BFB	107	70-130	%REC	1	8/13/2015 1:57:55 PM	R28180
EPA METHOD 8015M/D: DIESEL RA		Analyst	: KJH			
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/13/2015 10:21:10 AM	20758
Surr: DNOP	104	57.9-140	%REC	1	8/13/2015 10:21:10 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst: DJF	
Benzene	ND	0.041	mg/Kg	1	8/13/2015 1:57:55 PM	R28180
Toluene	ND	0.041	mg/Kg	1	8/13/2015 1:57:55 PM	R28180
Ethylbenzene	ND	0.041	mg/Kg	1	8/13/2015 1:57:55 PM	R28180
Xylenes, Total	ND	0.082	mg/Kg	1	8/13/2015 1:57:55 PM	R28180
Surr: 1,2-Dichloroethane-d4	113	70-130	%REC	1	8/13/2015 1:57:55 PM	R28180
Surr: 4-Bromofluorobenzene	101	70-130	%REC	1	8/13/2015 1:57:55 PM	R28180
Surr: Dibromofluoromethane	125	70-130	%REC	1	8/13/2015 1:57:55 PM	R28180
Surr: Toluene-d8	94.0	70-130	%REC	1	8/13/2015 1:57:55 PM	R28180

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-8

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:35:00 PM

Lab ID: 1508593-008

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analysi	: DJF
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/13/2015 2:25:34 PM	R28180
Surr: BFB	107	70-130	%REC	1	8/13/2015 2:25:34 PM	R28180
EPA METHOD 8015M/D: DIESEL RA		Analyst	: KJH			
Diesel Range Organics (DRO)	19	9.6	mg/Kg	1	8/13/2015 10:47:40 AM	20758
Surr: DNOP	108	57.9-140	%REC	1	8/13/2015 10:47:40 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.048	mg/Kg	1	8/13/2015 2:25:34 PM	R28180
Toluene	0.13	0.048	mg/Kg	1	8/13/2015 2:25:34 PM	R28180
Ethylbenzene	ND	0.048	mg/Kg	1	8/13/2015 2:25:34 PM	R28180
Xylenes, Total	0.17	0.095	mg/Kg	1	8/13/2015 2:25:34 PM	R28180
Surr: 1,2-Dichloroethane-d4	109	70-130	%REC	1	8/13/2015 2:25:34 PM	R28180
Surr: 4-Bromofluorobenzene	96.9	70-130	%REC	1	8/13/2015 2:25:34 PM	R28180
Surr: Dibromofluoromethane	115	70-130	%REC	1	8/13/2015 2:25:34 PM	R28180
Surr: Toluene-d8	93.6	70-130	%REC	1	8/13/2015 2:25:34 PM	R28180

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Lateral K-51 (2015)

Lab ID: 1508593-009

Client Sample ID: C-9

Collection Date: 8/12/2015 1:40:00 PM

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	5.1	mg/Kg	1	8/13/2015 2:53:12 PM	R28180
Surr: BFB	106	70-130	%REC	1	8/13/2015 2:53:12 PM	R28180
EPA METHOD 8015M/D: DIESEL RA		Analyst	: KJH			
Diesel Range Organics (DRO)	11	10	mg/Kg	1	8/13/2015 11:14:42 AM	20758
Surr: DNOP	109	57.9-140	%REC	1	8/13/2015 11:14:42 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.051	mg/Kg	1	8/13/2015 2:53:12 PM	R28180
Toluene	ND	0.051	mg/Kg	1	8/13/2015 2:53:12 PM	R28180
Ethylbenzene	ND	0.051	mg/Kg	1	8/13/2015 2:53:12 PM	R28180
Xylenes, Total	ND	0.10	mg/Kg	1	8/13/2015 2:53:12 PM	R28180
Surr: 1,2-Dichloroethane-d4	106	70-130	%REC	1	8/13/2015 2:53:12 PM	R28180
Surr: 4-Bromofluorobenzene	98.2	70-130	%REC	1	8/13/2015 2:53:12 PM	R28180
Surr: Dibromofluoromethane	123	70-130	%REC	1	8/13/2015 2:53:12 PM	R28180
Surr: Toluene-d8	96.4	70-130	%REC	1	8/13/2015 2:53:12 PM	R28180

Matrix: SOIL

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-10

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:45:00 PM

Lab ID: 1508593-010

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	: DJF
Gasoline Range Organics (GRO)	ND	5.4	mg/Kg	1	8/13/2015 10:45:19 AM	R28180
Surr: BFB	101	70-130	%REC	1	8/13/2015 10:45:19 AM	R28180
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	s			Analyst	: KJH
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/13/2015 11:41:12 AM	20758
Surr: DNOP	104	57.9-140	%REC	1	8/13/2015 11:41:12 AM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.054	mg/Kg	1	8/13/2015 10:45:19 AM	R28180
Toluene	ND	0.054	mg/Kg	1	8/13/2015 10:45:19 AM	R28180
Ethylbenzene	ND	0.054	mg/Kg	1	8/13/2015 10:45:19 AM	R28180
Xylenes, Total	ND	0.11	mg/Kg	1	8/13/2015 10:45:19 AM	R28180
Surr: 1,2-Dichloroethane-d4	101	70-130	%REC	1	8/13/2015 10:45:19 AM	R28180
Surr: 4-Bromofluorobenzene	102	70-130	%REC	1	8/13/2015 10:45:19 AM	R28180
Surr: Dibromofluoromethane	114	70-130	%REC	1	8/13/2015 10:45:19 AM	R28180
Surr: Toluene-d8	96.7	70-130	%REC	1	8/13/2015 10:45:19 AM	R28180

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508593

Date Reported: 8/14/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-11

Project: Lateral K-51 (2015)

Collection Date: 8/12/2015 1:50:00 PM

Lab ID:

1508593-011

Matrix: SOIL

Received Date: 8/13/2015 7:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	8/13/2015 3:20:51 PM	R28180
Surr: BFB	103	70-130	%REC	1	8/13/2015 3:20:51 PM	R28180
EPA METHOD 8015M/D: DIESEL R.	ANGE ORGANIC	s			Analyst	: KJH
Diesel Range Organics (DRO)	29	9.8	mg/Kg	1	8/13/2015 12:07:59 PM	20758
Surr: DNOP	98.1	57.9-140	%REC	1	8/13/2015 12:07:59 PM	20758
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	DJF
Benzene	ND	0.042	mg/Kg	1	8/13/2015 3:20:51 PM	R28180
Toluene	ND	0.042	mg/Kg	1	8/13/2015 3:20:51 PM	R28180
Ethylbenzene	ND	0.042	mg/Kg	1	8/13/2015 3:20:51 PM	R28180
Xylenes, Total	0.24	0.085	mg/Kg	1	8/13/2015 3:20:51 PM	R28180
Surr: 1,2-Dichloroethane-d4	108	70-130	%REC	1	8/13/2015 3:20:51 PM	R28180
Surr: 4-Bromofluorobenzene	96.8	70-130	%REC	1	8/13/2015 3:20:51 PM	R28180
Surr: Dibromofluoromethane	124	70-130	%REC	1	8/13/2015 3:20:51 PM	R28180
Surr: Toluene-d8	93.8	70-130	%REC	1	8/13/2015 3:20:51 PM	R28180

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 11 of 15 J
- Sample pH Not In Range
- Reporting Detection Limit

APEX TITAN

Client:

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508593

14-Aug-15

Project:	Lateral K	-51 (2015)									
Sample ID	MB-20758	SampTy	pe: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	PBS	Batch	ID: 20	758	F	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	SeqNo: 8	48519	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Surr: DNOP	Organics (DRO)	ND 8.1	10	10.00	_	81.1	57.9	140			
Sample ID	MB-20759	SampTy	pe: MI	BLK	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	PBS	Batch	ID: 20	759	F	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	SeqNo: 8	48520	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		7.5		10.00		75.4	57.9	140			
Sample ID	LCS-20758	SampTy	pe: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch	ID: 20	758	F	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	SeqNo: 8	48521	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Organics (DRO)	40	10	50.00	0	79.4	57.4	139			
Surr: DNOP		3.9		5.000		77.4	57.9	140			
Sample ID	LCS-20759	SampTy	pe: LC	s	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID:	LCSS	Batch	ID: 20	759	F	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	SeqNo: 8	48522	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		3.9		5.000		78.2	57.9	140			
Sample ID	1508593-001AMS	SampTy	pe: M	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	C-1	Batch	ID: 20	758	F	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	SeqNo: 8	49105	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	39	9.8	49.21	0	79.8	42.3	146			
Surr: DNOP		3.9		4.921		78.3	57.9	140			
Sample ID	1508593-001AMSI	SampTy	pe: M	SD	Tes	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID:	C-1	Batch	ID: 20	758	R	RunNo: 2	8160				
Prep Date:	8/13/2015	Analysis Da	ate: 8	13/2015	S	eqNo: 8	49108	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (Organics (DRO)	42	9.7	48.40	0	86.6	42.3	146	6.55	28.9	

Qualifiers:

Surr: DNOP

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

3.8

4.840

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

57.9

140

0

E Value above quantitation range

78.5

J Analyte detected below quantitation limits

Page 12 of 15

0

P Sample pH Not In Range

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508593

14-Aug-15

Client:

APEX TITAN

Project: Lateral K-51 (2015)

Sample ID rb	SampT	уре: МЕ	BLK	TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: PBS	Batch	h ID: R2	8180	F	RunNo: 2	8180							
Prep Date:	Analysis D	Date: 8/	13/2015	5	SeqNo: 8	49611	Units: mg/K	(g					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	ND	0.050											
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		98.2	70	130						
Surr: 4-Bromofluorobenzene	0.52		0.5000		105	70	130						
Surr: Dibromofluoromethane	0.53		0.5000		105	70	130						
Surr: Toluene-d8	0.51		0.5000		102	70	130						
	100		-111				CONTRACT WATER 7	12.02 Pa	200				
Sample ID 100ng Ics	Sampl	ype: LC	S	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List				
Sample ID 100ng Ics Client ID: LCSS	100	ype: LC n ID: R2			tCode: El RunNo: 2		8260B: Vola	tiles Short	List				
	100	n ID: R2	8180	F	1 370 (3)	8180	Units: mg/k		List				
Client ID: LCSS	Batch	n ID: R2	8180 13/2015	F	RunNo: 2	8180	Secretary des		RPDLimit	Qual			
Client ID: LCSS Prep Date:	Batch Analysis D	n ID: R2 Date: 8/	8180 13/2015	F	RunNo: 2 SeqNo: 8	8180 49615	Units: mg/K	(g		Qual			
Client ID: LCSS Prep Date: Analyte	Batch Analysis D Result	n ID: R2 Date: 8/	8180 13/2015 SPK value	SPK Ref Val	RunNo: 2 SeqNo: 8 %REC	8180 49615 LowLimit	Units: mg/K	(g		Qual			
Client ID: LCSS Prep Date: Analyte Benzene	Batch Analysis D Result	PQL 0.050	8180 13/2015 SPK value 1.000	SPK Ref Val	RunNo: 2 SeqNo: 8 %REC 108	8180 49615 LowLimit 70	Units: mg/K HighLimit	(g		Qual			
Client ID: LCSS Prep Date: Analyte Benzene Toluene	Batch Analysis D Result 1.1	PQL 0.050	8180 13/2015 SPK value 1.000 1.000	SPK Ref Val	RunNo: 2 SeqNo: 8 %REC 108 106	8180 49615 LowLimit 70 70	Units: mg/K HighLimit 130 130	(g		Qual			
Client ID: LCSS Prep Date: Analyte Benzene Toluene Surr: 1,2-Dichloroethane-d4	Batch Analysis D Result 1.1 1.1 0.51	PQL 0.050	8180 13/2015 SPK value 1.000 1.000 0.5000	SPK Ref Val	RunNo: 2 SeqNo: 8 %REC 108 106 103	8180 49615 LowLimit 70 70 70	Units: mg/K HighLimit 130 130	(g		Qual			
Client ID: LCSS Prep Date: Analyte Benzene Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	Batch Analysis D Result 1.1 1.1 0.51 0.55	PQL 0.050	8180 13/2015 SPK value 1.000 1.000 0.5000 0.5000	SPK Ref Val	RunNo: 2 SeqNo: 8 %REC 108 106 103 111	8180 49615 LowLimit 70 70 70 70	Units: mg/k HighLimit 130 130 130 130	(g		Qual			
Client ID: LCSS Prep Date: Analyte Benzene Toluene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	Result 1.1 1.1 0.51 0.55 0.57 0.49	PQL 0.050	8180 13/2015 SPK value 1.000 1.000 0.5000 0.5000 0.5000 0.5000	SPK Ref Val 0 0	RunNo: 2 SeqNo: 8 %REC 108 106 103 111 115 99.0	8180 49615 LowLimit 70 70 70 70 70 70	Units: mg/k HighLimit 130 130 130 130 130	%RPD	RPDLimit	Qual			

