3R-1011

Release Report/ General Correspondence

Enterprise SJ

Date: Jul-Sept 2014

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 <u>District IV</u> 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. Revised August 8, 2011

Form C-141

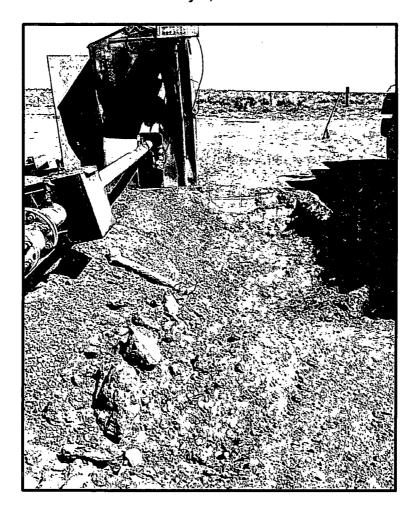
OIL CONS. DIVACUSCAPE With 19.15.29 NMAC.

				Sa	nta Fe	, NM 87	505	AUG	07 2014		
	Release Notification and Corrective Action										
	OPERATOR ☐ Initial Report ☒ Final Repor										
Name of C	ompany: E	nterprise F	ield Serv	ices LLC			homas Long				
			D. Box 43	324, Houston			No. 505-599				
Facility Na	me: Racha	ael #2	-		F	acility Typ	e: Well Site)			· · · · · · · · · · · · · · · · · · ·
Surface Ov	vner: NAP	I/Navajo Ti	ribal	Mineral (Owner:	NAPI/Nava	jo Tribal		API No.	30-045-2228	35
				LOCA	ATION	OF REL	EASE				
Unit Letter	Section	Township	Range	Feet from	North	South	Feet from	Eas	West	County	
J	34	26N	12W	the 1458	Line		the 1010	Line		San Juan	
	<u></u>	L		l	<u> </u>						
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Tues of Dale	agger Netur	al Cas 'Drad				OF RELE			1 \/-t D	\	
Type of Rei	ease: Natur	ai Gas, Prod	uced vvate	er, and Conde	ensate	Volume of Estimated	r Release: d 2-3 bbls of	fluids;	Volume R	Recovered: Unl	known
0						Estimated	d 5 MCF gas	release			
Source of R	elease: Equ	ipment Dam	age				Hour of Occu @ 11:43 a.m			Hour of Discov 1 @ 12:00 p.m	
Was Immed	iate Notice					If YES, To	Whom? Cor	y Smith -	- NMOCD, E	Eric Trevizo – 1	NAPI Safety,
Required			⊠ Yes	□ No □ N	lot	Steve Aus	itin – NNEPA	, Mike Fr	eeman – NA	API Manageme	ent
By Whom?				·····						ne call and er	nail
Was a Wate	rcourse Re		☐ Yes	⊠ No		If YES, Vo	olume Impacti	ng the W	/atercourse		
		npacted, Des				***************************************					
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activities we wide by 0.5 was excaval included with	re complete feet deep a led and tran h this "final"	ed on June 10 nd ten (10) fe asported to a c-141	6, 2014.Theet long by NMOCD	ne two excava y five (5) wide approved land	tions dir and up I farm fa	nensions m to 1.5 feet o cility. A third	easured appr leep. Approxi d party enviro	oximatel mately ei nmental	y ten (10) fe ight (8) cubi contractor c	s affected. Rei eet long and tei c yards of impa corrective action	n (10) feet acted soil n report is
rules and re- which may e relieve the o ground wate	hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.										
Signature:	Signature: OIL CONSERVATION DIVISION						, 4				
Printed Nam	e: Ivan W.	Zirbes				pproved by	Environmen	tal Specia	alist:	yy	
Title: Sr. D	irector, Env	ironmental				pproval Da	te:///4//2	-/	Expiration	Pate:	
E-mail Addr	ess: snolan	@eprod.com	!		c	Conditions o	f Approval:	-		Attached]

8-1.2014 Phone: (713) 381-6595 * Attach Additional Sheets If Necessary

NCS 1430841973

Enterprise Products Rachel #2 Meter Run Release Latitude North 36.441389°, Longitude West -108.093382° Unit I Section 34 T26N R12W San Juan County, New Mexico July 9, 2014



Submitted To:

Enterprise Products Field Environmental-San Juan Basin 614 Reilly Avenue Farmington, NM 87401

Submitted By:

Souder, Miller & Associates 401 West Broadway Farmington, NM 87401 (505) 325-7535



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1.0 Executive Summary

On June 13 and 16, 2014, Souder, Miller & Associates (SMA) responded to a hydrocarbon release associated with the Rachel #2 meter run release. The table below summarizes information about the release and remediation activities.