Sample ID 1508593-002ams	SampT	ype: MS	6	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: C-2	Batch	ID: R2	8180	F	RunNo: 2	8180				
Prep Date:	Analysis D	ate: 8/	13/2015	8	SeqNo: 8	49630	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.69	0.033	0.6579	0.01044	103	70	130			
Toluene	0.67	0.033	0.6579	0	102	65	138			
Surr: 1,2-Dichloroethane-d4	0.35		0.3290		106	70	130			
Surr: 4-Bromofluorobenzene	0.34		0.3290		102	70	130			
Surr: Dibromofluoromethane	0.40		0.3290		123	70	130			
Surr: Toluene-d8	0.30		0.3290		92.6	70	130			

Sample ID	1508593-002amsd	SampTy	pe: MS	SD	TestCode: EPA Method 8260B: Volatiles Short List										
Client ID:	C-2	Batch	D: R2	8180	R	tunNo: 2	8180								
Prep Date:		Analysis Da	te: 8/	13/2015	S	eqNo: 8	(g								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual				
Benzene		0.68	0.033	0.6579	0.01044	102	70	130	1.04	20					
Toluene		0.67	0.033	0.6579	0	101	65	138	0.686	20					

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 13 of 15

P Sample pH Not In Range

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508593 14-Aug-15

Client:

APEX TITAN

Project:

Lateral K-51 (2015)

Sample ID 1508593-002amsd

SampType: MSD

TestCode: EPA Method 8260B: Volatiles Short List

Client ID: C-2

Batch ID: R28180

RunNo: 28180

Prep Date:	Analysis D	ate: 8	/13/2015	8	SeqNo: 8	49631	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.36		0.3290		108	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.32		0.3290		96.7	70	130	0	0	
Surr: Dibromofluoromethane	0.39		0.3290		118	70	130	0	0	
Surr: Toluene-d8	0.31		0.3290		95.4	70	130	0	0	

Qualifiers:

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

Page 14 of 15

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508593 14-Aug-15

Client:

APEX TITAN

Project:	Lateral K	L-51 (2015	<u>(</u>)								
Sample ID	rb	Samp ⁻	Гуре: МІ	BLK	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	PBS	Batc	h ID: R2	8180	F	RunNo: 2	8180				
Prep Date:		Analysis [Date: 8	13/2015	8	SeqNo: 8	49636	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Rang	e Organics (GRO)	ND	5.0								
Surr: BFB		490		500.0		98.8	70	130			
Sample ID	2.5ug gro lcs	Samp ²	Type: LC	s	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	LCSS	Batc	h ID: R2	8180	F	RunNo: 2	8180				
Prep Date:		Analysis [Date: 8	13/2015	8	SeqNo: 8	49637	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Rang	e Organics (GRO)	26	5.0	25.00	0	102	70	123			
Surr: BFB		510		500.0		103	70	130			
Sample ID	1508593-001ams	Samp	Гуре: М	s	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	C-1	Batc	h ID: R2	8180	F	RunNo: 2	8180				
Prep Date:		Analysis [Date: 8	13/2015	8	SeqNo: 8	49638	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Rang	e Organics (GRO)	19	4.1	20.31	0	93.0	54.9	131			
Surr: BFB		430		406.2		106	70	130			
Sample ID	1508593-001ams	samp	Гуре: М	SD	Tes	tCode: El	PA Method	8015D Mod:	Gasoline	Range	
Client ID:	C-1	Batc	h ID: R2	8180	F	RunNo: 2	8180				
Prep Date:		Analysis [Date: 8	13/2015	S	SeqNo: 8	49639	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Rang	e Organics (GRO)	20	4.1	20.31	0	98.0	54.9	131	5.24	20	
Surr: BFB		440		406.2		109	70	130	0	0	

Qualifiers:

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

Page 15 of 15

- P Sample pH Not In Range
- Reporting Detection Limit



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Received by/date: HG 08//3//5				
Logged By: Anne Thorne 8/13/2015 7:00:00 A	AM	an Il		
Completed By: Anne Thorne 8/13/2015		am Il-		
Reviewed By: 2/18 9/13/15		UMU Ju		
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			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗆	
5. Were all samples received at a temperature of >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 🗹	4.4	
			# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗸	No L	for pH: (<2 or	>12 unless no
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:	
(II 10, 10th) Customer to addicization.)				
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:		ATTENDED STREET		
Client Instructions:				
17. Additional remarks:				
18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By		

				Marie Marie		和 End End											CHAIN OF CU	ISTODY RECORD
Offic Proje Samp	1250415018 Lateral 1					5	Laboratory: Address: _ Contact: _ Phone: _ PO/SO #: _ ampler's Signa	AN 72	244U 504	eem 150	ue, r	M			JESTED (AU)			Lab use only Due Date: Temp. of coolers when received (C°): 7 (2 3 4 5
Proi. N	lo.	Partie.	ALC: UNKNOWN	Proje	ect Na	ame	ite Carlo					Containers		Sazi	SILC TEH CO.	////		
Matrix	Dat	te	Time	OGE	Grab	Identifying Marks	s of Sample(s)	Start	End	VOA	A/G 1 LL.	250 ml Glass	P/O	17	9//	111	/ Lab Sam	ple ID (Lab Use Only)
5	8/12	2115	1300			C-1					1	1		XX			150859	3 -001
1	1		1305			C	l							XX				-602
			1310			C-	3					1		XY				-03
			1315			C-	4					1		XX				-204
			1320			(-	5					1		XX				705
			1325			C-	6					1		XX				-06
			1330			C-	7							XX				7007
			1335			C	-8						١	XY				US
			1340			C-						1	1	XX				709
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Samp	er's Name	Duc	hill	4	Sample	r's Signa	ature	hel	G					į	自	1/		//	//	//					
Proj. N			Proje	LO-	me Heral 1251 (201	5		No/Ty	ype of (Contain	ners		302,	が見る		//		//						
Matrix	Date	Time	COED	G r a b	Identifying Marks of Sar	mple(s)	Start	End	VOA	AG 11	250 ml	Glass	P/0	7	7	11		1	1		Lab	Sample	D (Lab Us	se Only)	
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OIL CONS. DIV DIST. 3

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 DEC 2 1 2015 Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

					0	PERATO	3		Initial	Report 🗵	Final Repor
Name of C	ompany:	Enterprise F	ield Ser	rices LLC		Contact: T	homas Long				
Address: 6	14 Reilly A	ve, Farmin	gton, NM	87401		Telephone	No. 505-599	-2286			
Facility Na	me: Jicari	lla F#3				Facility Type	oe: Natural G	as Gat	hering P	ipeline	
Surface Ov	wner: Jica	rilla Apach	e Tribe	Mineral (Owne	r: Jicarilla A	Apache Tribe		API No	0.	.*
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			-			N OF REI		1 =			2.45
Unit Letter C	Section 28	Township 26 N	Range 5 W	Feet from the 705	Lin	rth South e	Feet from the 1691	Line	Vest	County Rio Arriba	зC.
			L	atitude 36.4	6299	5 Longitud	le <u>-107.3680</u>	65			17#4
				NAT	URE	OF REL	EASE				
		al Gas and N		s Liquids		Volume of F 5-7 BBLS L	Release 9 MCF .iquids	Gas;	Section of the sectio	Recovered: No	-
Source of R	elease: Inte	rnal Corrosio	on			Date and H	our of Occurrent 10:36 a.m.	nce:		d Hour of Disc @ 11:15 a.m.	overy:
Was Immed	liate Notice			D N			Vhom? Courte	sy Notifi			al - JAEPO
Required		∐ Yes	S No	⊠ Not							4.
By Whom?							me 7/31/15 2:1				1242
Was a Wate	ercourse Re		Yes	⊠ No		If YES, Volu	ime Impacting	the Wat	ercourse		VC.
If a Waterco	urse was In	npacted, Des	cribe Full	y.*		L					
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Title: Directo	or, Environn	nental				Approval Da	ate: 1/4/10	6	Expiration	Date:	
E-mail Addre	ess:jefields(@eprod.com				Conditions	of Approval:			Attached [
Date: // Attach Addi	tional She	ets If Neces		e: (713)381-6		2303	1 141				(10)



OIL CONS. DIV DIST. 3
DEC 2 1 2015

CORRECTIVE ACTION REPORT

Property:

Jicarilla F#3 Pipeline Release NW 1/4, S28 T26N R5W Rio Arriba County, New Mexico

October 4, 2015 Apex Project No. 7250415019

Prepared for:

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

Prepared by:

Ranee Deechilly Environmental Scientist

Kyle Summers, CPG Branch Manager/Senior Geologist

Usmus

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	En				
Appendix D:		: Table			
Appendix E:		: Laboratory Analytical Reports &			
Appendix E:		Chain of Custody Documentation			



CORRECTIVE ACTION REPORT

Jicarilla F#3 Pipeline Release NW 1/4, S28 T26N R5W Rio Arriba County, New Mexico

Apex Project No. 7250415019

1.0 INTRODUCTION

1.1 Site Description & Background

The Jicarilla F#3 pipeline release site is located within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ of Section 28 in Township 26 North and Range 5 West in rural Rio Arriba County, New Mexico (36.46299N, 107.36806W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to a dirt road and is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

A natural gas leak on the lateral Jicarilla F #3 pipeline was reported to Enterprise on July 31, 2015 by a third party. Enterprise immediately isolated, blew down, and locked out the line. Beginning on August 25, 2015, Enterprise initiated excavation activities to facilitate the repair of the subsurface leak, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 40 feet of pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was characterized by soil discoloration and distressed vegetation in the vicinity of the release.

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

1.2 Project Objective

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

2.0 SITE RANKING

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



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

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

- No nearby water wells were identified on the OSE water rights website, however based on the proximity to both a small ephemeral wash and to Tapicito creek groundwater is estimated to be less than 50 feet below grade surface (bgs), resulting in a ranking of "20" for depth to groundwater.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site. These proximities result in a wellhead protection area ranking of "0".
- The release point is located approximately 840 feet from a small ephemeral wash that is identified as a "blue line" on the United States Geological Society topographic map, which drains into Tapicito Creek. This information supports a distance to surface water ranking of "10".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

A natural gas leak on the lateral Jicarilla F #3 pipeline was reported to Enterprise on July 31, 2015 by a third party. Enterprise immediately isolated, blew down, and locked out the line. Beginning on August 25, 2015, Enterprise initiated excavation activities at the Site to repair the subsurface leak, and remediate potential hydrocarbon impact. The release was identified and subsequently repaired by replacing approximately 40 feet of pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was identified by soil discoloration and distressed vegetation in the vicinity of the release. During corrective action activities, West States Energy Contractors, Inc., provided heavy equipment and labor support. Ranee Deechilly, an Apex environmental professional, provided environmental support.

On August 26 and 27, 2015, confirmation soil samples C-1 through C-4 were collected from the sidewalls and base of the northern portion of the excavation. In addition, four (4) stockpile soil samples (SP-1 through SP-4) were collected from apparently unaffected spoils to determine the potential to reuse a portion of the soils as backfill material. Excavation activities were completed on August 28, 2015, and confirmation soil samples C-5 through C-16 were collected from the remaining untested portions of the excavation for laboratory analysis. The final excavation measured approximately 42 feet long by 30 feet wide at the maximum extents, with total depths ranging from approximately five (5) feet bgs to 16 feet bgs.



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

A total of approximately 232 cubic yards of hydrocarbon affected soils were transported to the TNT landfarm in Rio Arriba County, New Mexico for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and laboratory-confirmed acceptable spoils, and then contoured to surrounding grade.

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

3.2 Soil Sampling Program

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

Apex's soil sampling program included the collection of sixteen (16) confirmation soil samples (C-1 through C-16) from the resulting excavation, and four (4) stockpile soil samples for laboratory analysis. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

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

3.3 Laboratory Analytical Methods

The confirmation soil samples and stockpile samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) SW-846 Method #8021. The soil samples were also analyzed for total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) utilizing EPA SW-846 Method #8015.

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

4.0 DATA EVALUATION

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

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or laboratory reporting limits associated with the final confirmation samples (C-1 through C-16) collected from the excavated area, and the



stockpile samples collected to verify reusable spoils, to the OCD RALs for sites having a total ranking score of "30".

- The laboratory analyses of confirmation samples collected from soils remaining in place and the reused spoils did not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD RAL of 10 milligram per kilogram (mg/kg).
- The laboratory analyses of the confirmation samples collected from soils remaining in place and reused spoils indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.11 mg/kg (SP-4), which are below the OCD RAL of 50 mg/kg.
- The laboratory analyses of the confirmation samples collected from soils remaining in place and reused spoils indicate combined TPH GRO/DRO concentrations ranging from below the laboratory reporting limits to 47 mg/kg (SP-3), which are below the OCD RAL of 100 mg/kg for a Site ranking of "30".

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

5.0 FINDINGS AND RECOMMENDATIONS

The Jicarilla F#3 pipeline release site is located within the Enterprise ROW in the NW ¼ of Section 28 in Township 26 North and Range 5 West in rural Rio Arriba County, New Mexico. The Site is located adjacent to a dirt road and is surrounded by native vegetation rangeland periodically interrupted by oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately east to west.

Beginning on August 25, 2015, Enterprise initiated excavation activities to facilitate the repair of the subsurface leak, and to remediate potential hydrocarbon impact. The pipeline was subsequently repaired by replacing approximately 40 feet of new pipe. Natural gas was released from the pipeline as a result of external corrosion. The surface expression of the release was characterized by soil discoloration and distressed vegetation in the vicinity of the release.

- The primary objective of the corrective action was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated poorly sorted silty sand with clay.
- The final excavation measured approximately 42 feet long by 30 feet wide at the maximum extents, with total depths ranging from approximately five (5) feet bgs to 16 feet bgs.
- Prior to backfilling, sixteen (16) confirmation samples soil samples were collected from the resulting final excavation for laboratory analyses. In addition, four (4) stockpile samples were collected from apparently unaffected spoils to determine the potential to reuse a portion of the soils as backfill material. Based on analytical results, soils remaining in place do not exhibit BTEX or TPH GRO/DRO concentrations above the OCD RALs for a Site ranking of "30".
- A total of approximately 232 cubic yards of hydrocarbon affected soils were transported to the TNT landfarm in Rio Arriba County, New Mexico for disposal/remediation. The



excavation was backfilled with clean imported fill and laboratory-confirmed acceptable spoils and then contoured to surrounding grade.

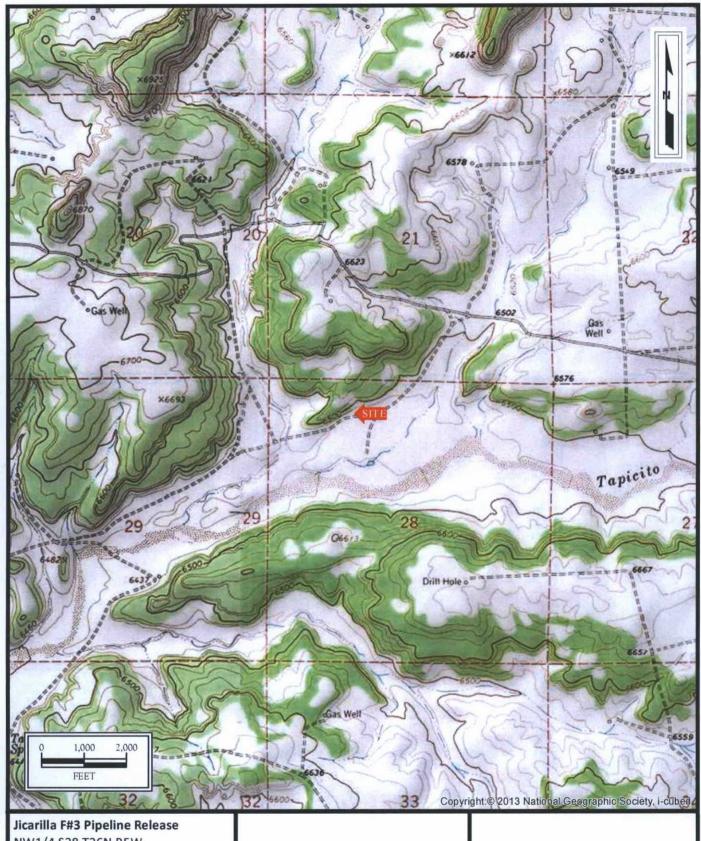
Based on field observations and laboratory analytical results, no additional investigation or corrective action with respect to soil impact appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

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

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



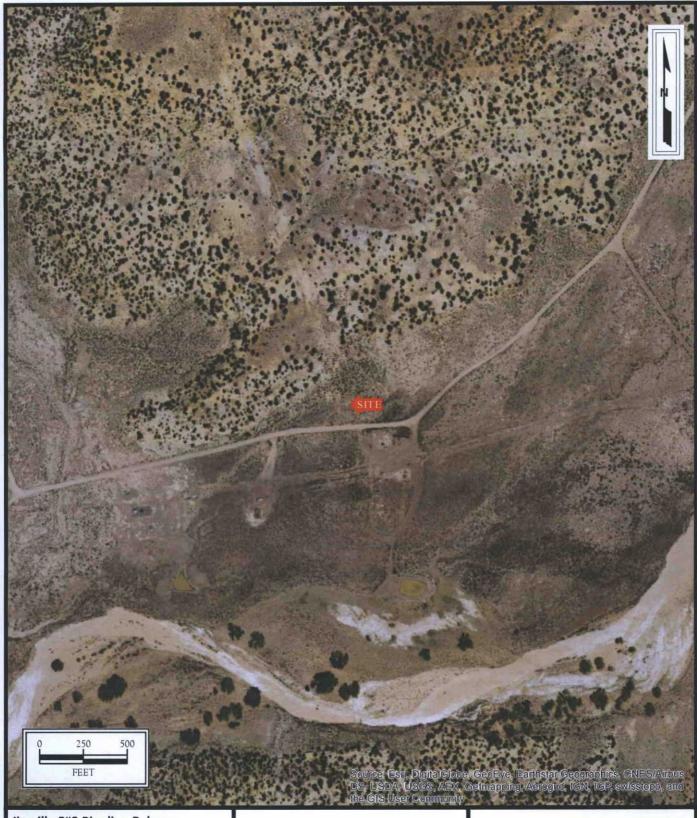
NW1/4 S28 T26N R5W Rio Arriba County, New Mexico 36.46299N, 107.36806W



Apex TITAN, Inc. 606 South Rio Grande, Suite A Aztec, NM 87410 Phone: (505) 334-5200 www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1 Topographic Map Lapis Point, NM Quadrangle 1963

Project No. 7250415019



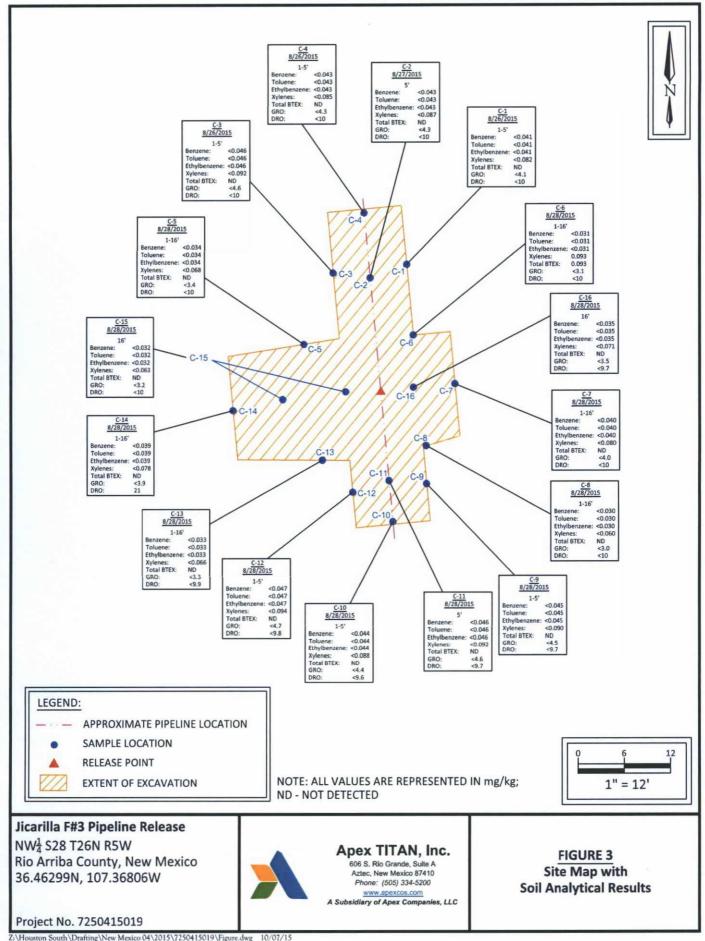
Jicarilla F#3 Pipeline Release NW1/4 S28 T26N R5W Rio Arriba County, New Mexico 36.46299N, 107.36806W