	TABLE 1: RELEASE INFORMATION						
Name		Rachel # 2 N	Meter Run Release				
	Latitude	/Longitude	Section, Township, Range				
Location	36.441389°	-108.093382°	(NE 1/4 /SE 1/4) Unit I Section 34	T 26N, R 12W			
Date Reported	May 30, 2014	•					
Reported by	Tom Long						
Land Owner	Navajo Agricu	ıltural Products I	ndustry				
Reported To	New Mexico	Oil Conservation	Division (NMOCD)	and NAPI			
Diameter of Pipeline	N/A						
Source of Release	Incident/Equi	oment Damage o	of Meter Run				
Release Contents	Natural Gas/0	Natural Gas/Condensate					
Release Volume: Natural Gas	5.0 MCF						
Release Volume: Liquids/Condensate	Unknown						
Nearest Waterway	Tributary of G	allegos Wash					
Depth to Groundwater	Less than 100) feet					
Nearest Domestic Water Source	Greater than	1,000 feet					
NMOCD Ranking	10						
SMA Response	June 13 and	June 16, 2014					
Dates							
Subcontractors	West States Energy (WSEC)						
Disposal Facility	Envirotech La	ındfarm					
Yd ³ Contaminated							
Soil Excavated and	8	8					
Disposed							

2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of a hydrocarbon release associated with the Rachel #2 meter run release. The release was due to equipment damage by a large agricultural pesticide sprayer hitting the Rachel #2 meter house and meter run, breaking off the ½" drip pot for condensate storage and the pipe fitting. A separate leak on the meter run, close to the meter house was also created due to impact. Approximately 5.0 thousand cubic feet (MCF) of natural gas was lost. The amount of liquids/condensate released is unknown. The release was reported on May 30, 2014 and was located in (NE ¼ /SE ¼) Unit I, Section 34, Township 26 North, Range 12 West, 36.441389°, -108.093382°, San Juan County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

3.0 Site Ranking and Land Jurisdiction

The release site is located approximately 650 feet north of an unnamed tributary of the Gallegos Wash on land owned by NAPI with an elevation of approximately 6,260 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 100 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No recorded wells were located within 1,000 feet or a 1 mile radius of the site.

The physical location of this release is within the jurisdiction of Navajo Agricultural Products Inc. (NAPI) and NMOCD. This release location has been assigned a NMOCD ranking of 10, which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm total benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 1,000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On June 13, 2014 SMA mobilized to the release site to delineate the release area through field screening using a calibrated photoionization detector (PID) and collected surface samples by hand. On June 16, 2014, SMA provided oversight and guidance of excavation activities of West States Energy Contractors (WSEC). WSEC used a rubber tired backhoe for surface excavation. During the excavation event, soil samples were

collected for field screening to determine the extent of the release. Table 3 summarizes the field screening results. Field notes are included in Appendix A.

The final excavation, on the west side of the meter run, measured approximately 10 feet long by 10 feet wide with maximum excavation depth of approximately 0.5 feet below ground surface. The final excavation, on the east side of the meter run, measured approximately 10 feet long by 5 feet wide with depths of 1.0 -1.5 feet. Field screening of the excavated material determined that the soils removed were not suitable for use as backfill material. The impacted soil was transported for disposal to Envirotech Landfarm on Hilltop near Bloomfield, NM. Bills of lading are included in Appendix C.

All laboratory soil samples were field screened with a calibrated PID. Samples meeting field screening criteria were submitted for laboratory analysis per United States Environmental Protection Agency Method 8021 BTEX, and 8015 Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation and laboratory results.

5.0 Conclusions and Recommendations

As noted in Section 3.0 of this report, NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 10: 10 ppm benzene, 50 ppm total BTEX, and 1,000 ppm TPH. Laboratory analysis of the excavation for benzene, total BTEX, and TPH (GRO/DRO) were at concentrations below the NMOCD Guidelines for all samples. The impacted soil was hauled off site for disposal. Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 4. Laboratory report is included in Appendix D.