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

FIGURE 2 **Site Vicinity Map**

Project No. 7250415019



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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-138
Revised August 1, 2011
*Surface Waste Management Facility Operator
and Generator shall maintain and make this
documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

	REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
	Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
	Originating Site: Jicarilla F#3 Pipeline
	Location of Material (Street Address, City, State or ULSTR): Unit Letter C Section 28 Township 26 North Range 5 West; 36.462995, -107.368065
	Source and Description of Weste: Hydro-excavated soil impacted with hydrocarbons associated with a pipeline release. Estimated Volume 50 (yd) bbls Known Volume (to be entered by the operator at the end of the haul) 333 (yd) bbls
5.	GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
	representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby COMPANY NAME COMPANY NAME
certi	FINT & SIGN NAME fy that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 latory 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)
	ASDS 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, 7	8-26-15, representative for Enterprise Field Services, LLC authorize TNT Land Farm. to
	rator Signature plete the required testing/sign the Generator Waste Testing Certification.
to the	, representative for TNT Land Farm do hereby certify that representative samples of the leld waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform e specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples ttached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6.	Transporter: West States Energy Contractor
Addres	and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 ss of Facility: 70 CR 405, Lindrith NM d of Treatment and/or Disposal:
	☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other
Waste	Acceptance Status: DENIED (Must Be Maintained As Permanent Record)
	TNAME: Lutisha Schm: + 2 TITLE: Office Adm: n DATE: 8-28-15 ATURE: Putulu So TELEPHONE NO.: 500-10-10-10-10-10-10-10-10-10-10-10-10-1
1014	Surface Waste Management Facility Authorized Agent



Photograph 1

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



Photograph 2

View of the initial excavation and removed pipeline, facing north.



Photograph 3

View of the main release footprint, facing southeast.



Page 1 of 2



Photograph 4

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



Photograph 4

View of the final excavation, facing north.



Photograph 4

View of the final excavation, facing southeast. Note: Sidewall caved into the excavation after affected soil removal was completed.





TABLE 1 Jicarilla F#3 Pipeline Release SOIL ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
		Natural Resources vision, Remediation	10	NE	NE	NE	50	100	
		A Local and	Marie Commission	Stocks	pile Samples				
SP-1	8.27.15	Stockpile	< 0.045	<0.045	<0.045	<0.089	ND	<4.5	12
SP-2	8.27.15	Stockpile	< 0.044	<0.044	<0.044	<0.087	ND	<4.4	21
SP-3	8.27.15	Stockpile	<0.045	<0.045	<0.045	< 0.091	ND	<4.5	47
SP-4	8.27.15	Stockpile	< 0.053	< 0.053	<0.053	<0.11	ND	7.3	18
	A STATE OF THE STA	A PROPERTY OF THE PERSON NAMED IN		Excavation Co	onfirmation Samples	A DECEMBER OF		State of the last	
C-1	8.26.15	1 to 5	< 0.041	<0.041	<0.041	< 0.082	ND	<4.1	<10
C-2	8.27.15	5	< 0.043	< 0.043	<0.043	<0.087	ND	<4.3	<10
C-3	8.26.15	1 to 5	<0.046	< 0.046	<0.046	< 0.092	ND	<4.6	<10
C-4	8.26.15	1 to 5	< 0.043	< 0.043	<0.043	<0.085	ND	<4.3	<10
C-5	8.28.15	1 to 16	< 0.034	< 0.034	<0.034	<0.068	ND	<3.4	<10
C-6	8.28.15	1 to 16	< 0.031	< 0.031	<0.031	0.093	0.093	<3.1	<10
C-7	8.28.15	1 to 16	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<10
C-8	8.28.15	1 to 16	<0.030	<0.030	<0.030	< 0.060	ND	<3.0	<10
C-9	8.28.15	1 to 5	< 0.045	< 0.045	<0.045	< 0.090	ND	<4.5	<9.7
C-10	8.28.15	1 to 5	<0.044	<0.044	<0.044	<0.088	ND	<4.4	<9.6
C-11	8.28.15	5	<0.046	<0.046	<0.046	< 0.092	ND	<4.6	<9.7
C-12	8.28.15	1 to 5	<0.047	<0.047	<0.047	< 0.094	ND	<4.7	<9.8
C-13	8.28.15	1 to 16	<0.033	< 0.033	<0.033	<0.066	ND	<3.3	<9.9
C-14	8.28.15	1 to 16	<0.039	<0.039	<0.039	<0.078	ND	<3.9	21
C-15	8.28.15	16	<0.032	< 0.032	<0.032	< 0.063	ND	<3.2	<10
C-16	8.28.15	16	< 0.035	< 0.035	<0.035	< 0.071	ND	<3.5	<9.7

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

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established



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

OrderNo.: 1508D77

August 31, 2015

Kyle Summers

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Jicarilla F#3

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/28/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1508D77

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-1

Project: Jicarilla F#3

Collection Date: 8/27/2015 2:30:00 PM

Lab ID: 1508D77-001

Matrix: MEOH (SOIL) Received Date: 8/28/2015 8:25:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analyst	JME
Diesel Range Organics (DRO)	12	10	mg/Kg	1	8/28/2015 11:57:04 AM	21028
Surr: DNOP	99.2	57.9-140	%REC	1	8/28/2015 11:57:04 AM	21028
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	8/28/2015 11:33:09 AM	21027
Surr: BFB	87.7	75.4-113	%REC	1	8/28/2015 11:33:09 AM	21027
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.045	mg/Kg	1	8/28/2015 11:33:09 AM	21027
Toluene	ND	0.045	mg/Kg	1	8/28/2015 11:33:09 AM	21027
Ethylbenzene	ND	0.045	mg/Kg	1	8/28/2015 11:33:09 AM	21027
Xylenes, Total	ND	0.089	mg/Kg	1	8/28/2015 11:33:09 AM	21027
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	8/28/2015 11:33:09 AM	21027

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

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

Lab Order 1508D77

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Jicarilla F#3

Lab ID: 1508D77-002

Client Sample ID: SP-2

Collection Date: 8/27/2015 2:35:00 PM

Matrix: MEOH (SOIL) Received Date: 8/28/2015 8:25:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s			Analys	: JME
Diesel Range Organics (DRO)	21	10	mg/Kg	1	8/28/2015 12:18:25 PM	1 21028
Surr: DNOP	102	57.9-140	%REC	1	8/28/2015 12:18:25 PM	1 21028
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	8/28/2015 11:58:05 AM	1 21027
Surr: BFB	84.6	75.4-113	%REC	1	8/28/2015 11:58:05 AM	1 21027
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.044	mg/Kg	1	8/28/2015 11:58:05 AM	1 21027
Toluene	ND	0.044	mg/Kg	1	8/28/2015 11:58:05 AM	1 21027
Ethylbenzene	ND	0.044	mg/Kg	1	8/28/2015 11:58:05 AM	1 21027
Xylenes, Total	ND	0.087	mg/Kg	1	8/28/2015 11:58:05 AM	1 21027
Surr: 4-Bromofluorobenzene	97.4	80-120	%REC	1	8/28/2015 11:58:05 AM	1 21027

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

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

Lab Order 1508D77

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-3

Project: Jicarilla F#3

Collection Date: 8/27/2015 2:40:00 PM

Lab ID: 1508D77-003

Matrix: MEOH (SOIL) Received

Received Date: 8/28/2015 8:25:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analys	st: JME
Diesel Range Organics (DRO)	47	9.9	mg/Kg	1	8/28/2015 12:18:47 P	M 21028
Surr: DNOP	108	57.9-140	%REC	1	8/28/2015 12:18:47 P	M 21028
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	8/28/2015 12:23:07 P	M 21027
Surr: BFB	99.4	75.4-113	%REC	1	8/28/2015 12:23:07 P	M 21027
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.045	mg/Kg	1	8/28/2015 12:23:07 P	M 21027
Toluene	ND	0.045	mg/Kg	1	8/28/2015 12:23:07 P	M 21027
Ethylbenzene	ND	0.045	mg/Kg	1	8/28/2015 12:23:07 P	M 21027
Xylenes, Total	ND	0.091	mg/Kg	1	8/28/2015 12:23:07 P	M 21027
Surr: 4-Bromofluorobenzene	99.4	80-120	%REC	1	8/28/2015 12:23:07 P	M 21027

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

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

Lab Order 1508D77

Date Reported: 8/31/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: SP-4

Project: Jicarilla F#3

Collection Date: 8/27/2015 2:45:00 PM

Lab ID: 1508D77-004

Matrix: MEOH (SOIL) Received Date: 8/28/2015 8:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	s				Analys	t: JME
Diesel Range Organics (DRO)	18	10		mg/Kg	1	8/28/2015 12:45:54 PM	A 21028
Surr: DNOP	108	57.9-140		%REC	1	8/28/2015 12:45:54 PM	A 21028
EPA METHOD 8015D: GASOLINE RAI	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	7.3	5.3		mg/Kg	1	8/28/2015 12:48:01 PM	M 21027
Surr: BFB	116	75.4-113	S	%REC	1	8/28/2015 12:48:01 PM	M 21027
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.053		mg/Kg	1	8/28/2015 12:48:01 PM	M 21027
Toluene	ND	0.053		mg/Kg	1	8/28/2015 12:48:01 PM	M 21027
Ethylbenzene	ND	0.053		mg/Kg	1	8/28/2015 12:48:01 PM	M 21027
Xylenes, Total	ND	0.11		mg/Kg	1	8/28/2015 12:48:01 PM	M 21027
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	8/28/2015 12:48:01 PM	M 21027

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

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508D77

31-Aug-15

Client:

APEX TITAN

Project:

Jicarilla F#3

Sample ID MB-21028

SampType: MBLK

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

Client ID:

PBS Batch ID: 21028 RunNo: 28511

Prep Date: 8/28/2015 Analysis Date: 8/28/2015

SeqNo: 863099

Units: mg/Kg

Analyte

Result PQL

HighLimit

RPDLimit

Qual

Diesel Range Organics (DRO) Surr: DNOP

ND 10

10.00

103

LowLimit

57.9

140

Sample ID LCS-21028

SampType: LCS

RunNo: 28511

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

%RPD

Client ID: LCSS Prep Date: 8/28/2015

Batch ID: 21028

Analysis Date: 8/28/2015

SeqNo: 863100

Units: mg/Kg

HighLimit

Qual

Diesel Range Organics (DRO)

Result PQL 48

50.00

%REC 96.2 95.8

57.4

LowLimit

%RPD **RPDLimit**

Surr: DNOP

4.8

10 5.000

0

SPK value SPK Ref Val

SPK value SPK Ref Val %REC

57.9

139 140

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RPD outside accepted recovery limits

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RL Reporting Detection Limit

P

Page 5 of 7

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508D77

31-Aug-15

Client:

APEX TITAN

Project:

Jicarilla F#3

Sample ID MB-21027

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

PBS

Batch ID: 21027

PQL

5.0

RunNo: 28537

Client ID:

Units: mg/Kg

Prep Date: 8/27/2015

Analysis Date: 8/28/2015

SeqNo: 863346

SPK value SPK Ref Val %REC

LowLimit

113

HighLimit

RPDLimit

Analyte Gasoline Range Organics (GRO) Result ND 810

1000

80.7

75.4

%RPD

Surr: BFB

SampType: LCS

PQL

5.0

TestCode: EPA Method 8015D: Gasoline Range

Sample ID LCS-21027 Client ID: LCSS

Batch ID: 21027

RunNo: 28537

Prep Date: 8/27/2015

Analysis Date: 8/28/2015

SeqNo: 863347

%REC

Units: mg/Kg

%RPD **RPDLimit** Qual HighLimit

Gasoline Range Organics (GRO) Surr: BFB

24 850

Result

25.00 1000

SPK value SPK Ref Val

94.6 85.1

79.6 75.4

LowLimit

122

113

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank B
- E Value above quantitation range
- Analyte detected below quantitation limits
- Page 6 of 7

- Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508D77 31-Aug-15

Client:

APEX TITAN

Project:

Jicarilla F#3

Sample ID MB-21027 Client ID:

SampType: MBLK

Analysis Date: 8/28/2015

PQL

0.050

0.050

0.050

0.10

TestCode: EPA Method 8021B: Volatiles

PBS

Batch ID: 21027

Result

ND

ND

ND

ND

0.95

RunNo: 28537 SeqNo: 863353

SPK value SPK Ref Val %REC

LowLimit

80

Units: mg/Kg

HighLimit

%RPD **RPDLimit**

Qual

Analyte Benzene Toluene Ethylbenzene

Prep Date:

8/27/2015

Xylenes, Total

Client ID: LCSS

Sample ID LCS-21027

Prep Date: 8/27/2015

Surr: 4-Bromofluorobenzene

SampType: LCS

Batch ID: 21027 Analysis Date: 8/28/2015

TestCode: EPA Method 8021B: Volatiles RunNo: 28537

SeqNo: 863354

94.9

Units: mg/Kg

120

%RPD

RPDLimit

	1,000						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	0.91	0.050	1.000	0	91.1	76.6	128
Toluene	0.91	0.050	1.000	0	91.3	75	124
Ethylbenzene	0.94	0.050	1.000	0	94.5	79.5	126
Xylenes, Total	2.7	0.10	3.000	0	91.3	78.8	124
Surr: 4-Bromofluorobenzene	1.1		1.000		105	80	120

1.000

Qualifiers:

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

Page 7 of 7



Hail Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

Sample Log-In Check List

Client Name: APEX AZTEC Work Order	Number 1508D77		RcptNo: 1
Received by/date: JA 08/28/15	5		
Logged By: Celina Sessa 8/28/2015 8:29	5:00 AM	alin S	ma
Completed By: Celina Sessa 8/28/2015 9:19	9:27 AM	Celin S	
	15	cecur)	m
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		
<u>Log In</u>			
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗆	NA 🗆
5. Were all samples received at a temperature of >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
10		м. П	bottles checked
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗆	for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗸	No 🗌	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗌	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗸	No 🗌	Checked by:
Special Handling (if applicable)			
16. Was client notified of all discrepancies with this order?	Yes	No 🗆	NA 🗹
Person Notified:	Date		
By Whom:		Phone Fax	In Person
Regarding:			
Client Instructions:			
17. Additional remarks:			
18 Cooler Information			
18. Cooler Information Cooler No Temp °C Condition Seal Intact Sea	No Seal Date	Signed By	ĺ
1 2.6 Good Yes			

									CHAIN OF CUSTODY RECORD
APEX Office Location Project Manager Sampler's Name Name Dec	ummers chilly	Laboratory: Address: Contact: Phone: PO/SO #: Sampler's Signa	Free returned	non		BEET STATE	ANALYSI REQUES	TED Y/O	Lab use only Due Date: Temp. of coolers 3.3 to 3 when received (C°): 1 2 3 4 5 Page of of others Of other in the second of other in t
Proj. No.	Project Name	a F#.	3	No/Type of (Containers		AK		
Matrix Date Time		larks of Sample(s)	Start Depth End Depth	VOA LIL	250 ml Glass	6/0	OR		Lab Sample ID (Lab Use Only)
5 8/27/1 1430	S	PI			1		XX		1508D77-001
3 1435		P-2					XX		-002
3 1435 3 1446 5 1445	3	P-3			1		XX		-003
5 1445	S	py			1		XX		-004
		NES							
Turn around time □ No	rmal 25% Rush	□ 50% Rush 📓	100% Rush	Same	100				
Relinquished by (Signature	Date:	Time: Pedeix	ed by: (Signat	ire)	Date	طہرہ	Time:	NOTES:	Tambons (EPROD)
Relinquished by (Signature Relinquished by (Signature	elea 8/27/15	Time: Receiv	ed by: (Signature)	ure)	Date Date Date	<i>8/15</i> e:	Time:	NonA Rush	Tom Long (EPROD) FE# N22222



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

September 02, 2015

Kyle Summers

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Jicarilla F #3

OrderNo.: 1508E29

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 16 sample(s) on 8/29/2015 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-1

Project: Jicarilla F #3

Collection Date: 8/26/2015 2:00:00 PM

Lab ID: 1508E29-001

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	9/1/2015 5:33:18 PM	C28591
Surr: BFB	105	70-130	%REC	1	9/1/2015 5:33:18 PM	C28591
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	s			Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 8:04:47 PM	21010
Surr: DNOP	102	57.9-140	%REC	1	9/1/2015 8:04:47 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.041	mg/Kg	1	9/1/2015 5:33:18 PM	D28591
Toluene	ND	0.041	mg/Kg	1	9/1/2015 5:33:18 PM	D28591
Ethylbenzene	ND	0.041	mg/Kg	1	9/1/2015 5:33:18 PM	D28591
Xylenes, Total	ND	0.082	mg/Kg	1	9/1/2015 5:33:18 PM	D28591
Surr: 1,2-Dichloroethane-d4	98.5	70-130	%REC	1	9/1/2015 5:33:18 PM	D28591
Surr: 4-Bromofluorobenzene	95.4	70-130	%REC	1	9/1/2015 5:33:18 PM	D28591
Surr: Dibromofluoromethane	113	70-130	%REC	1	9/1/2015 5:33:18 PM	D28591
Surr: Toluene-d8	94.3	70-130	%REC	1	9/1/2015 5:33:18 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-2

Project: Jicarilla F #3

Collection Date: 8/27/2015 1:30:00 PM

Lab ID: 1508E29-002

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	9/1/2015 6:00:53 PM	C28591
Surr: BFB	104	70-130	%REC	1	9/1/2015 6:00:53 PM	C28591
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 8:26:22 PM	21010
Surr: DNOP	103	57.9-140	%REC	1	9/1/2015 8:26:22 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.043	mg/Kg	1	9/1/2015 6:00:53 PM	D28591
Toluene	ND	0.043	mg/Kg	1	9/1/2015 6:00:53 PM	D28591
Ethylbenzene	ND	0.043	mg/Kg	1	9/1/2015 6:00:53 PM	D28591
Xylenes, Total	ND	0.087	mg/Kg	1	9/1/2015 6:00:53 PM	D28591
Surr: 1,2-Dichloroethane-d4	101	70-130	%REC	1	9/1/2015 6:00:53 PM	D28591
Surr: 4-Bromofluorobenzene	94.8	70-130	%REC	1	9/1/2015 6:00:53 PM	D28591
Surr: Dibromofluoromethane	117	70-130	%REC	1	9/1/2015 6:00:53 PM	D28591
Surr: Toluene-d8	90.9	70-130	%REC	1	9/1/2015 6:00:53 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-3

Project: Jicarilla F #3

Collection Date: 8/26/2015 2:05:00 PM

Lab ID: 1508E29-003

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOI	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	9/1/2015 6:28:26 PM	C28591
Surr: BFB	110	70-130	%REC	1	9/1/2015 6:28:26 PM	C28591
EPA METHOD 8015M/D: DIESEL R.	ANGE ORGANIC	s			Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 8:48:10 PM	21010
Surr: DNOP	100	57.9-140	%REC	1	9/1/2015 8:48:10 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.046	mg/Kg	1	9/1/2015 6:28:26 PM	D28591
Toluene	ND	0.046	mg/Kg	1	9/1/2015 6:28:26 PM	D28591
Ethylbenzene	ND	0.046	mg/Kg	1	9/1/2015 6:28:26 PM	D28591
Xylenes, Total	ND	0.092	mg/Kg	1	9/1/2015 6:28:26 PM	D28591
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	9/1/2015 6:28:26 PM	D28591
Surr: 4-Bromofluorobenzene	99.3	70-130	%REC	1	9/1/2015 6:28:26 PM	D28591
Surr: Dibromofluoromethane	127	70-130	%REC	1	9/1/2015 6:28:26 PM	D28591
Surr: Toluene-d8	94.2	70-130	%REC	1	9/1/2015 6:28:26 PM	D28591

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-4

Project: Jicarilla F #3

Collection Date: 8/26/2015 2:10:00 PM

Lab ID: 1508E29-004

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	9/1/2015 6:56:01 PM	C28591
Surr: BFB	99.4	70-130	%REC	1	9/1/2015 6:56:01 PM	C28591
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 9:31:45 PM	21010
Surr: DNOP	102	57.9-140	%REC	1	9/1/2015 9:31:45 PM	21010
EPA METHOD 8260B: VOLATILES S	SHORT LIST				Analys	t: DJF
Benzene	ND	0.043	mg/Kg	1	9/1/2015 6:56:01 PM	D28591
Toluene	ND	0.043	mg/Kg	1	9/1/2015 6:56:01 PM	D28591
Ethylbenzene	ND	0.043	mg/Kg	1	9/1/2015 6:56:01 PM	D28591
Xylenes, Total	ND	0.085	mg/Kg	1	9/1/2015 6:56:01 PM	D28591
Surr: 1,2-Dichloroethane-d4	102	70-130	%REC	1	9/1/2015 6:56:01 PM	D28591
Surr: 4-Bromofluorobenzene	90.8	70-130	%REC	1	9/1/2015 6:56:01 PM	D28591
Surr: Dibromofluoromethane	118	70-130	%REC	1	9/1/2015 6:56:01 PM	D28591
Surr: Toluene-d8	91.1	70-130	%REC	1	9/1/2015 6:56:01 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-5