SMA recommends no further action at this site.

6.0 Closure and Limitations

The scope of our services consisted of the performance of a preliminary spill assessment, regulatory liaison, contractor oversight and control of remediation operations, disposal arrangements and documentation, project management and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

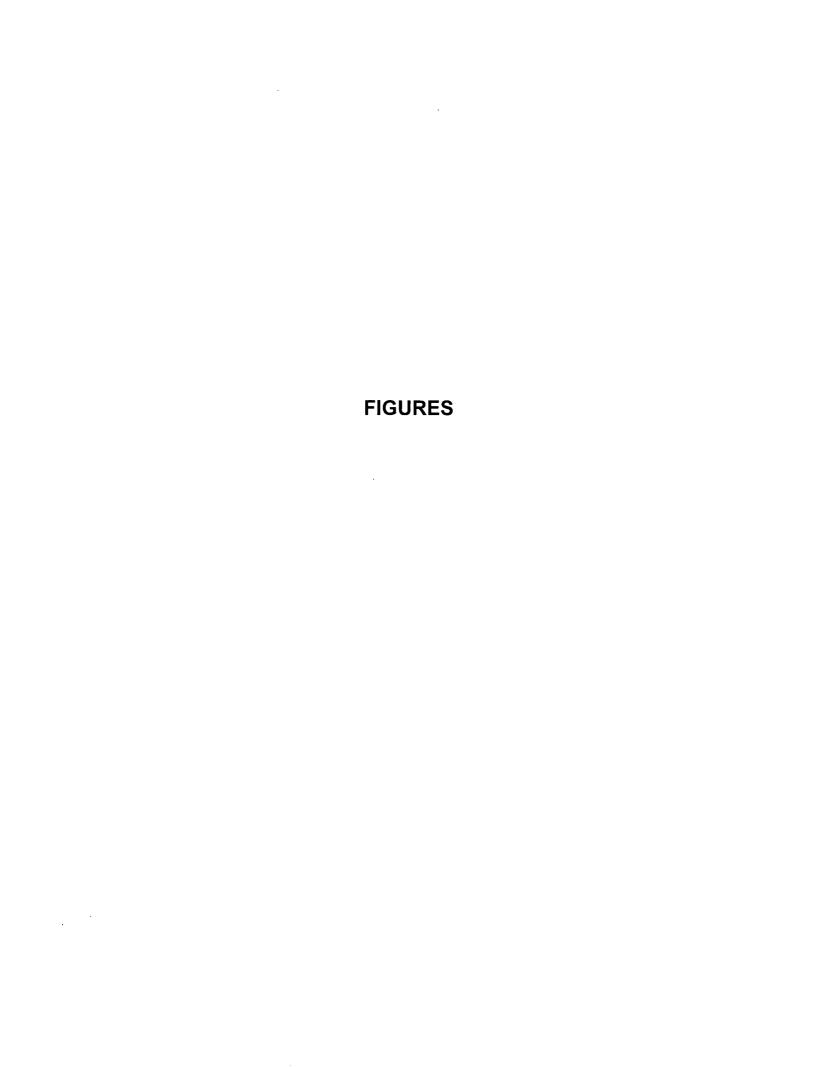
If there are any questions regarding this report, please contact either Steve Moskal or Reid Allan at 505-325-7535.