Project: Jicarilla F #3

Collection Date: 8/28/2015 12:30:00 PM

Lab ID: 1508E29-005

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	9/1/2015 7:23:30 PM	C28591
Surr: BFB	106	70-130	%REC	1	9/1/2015 7:23:30 PM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	t: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 9:53:21 PM	21010
Surr: DNOP	105	57.9-140	%REC	1	9/1/2015 9:53:21 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.034	mg/Kg	1	9/1/2015 7:23:30 PM	D28591
Toluene	ND	0.034	mg/Kg	1	9/1/2015 7:23:30 PM	D28591
Ethylbenzene	ND	0.034	mg/Kg	1	9/1/2015 7:23:30 PM	D28591
Xylenes, Total	ND	0.068	mg/Kg	1	9/1/2015 7:23:30 PM	D28591
Surr: 1,2-Dichloroethane-d4	106	70-130	%REC	1	9/1/2015 7:23:30 PM	D28591
Surr: 4-Bromofluorobenzene	94.0	70-130	%REC	1	9/1/2015 7:23:30 PM	D28591
Surr: Dibromofluoromethane	127	70-130	%REC	1	9/1/2015 7:23:30 PM	D28591
Surr: Toluene-d8	95.2	70-130	%REC	1	9/1/2015 7:23:30 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-6

Project: Jicarilla F #3

Collection Date: 8/28/2015 12:35:00 PM

Lab ID: 1508E29-006

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	9/1/2015 7:50:58 PM	C28591
Surr: BFB	102	70-130	%REC	1	9/1/2015 7:50:58 PM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 10:15:10 PM	21010
Surr: DNOP	96.6	57.9-140	%REC	1	9/1/2015 10:15:10 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.031	mg/Kg	1	9/1/2015 7:50:58 PM	D28591
Toluene	ND	0.031	mg/Kg	1	9/1/2015 7:50:58 PM	D28591
Ethylbenzene	ND	0.031	mg/Kg	1	9/1/2015 7:50:58 PM	D28591
Xylenes, Total	0.093	0.061	mg/Kg	1	9/1/2015 7:50:58 PM	D28591
Surr: 1,2-Dichloroethane-d4	104	70-130	%REC	1	9/1/2015 7:50:58 PM	D28591
Surr: 4-Bromofluorobenzene	97.6	70-130	%REC	1	9/1/2015 7:50:58 PM	D28591
Surr: Dibromofluoromethane	124	70-130	%REC	1	9/1/2015 7:50:58 PM	D28591
Surr: Toluene-d8	92.4	70-130	%REC	1	9/1/2015 7:50:58 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Lab ID:

Jicarilla F #3

1508E29-007

Client Sample ID: C-7

Collection Date: 8/28/2015 12:40:00 PM

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	9/1/2015 8:18:22 PM	C28591
Surr: BFB	104	70-130	%REC	1	9/1/2015 8:18:22 PM	C28591
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	s			Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/1/2015 10:36:49 PM	21010
Surr: DNOP	102	57.9-140	%REC	1	9/1/2015 10:36:49 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.040	mg/Kg	1	9/1/2015 8:18:22 PM	D28591
Toluene	ND	0.040	mg/Kg	1	9/1/2015 8:18:22 PM	D28591
Ethylbenzene	ND	0.040	mg/Kg	1	9/1/2015 8:18:22 PM	D28591
Xylenes, Total	ND	0.080	mg/Kg	1	9/1/2015 8:18:22 PM	D28591
Surr: 1,2-Dichloroethane-d4	109	70-130	%REC	1	9/1/2015 8:18:22 PM	D28591
Surr: 4-Bromofluorobenzene	96.1	70-130	%REC	1	9/1/2015 8:18:22 PM	D28591
Surr: Dibromofluoromethane	121	70-130	%REC	1	9/1/2015 8:18:22 PM	D28591
Surr: Toluene-d8	90.9	70-130	%REC	1	9/1/2015 8:18:22 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 7 of 21
- P Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-8

Project: Jicarilla F #3

Collection Date: 8/28/2015 12:45:00 PM

Lab ID: 1508E29-008

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL	Qual Uni	its	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE					Analyst	: DJF
Gasoline Range Organics (GRO)	ND	3.0	mg	/Kg	1	9/1/2015 8:45:48 PM	C28591
Surr: BFB	105	70-130	%F	REC	1	9/1/2015 8:45:48 PM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg	/Kg	1	9/1/2015 10:58:36 PM	21010
Surr: DNOP	105	57.9-140	%F	REC	1	9/1/2015 10:58:36 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST					Analyst	: DJF
Benzene	ND	0.030	mg	/Kg	1	9/1/2015 8:45:48 PM	D28591
Toluene	ND	0.030	mg	/Kg	1	9/1/2015 8:45:48 PM	D28591
Ethylbenzene	ND	0.030	mg	/Kg	1	9/1/2015 8:45:48 PM	D28591
Xylenes, Total	ND	0.060	mg	/Kg	1	9/1/2015 8:45:48 PM	D28591
Surr: 1,2-Dichloroethane-d4	92.3	70-130	%R	REC	1	9/1/2015 8:45:48 PM	D28591
Surr: 4-Bromofluorobenzene	102	70-130	%R	REC	1	9/1/2015 8:45:48 PM	D28591
Surr: Dibromofluoromethane	122	70-130	%R	REC	1	9/1/2015 8:45:48 PM	D28591
Surr: Toluene-d8	93.0	70-130	%R	REC	1	9/1/2015 8:45:48 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project: Jicarilla F #3

Lab ID: 1508E29-009

Client Sample ID: C-9

Collection Date: 8/28/2015 12:50:00 PM

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	9/1/2015 9:13:13 PM	C28591
Surr: BFB	99.6	70-130	%REC	1	9/1/2015 9:13:13 PM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/1/2015 11:20:19 PM	21010
Surr: DNOP	101	57.9-140	%REC	1	9/1/2015 11:20:19 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.045	mg/Kg	1	9/1/2015 9:13:13 PM	D28591
Toluene	ND	0.045	mg/Kg	1	9/1/2015 9:13:13 PM	D28591
Ethylbenzene	ND	0.045	mg/Kg	1	9/1/2015 9:13:13 PM	D28591
Xylenes, Total	ND	0.090	mg/Kg	1	9/1/2015 9:13:13 PM	D28591
Surr: 1,2-Dichloroethane-d4	105	70-130	%REC	1	9/1/2015 9:13:13 PM	D28591
Surr: 4-Bromofluorobenzene	94.1	70-130	%REC	1	9/1/2015 9:13:13 PM	D28591
Surr: Dibromofluoromethane	122	70-130	%REC	1	9/1/2015 9:13:13 PM	D28591
Surr: Toluene-d8	90.7	70-130	%REC	1	9/1/2015 9:13:13 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: C-10

Collection Date: 8/28/2015 12:55:00 PM Project: Jicarilla F #3

Lab ID: 1508E29-010 Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	: DJF
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	9/1/2015 9:40:37 PM	C28591
Surr: BFB	105	70-130	%REC	1	9/1/2015 9:40:37 PM	C28591
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	S			Analyst	: JME
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	9/1/2015 11:41:59 PM	21010
Surr: DNOP	92.7	57.9-140	%REC	1	9/1/2015 11:41:59 PM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.044	mg/Kg	1	9/1/2015 9:40:37 PM	D28591
Toluene	ND	0.044	mg/Kg	1	9/1/2015 9:40:37 PM	D28591
Ethylbenzene	ND	0.044	mg/Kg	1	9/1/2015 9:40:37 PM	D28591
Xylenes, Total	ND	0.088	mg/Kg	1	9/1/2015 9:40:37 PM	D28591
Surr: 1,2-Dichloroethane-d4	98.4	70-130	%REC	1	9/1/2015 9:40:37 PM	D28591
Surr: 4-Bromofluorobenzene	94.8	70-130	%REC	1	9/1/2015 9:40:37 PM	D28591
Surr: Dibromofluoromethane	119	70-130	%REC	1	9/1/2015 9:40:37 PM	D28591
Surr: Toluene-d8	95.2	70-130	%REC	1	9/1/2015 9:40:37 PM	D28591

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 10 of 21 J
- Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-11

Project: Jicarilla F #3

Collection Date: 8/28/2015 1:00:00 PM

Lab ID: 1508E29-011

Matrix: MEOH (SOIL)

Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	9/2/2015 12:52:28 AM	C28591
Surr: BFB	102	70-130	%REC	1	9/2/2015 12:52:28 AM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/2/2015 12:03:40 AM	21010
Surr: DNOP	106	57.9-140	%REC	1	9/2/2015 12:03:40 AM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.046	mg/Kg	1	9/2/2015 12:52:28 AM	D28591
Toluene	ND	0.046	mg/Kg	1	9/2/2015 12:52:28 AM	D28591
Ethylbenzene	ND	0.046	mg/Kg	1	9/2/2015 12:52:28 AM	D28591
Xylenes, Total	ND	0.092	mg/Kg	1	9/2/2015 12:52:28 AM	D28591
Surr: 1,2-Dichloroethane-d4	97.2	70-130	%REC	1	9/2/2015 12:52:28 AM	D28591
Surr: 4-Bromofluorobenzene	99.2	70-130	%REC	1	9/2/2015 12:52:28 AM	D28591
Surr: Dibromofluoromethane	110	70-130	%REC	1	9/2/2015 12:52:28 AM	D28591
Surr: Toluene-d8	96.6	70-130	%REC	1	9/2/2015 12:52:28 AM	D28591

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

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 11 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-12

Project: Jicarilla F #3

Collection Date: 8/28/2015 1:05:00 PM

Lab ID: 1508E29-012

Matrix: MEOH (SOIL)

Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	: DJF
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/2/2015 1:19:50 AM	C28591
Surr: BFB	106	70-130	%REC	1	9/2/2015 1:19:50 AM	C28591
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	s			Analys	: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	9/2/2015 12:25:28 AM	21010
Surr: DNOP	105	57.9-140	%REC	1	9/2/2015 12:25:28 AM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	: DJF
Benzene	ND	0.047	mg/Kg	1	9/2/2015 1:19:50 AM	D28591
Toluene	ND	0.047	mg/Kg	1	9/2/2015 1:19:50 AM	D28591
Ethylbenzene	ND	0.047	mg/Kg	1	9/2/2015 1:19:50 AM	D28591
Xylenes, Total	ND	0.094	mg/Kg	1	9/2/2015 1:19:50 AM	D28591
Surr: 1,2-Dichloroethane-d4	105	70-130	%REC	1	9/2/2015 1:19:50 AM	D28591
Surr: 4-Bromofluorobenzene	99.7	70-130	%REC	1	9/2/2015 1:19:50 AM	D28591
Surr: Dibromofluoromethane	119	70-130	%REC	1	9/2/2015 1:19:50 AM	D28591
Surr: Toluene-d8	93.8	70-130	%REC	1	9/2/2015 1:19:50 AM	D28591

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 12 of 21 J
- Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-13

Project: Jicarilla F #3

Collection Date: 8/28/2015 1:10:00 PM

Lab ID: 1508E29-013

Matrix: MEOH (SOIL)

Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	9/2/2015 1:47:22 AM	C28591
Surr: BFB	102	70-130	%REC	1	9/2/2015 1:47:22 AM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/2/2015 12:47:04 AM	21010
Surr: DNOP	98.5	57.9-140	%REC	1	9/2/2015 12:47:04 AM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.033	mg/Kg	1	9/2/2015 1:47:22 AM	D28591
Toluene	ND	0.033	mg/Kg	1	9/2/2015 1:47:22 AM	D28591
Ethylbenzene	ND	0.033	mg/Kg	1	9/2/2015 1:47:22 AM	D28591
Xylenes, Total	ND	0.066	mg/Kg	1	9/2/2015 1:47:22 AM	D28591
Surr: 1,2-Dichloroethane-d4	106	70-130	%REC	1	9/2/2015 1:47:22 AM	D28591
Surr: 4-Bromofluorobenzene	96.0	70-130	%REC	1	9/2/2015 1:47:22 AM	D28591
Surr: Dibromofluoromethane	119	70-130	%REC	1	9/2/2015 1:47:22 AM	D28591
Surr: Toluene-d8	93.3	70-130	%REC	1	9/2/2015 1:47:22 AM	D28591

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 13 of 21 J
- Sample pH Not In Range
- Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: C-14

Project: Jicarilla F #3

Collection Date: 8/28/2015 1:15:00 PM

Lab ID: 1508E29-014

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: DJF
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	9/2/2015 2:14:46 AM	C28591
Surr: BFB	103	70-130	%REC	1	9/2/2015 2:14:46 AM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analyst	: JME
Diesel Range Organics (DRO)	21	9.9	mg/Kg	1	9/2/2015 1:08:47 AM	21010
Surr: DNOP	99.4	57.9-140	%REC	1	9/2/2015 1:08:47 AM	21010
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: DJF
Benzene	ND	0.039	mg/Kg	1	9/2/2015 2:14:46 AM	D28591
Toluene	ND	0.039	mg/Kg	1	9/2/2015 2:14:46 AM	D28591
Ethylbenzene	ND	0.039	mg/Kg	1	9/2/2015 2:14:46 AM	D28591
Xylenes, Total	ND	0.078	mg/Kg	1	9/2/2015 2:14:46 AM	D28591
Surr: 1,2-Dichloroethane-d4	105	70-130	%REC	1	9/2/2015 2:14:46 AM	D28591
Surr: 4-Bromofluorobenzene	88.9	70-130	%REC	1	9/2/2015 2:14:46 AM	D28591
Surr: Dibromofluoromethane	123	70-130	%REC	1	9/2/2015 2:14:46 AM	D28591
Surr: Toluene-d8	93.1	70-130	%REC	1	9/2/2015 2:14:46 AM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits page 14 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN Client Sample ID: C-15

Project: Jicarilla F #3 Collection Date: 8/28/2015 1:20:00 PM

Lab ID: 1508E29-015 Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	: DJF
Gasoline Range Organics (GRO)	ND	3.2	mg/Kg	1	9/2/2015 2:42:09 AM	C28591
Surr: BFB	105	70-130	%REC	1	9/2/2015 2:42:09 AM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/2/2015 1:30:25 AM	21044
Surr: DNOP	102	57.9-140	%REC	1	9/2/2015 1:30:25 AM	21044
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	: DJF
Benzene	ND	0.032	mg/Kg	1	9/2/2015 2:42:09 AM	D28591
Toluene	ND	0.032	mg/Kg	1	9/2/2015 2:42:09 AM	D28591
Ethylbenzene	ND	0.032	mg/Kg	1	9/2/2015 2:42:09 AM	D28591
Xylenes, Total	ND	0.063	mg/Kg	1	9/2/2015 2:42:09 AM	D28591
Surr: 1,2-Dichloroethane-d4	101	70-130	%REC	1	9/2/2015 2:42:09 AM	D28591
Surr: 4-Bromofluorobenzene	92.4	70-130	%REC	1	9/2/2015 2:42:09 AM	D28591
Surr: Dibromofluoromethane	118	70-130	%REC	1	9/2/2015 2:42:09 AM	D28591
Surr: Toluene-d8	96.6	70-130	%REC	1	9/2/2015 2:42:09 AM	D28591

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

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 15 of 21
- P Sample pH Not In Range
- RL Reporting Detection Limit

Lab Order 1508E29

Date Reported: 9/2/2015

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Project:

Lab ID:

Jicarilla F #3

1508E29-016

Client Sample ID: C-16

Matrix: MEOH (SOIL) Received Date: 8/29/2015 10:00:00 AM

Collection Date: 8/28/2015 1:25:00 PM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	t: DJF
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	9/2/2015 3:09:29 AM	C28591
Surr: BFB	106	70-130	%REC	1	9/2/2015 3:09:29 AM	C28591
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS					Analys	t: JME
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	9/2/2015 2:35:21 AM	21044
Surr: DNOP	103	57.9-140	%REC	1	9/2/2015 2:35:21 AM	21044
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analys	t: DJF
Benzene	ND	0.035	mg/Kg	1	9/2/2015 3:09:29 AM	D28591
Toluene	ND	0.035	mg/Kg	1	9/2/2015 3:09:29 AM	D28591
Ethylbenzene	ND	0.035	mg/Kg	1	9/2/2015 3:09:29 AM	D28591
Xylenes, Total	ND	0.071	mg/Kg	1	9/2/2015 3:09:29 AM	D28591
Surr: 1,2-Dichloroethane-d4	97.9	70-130	%REC	1	9/2/2015 3:09:29 AM	D28591
Surr: 4-Bromofluorobenzene	98.2	70-130	%REC	1	9/2/2015 3:09:29 AM	D28591
Surr: Dibromofluoromethane	117	70-130	%REC	1	9/2/2015 3:09:29 AM	D28591
Surr: Toluene-d8	96.3	70-130	%REC	1	9/2/2015 3:09:29 AM	D28591

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

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits Page 16 of 21 J
- Sample pH Not In Range
- Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508E29

02-Sep-15

Client:

APEX TITAN

Project:

Jicarilla F #3

110jecti sicarna	1 110			
Sample ID MB-21044	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Rang	e Organics
Client ID: PBS	Batch ID: 21044	RunNo: 28580		
Prep Date: 8/31/2015	Analysis Date: 9/1/2015	SeqNo: 864619	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	ND 10			
Surr: DNOP	9.6 10.00	95.8 57.9	140	
Sample ID LCS-21044	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Rang	e Organics
Client ID: LCSS	Batch ID: 21044	RunNo: 28580		
Prep Date: 8/31/2015	Analysis Date: 9/1/2015	SeqNo: 864624	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	43 10 50.00			
Surr: DNOP	4.9 5.000	97.7 57.9	140	
Sample ID MB-21010	SampType: MBLK	TestCode: EPA Method	8015M/D: Diesel Rang	e Organics
Client ID: PBS	Batch ID: 21010	RunNo: 28580		
Prep Date: 8/27/2015	Analysis Date: 9/1/2015	SeqNo: 865408	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	ND 10			
Surr: DNOP	9.1 10.00	91.5 57.9	140	
Sample ID LCS-21010	SampType: LCS	TestCode: EPA Method	8015M/D: Diesel Rang	e Organics
Client ID: LCSS	Batch ID: 21010	RunNo: 28580		
Prep Date: 8/27/2015	Analysis Date: 9/1/2015	SeqNo: 865620	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	41 10 50.00		139	
Surr: DNOP	4.3 5.000	85.2 57.9	140	
Sample ID 1508E29-015AMS	S SampType: MS	TestCode: EPA Method	I 8015M/D: Diesel Rang	e Organics
Client ID: C-15	Batch ID: 21044	RunNo: 28580		
Prep Date: 8/31/2015	Analysis Date: 9/2/2015	SeqNo: 865641	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	40 9.7 48.31		146	
Surr: DNOP	4.8 4.831	99.4 57.9	140	
Sample ID 1508E29-015AMS	SD SampType: MSD	TestCode: EPA Method	8015M/D: Diesel Rang	e Organics
Client ID: C-15	Batch ID: 21044	RunNo: 28580		
Prep Date: 8/31/2015	Analysis Date: 9/2/2015	SeqNo: 865642	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Page 17 of 21

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508E29

02-Sep-15

Client:

APEX TITAN

Project:

Jicarilla F #3

Sample ID 1508E29-015AMSD

SampType: MSD

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

Client ID: C-15

Batch ID: 21044

RunNo: 28580

Prep Date: 8/31/2015	Analysis D	ate: 9/	2/2015	8	eqNo: 8	65642	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	43	10	49.95	0	85.7	42.3	146	6.63	28.9		
Surr: DNOP	5.0		4.995		101	57.9	140	0	0		

Qualifiers:

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

Page 18 of 21

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508E29

02-Sep-15

Client:

APEX TITAN

Project:

Jicarilla F #3

Sample ID rb1	SampType: MBLK TestCode: EPA Method 8260B: Volati								t List			
Client ID: PBS	Batch	h ID: D2	8591	F	RunNo: 28591							
Prep Date:	Analysis D	Date: 9/	2/2015	5	eqNo: 8	65657	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	ND	0.050										
Toluene	ND	0.050										
Ethylbenzene	ND	0.050										
Xylenes, Total	ND	0.10										
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.0	70	130					
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.8	70	130					
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130					
Surr: Toluene-d8	0.48		0.5000		97.0	70	130					
Sample ID 100ng lcs2	SampT	Type: LC	s	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List			
Client ID: LCSS	Batch	h ID: D2	8591	F	RunNo: 2	8591						

Client ID: LCSS	Batcl	n ID: D2	8591	F	RunNo: 2	8591				
Prep Date:	Analysis D	Date: 9/	1/2015	S	SeqNo: 8	65659	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	70	130			
Toluene	1.0	0.050	1.000	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		96.7	70	130			
Surr: 4-Bromofluorobenzene	0.51		0.5000		103	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		111	70	130			
Surr: Toluene-d8	0.50		0.5000		99.4	70	130			

Sample ID 1508e29-002ams2	SampType: N	IS	Tes	tCode: El	PA Method	8260B: Vola	iles Short	List	
Client ID: C-2	Batch ID: [28591	RunNo: 28591						
Prep Date:	Analysis Date:	9/2/2015	5	SeqNo: 8	65665	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83 0.04	3 0.8681	0	95.7	70	130			
Toluene	0.84 0.04	0.8681	0	96.8	65	138			
Surr: 1,2-Dichloroethane-d4	0.46	0.4340		106	70	130			
Surr: 4-Bromofluorobenzene	0.41	0.4340		93.6	70	130			
Surr: Dibromofluoromethane	0.53	0.4340		122	70	130			
Surr: Toluene-d8	0.41	0.4340		95.0	70	130			

Sample ID	1508e29-002amsd2	SampType	MSD	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID:	C-2	Batch ID:	D28591	F	RunNo: 2	8591				
Prep Date:	A	nalysis Date:	9/2/2015	5	SeqNo: 8	65666	Units: mg/k	(g		
Analyte		Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.86 0.0	0.8681	0	99.4	70	130	3.83	20	
Toluene		0.80 0.0	0.8681	0	91.8	65	138	5.29	20	

Qualifiers:

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

Page 19 of 21

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

Hall Environmental Analysis Laboratory, Inc.

WO#:

1508E29

02-Sep-15

Client:

APEX TITAN

Project:

Jicarilla F #3

Sample ID 1508e29-002am	sd2 SampT	ype: M	SD	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: C-2	Batch	n ID: D2	28591	F	RunNo: 2	8591				
Prep Date:	Analysis D)ate: 9	/2/2015	S	SeqNo: 8	65666	Units: mg/K	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.44		0.4340		102	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.42		0.4340		97.0	70	130	0	0	
Surr: Dibromofluoromethane	0.53		0.4340		122	70	130	0	0	
Surr: Toluene-d8	0.38		0.4340		87.3	70	130	0	0	

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- 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 20 of 21

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

Hall Environmental Analysis Laboratory, Inc.