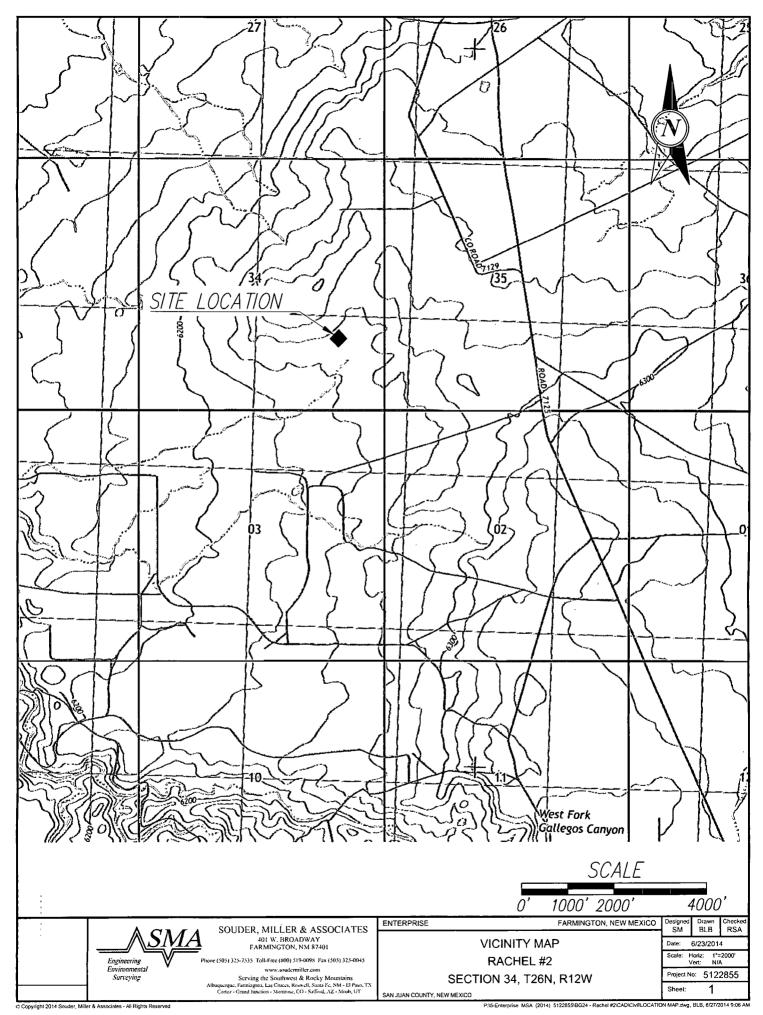
Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

Steve Moskal Project Scientist Reid S. Allan, PG Principal Scientist







0' 1500' 3000' 6000'

Engineering
Environmental
Surveying

SOUDER, MILLER & ASSOCIATES 401 W. BROADWAY FARMINGTON, NM 87401

Phone (505) 325-7535 Toll-Free (800) 519-0098 Fax (505) 325-0045

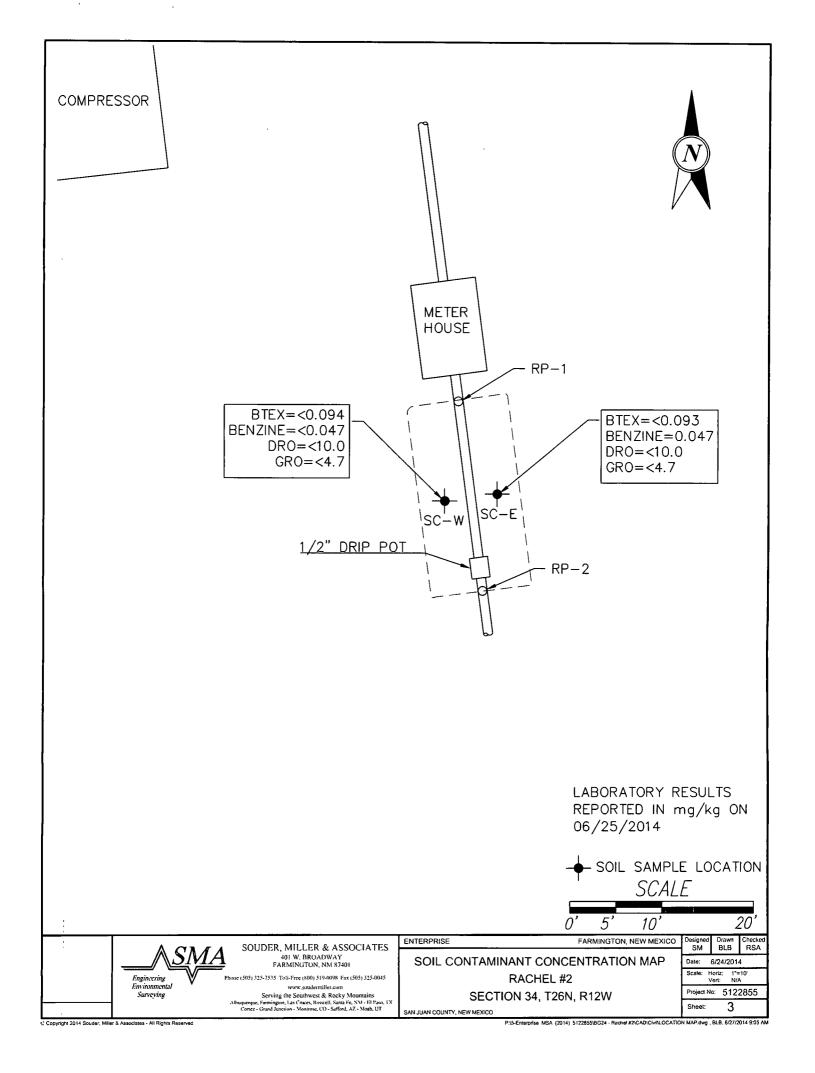
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Serving the Southwest & Rocky Mountains
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SITE LOCATION MAP RACHEL #2