WO#: 1508E29

02-Sep-15

Client:

APEX TITAN

Project:

Jicarilla F #3

Sample ID rb1

SampType: MBLK

TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID:

PBS

Batch ID: C28591 RunNo: 28591

SPK value SPK Ref Val %REC

Prep Date:

Analysis Date: 9/2/2015

PQL

5.0

SeqNo: 865498

Units: mg/Kg

Qual

Gasoline Range Organics (GRO)

ND 480

Result

SPK value SPK Ref Val

0

SPK value SPK Ref Val %REC

1.471

95.9

HighLimit

%RPD **RPDLimit**

Analyte

500.0

70 130

Surr: BFB

Sample ID 2.5ug gro lcs2

SampType: LCS

TestCode: EPA Method 8015D Mod: Gasoline Range

RunNo: 28591

Prep Date:

Client ID: LCSS Batch ID: C28591 Analysis Date: 9/1/2015

SeqNo: 865499

LowLimit

Units: mg/Kg

123

130

HighLimit

RPDLimit

Analyte Gasoline Range Organics (GRO)

520

25.00 500.0

20.54

410.9

%REC 71.4 103

70 70

%RPD

Qual

Surr: BFB

Sample ID 1508e29-001ams2

Client ID: C-1

SampType: MS

18

Result

Result

Batch ID: C28591

PQL

5.0

RunNo: 28591

SeqNo: 865548

57.6

106

TestCode: EPA Method 8015D Mod: Gasoline Range

LowLimit

54.9

70

LowLimit

Units: mg/Kg

131

130

HighLimit

%RPD

RPDLimit

Qual

Qual

Analyte

Prep Date:

13 Gasoline Range Organics (GRO) Surr: BFB 430

SampType: MSD

Analysis Date: 9/2/2015

PQL

4.1

TestCode: EPA Method 8015D Mod: Gasoline Range

Client ID: C-1

Sample ID 1508e29-001amsd2

Batch ID: C28591

PQL

4.1

RunNo: 28591

Prep Date:

Analysis Date: 9/2/2015

SeqNo: 865562

Units: mg/Kg

%RPD **RPDLimit**

20

0

Analyte Gasoline Range Organics (GRO) Surr: BFB

14 440

Result

20.54 410.9

SPK value SPK Ref Val 1.471

%REC LowLimit 60.6 108

54.9 70 HighLimit 131 130

4.53

0

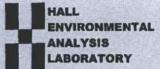
Qualifiers:

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

% Recovery outside of range due to dilution or matrix

- Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- Analyte detected in the associated Method Blank B
- E Value above quantitation range
- Analyte detected below quantitation limits J
- Sample pH Not In Range
- RL Reporting Detection Limit

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

Sample Log-In Check List

Website: www.hallenvironmental.com

Client Name: APEX AZTEC Work Order Number: 1508E29 RoptNo: 1

Received by/date: 8/29/2015 10:00:00 AM Lindsay Mangin Logged By: Completed By: Lindsay Mangin 8/31/2015 5:53:20 AM A- 08/31115 Reviewed By: Chain of Custody No 🗌 Not Present Yes 1 Custody seals intact on sample bottles? No 🗌 Not Present Yes 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In No 🗌 NA 🗌 4. Was an attempt made to cool the samples? No 🗌 NA 🗆 5. Were all samples received at a temperature of >0° C to 6.0°C Yes No I 6. Sample(s) in proper container(s)? Yes No [7. Sufficient sample volume for indicated test(s)? No 🗌 8. Are samples (except VOA and ONG) properly preserved? Yes No M NA 🗆 Yes 9. Was preservative added to bottles? Yes 🗌 No 🔲 No VOA Vials 10. VOA vials have zero headspace? Yes -No M 11. Were any sample containers received broken? # of preserved bottles checked for pH: No L Yes 12. Does paperwork match bottle labels? (<2 or >12 unless noted) (Note discrepancies on chain of custody) Adjusted? No 🗌 13. Are matrices correctly identified on Chain of Custody? No 🗆 14. Is it clear what analyses were requested? No 🗌 Checked by: 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗌 No 🗆 NA 16. Was client notified of all discrepancies with this order? Person Notified: Date: By Whom: Via: eMail Phone Fax In Person Regarding: Client Instructions: 17. Additional remarks:

18. Cooler Information

č	coler Inform	nation					
	Cooler No	Temp ℃	Condition	Seal Intact	Seal No	Seal Date	Signed By
	1	1.6	Good	Yes			

												CHAIN OF CUSTODY RECORD
	A				Laboratory:	Ha	d				ANALYSIS REQUESTED	Lab use only Due Date:
A	PEX				Address: _			Ba			/	Temp. of coolers
Offic	e Location	1	42	tec							12	when received (C°):
					_ Contact: _	Free	ma	<u></u>			/W	1 2 3 4 5
	Project Manager K.Swwwws PO/SO#:							13	/// Pageof2_			
	ect Manag ler's Name	er	.Su	mmers							73/	
R	Lance (Deech	illy	,	Sampler's Signa	ueh	dy				Sus etch Sus Tell Geodole	
Proj. I	Vo.		Proje	ot Name Ji car:11	a F#3		No/	Type of (Containers		47	
Matrix	Date	Time	CoEa	G		Start Depth End	VOA	A/G	250 ml Glass	P/0	43//	Lab Sample ID (Lab Use Only)
S	8/26/15	1400			C-1						11	1508 XEZG-001
	8/27/14	1330			C-2	C-2						-002
	8/26/15	1405			C-3						-003	
	812615	1410			C-4				1			-021
	8/28/15	1230			C-5				1			-05
		1235			C-6							-006
		1240			C-7							-007
		1245			C-8				1			-008
4		1250			C-9							-009
V	V	1255		C area Breek	C-10	Annu n		_ ^	1 1		111	-010
Relina Relina	quished by (squished by (squish	Signature))	Date:	Time: Receiv	ed by: (Signal by:	gnature) gnature) gnature)		Date S/28	15		Bill to Tomlong (EPROD) Non AFE # N222 22 3-day rush (9/2/15)

APEX Office Location Address: ABQ Contact: Prumus Phone: Phone: Polso Name Sampler's Name Sampler's Name Contact: Prumus Project Manager K.S.W.W.W.L.S. Polso Signature Contact: Prumus Contact: Pru				Notice of the party of the second	CHAIN OF CUSTODY RECORD
Office Location ALKE Contact: Frankly Phone: Phone: Poset Manager K. Swambler's Name Rankl Delchilly Project Name Rankl Delchilly Project Name Rankl Date Time Sampler's Signature Matrix Date Date Date: Time: Date	ADEX				Due Date:
Contact: Presence Project Manager K.Suwwils Project Manager Sampler's Signature Ranke Delectify Project Name Sampler's Signature Ranke Delectify Project Name Sampler's Signature Ranke Delectify Project Name Sampler's Signature Ranke Of Sampler's Ranke Of Sampler'		Address:ABQ			/ / / / lettip. Of coolers
	Office Location Andre				when received (C°): B: 6
		Contact: Frame	an	1 /2/ /	1 2 3 4 5
		Phone:		1 /2 / /	/ / Page 7_of 2_
	Project Manager K.Sumwer	S_ PO/SO#:		1 18/1/	
	Sampler's Name Rance Deechilly	Sampler's Signature Ruduchill	,	THE !	
	Proj. No. Project Name	rilla F#3 NorType	of Containers		
1310 C-13	Matrix Date Time O r a Identifyir	Marks of Sample(s) Start Depth A V V A V S	Add 144 Add 14	7/////	Lab Sample ID (Lab Use Only)
1310 C-13 1 X X -0 13 1 X X -0 13 1 X X -0 13 13 13 13 10 13 10 13 10 13 10 13 10 13 13	5 812815 1300			XX III	1508EZG-OI
Turn around time Normal 25% Rush 250% Rush 2400% Rush 3 day Relinquished by (Signature) Date: Time: Received by: (Signature) Notes: Bill to 15m Long Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Received by: (Signature) Note: Note	1 1 1305	C-12		XX	-017
Turn around time Normal 25% Rush 250% Rush 2400% Rush 3 day Relinquished by (Signature) Date: Time: Received by: (Signature) Notes: Bill to 15m Long Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Received by: (Signature) Note: Note	1310	C-13		X X	-013
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Turn around time Normal 25% Rush 250% Rush 250% Rush 3 day Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: NOTES: Description Date: Time: Received by: (Signature) Date: Time: Bill to 16 m Long Description Date: Time: Received by: (Signature) Date: Time: Received by: (Signature) Date: Time: Received by: (Signature) Date: Time: Non AFE # N22222			1	X.V	-011
Turn around time Normal 25% Rush 250% Rush 250% Rush 3 day Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Bill to four Lung Relinquished by (Signature) Date: Time: Received by (Signature) Date: Time: Bill to four Lung Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Bill to four Lung Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Non AFE # N22222					-016
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Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Stall > 1745 Received by (Signature) Received by (Signature) Received by: (Signature) Date: Time: Bill to 16 m Lung Received by: (Signature) Date: Time: NOTES: Stall > 1745 Date: Time: Bill to 16 m Lung Received by: (Signature) Date: Time: Notes: Bill to 16 m Lung Received by: (Signature) Date: Time: Notes: Bill to 16 m Lung Received by: (Signature) Date: Time: Notes: Bill to 16 m Lung Received by: (Signature) Date: Time: Notes: Bill to 16 m Lung Date: Time: Notes: Bill to 16 m Lung Notes: Bill to 16 m Lung Received by: (Signature) Date: Time: Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Received by: (Signature) Notes: Bill to 16 m Lung Notes: Bill to 16 m					
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Stroll 1745 Received by (Signature) Date: Time: Stroll 1745 Received by (Signature) Received by: (Signature) Date: Time: Bill to form Lung Relinquished by (Signature) Date: Time: NOTES: Date: Time: Bill to form Lung Received by: (Signature) Date: Time: Note to form Lung Relinquished by (Signature) Date: Time: Note to form Lung Date: Time: Note to form Lung Non AFE to Note to form Lung Received by: (Signature) Date: Time: Note to form Lung Non AFE to Note to form Lung Note to form Lung Received by: (Signature) Date: Time: Note to form Lung Received by: (Signature) Note to form Lung Note to	Turn around time ☐ Normal ☐ 25% Rush	□50% Rush	<u> </u>		
Relinquished by (Signature) Date: Time: Received by: (Signature) Date: Time: Non ATE # N22222	Relinquished by (Signature) Date:	Time: Redived by: /Signature)	et 8/28/15	1745	115
Religional by (Clanature) Deter Time: December by (Clanature) Deter Time:	Mustre Walte Shells		Brains	1000 N	on AFE# N22222
Matrix WW-Wastewater W-Water S-Soil SD-Solid L-Liquid A-Air Bag C-Charcoal tube SL-sludge O-Oil	Relinquished by (Signature) Date:	Time: Received by: (Signature)	Date:	BOOM REMARKS TO SERVICE THE SERVICE OF THE SERVICE	eayons (9/2/15)