ENTERPRISE

SECTION 34, T26N, R12W

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FARMINGTON, NEW MEXICO	Designed SM	Drawn BLB	Checked
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MAP	Date:	6/23/201	4
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, R12W	Project N	o: 512	2855
,	Sheet:	2	





Enterprise Products Table 2: Site Ranking

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20		Verified using Google	Groundwater is assumed to be
50' to 99' = 10	10 Ear		between 50 and 99 feet below ground
>100' = 0			surface
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20		Verified using	A tributary of the
200' - 1000' = 10	10	Petroleum Recovery Research Center Map; field verified.	Gallegos Wash is located 650 feet norht of the site.
>1000' = 0		neid vermed.	nome of the site.
Ranking Criteria for Horizintal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR	0	New Mexico State Engineer's Office	There are no recorded wells within
NO to BOTH. YES = 20, NO = 0		online water well data base	
Total Site Ranking	20		
Soil Remedation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
ТРН	5000 PPM	1000 PPM	100 PPM



Enterprise Productions Table 3: Summary of Excavation Field Screening Results

	FIELD SCREENING RESULTS SUMMARY										
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading	Lab Sample Collected Y/N						
6/13/2014	1419	RP-1 @ 5' E	0	5.1	N						
6/13/2014	1420	RP-1 @ 10' E	0	2.2	N						
6/13/2014	1421	RP-1 @ 15' E	0	6.9	N						
6/13/2014	1422	RP-1 @ 20' E	0	1.8	N						
6/13/2014	1416	RP-1 @ 5' W	0	10.2	N						
6/13/2014	1417	RP-1 @ 10'W	0	2.4	N						
6/13/2014	1418	RP-1 @15' W	0	0.7	N						
6/13/2014	1419	RP-1 @ 20' W	0	0.6	N						
6/13/2014	1455	RP-1 @ 1' bgs	1	115.4	N						
6/13/2014	1423	RP-2 @ 5' E	0	1.1	N						
6/13/2014	1424	RP-2 @ 10' E	0	0.5	N						
6/13/2014	1425	RP-2 @ 15' E	0	0.6	N						
6/13/2014	1426	RP-2 @ 20' E	0	0.9	N						
6/13/2014	1429	RP-2 @ 5' W	0	1.4	N						
6/13/2014	1428	RP-2 @ 10' W	0	4.4	N						
6/13/2014	1427	RP-2 @ 15' W	0	0.8	N						
6/13/2014	1426	RP-2 @ 20' W	0	0.7	N						
6/13/2014	1455	RP-2 @ 1' bgs	1	26.4	N						
6/16/2014	1040	RP-1 @ pipe	1	3.0	N						
6/16/2014	1040	RP-1@ 2'E	1.5	4.1	N						
6/16/2014	1041	RP-1@ 5' E	1	4.3	N						
6/16/2014	1058	RP-1 @ 2'W	0.5	6.9	N						
6/16/2014	1058	RP-1 @ 5'W	0.5	7.3	N						
6/16/2014	1059	RP-2 @5' W	0.5	5.0	N						
6/16/2014	1115	West Composite	0.5	6.0	Υ						
6/16/2014	1115	East Composite	1	4.9	Υ						



Enterprise Products Table 4: Summary of Laboratory Analysis Results in mg/Kg

Rachel #2 Meter Run Release 7/9/2014

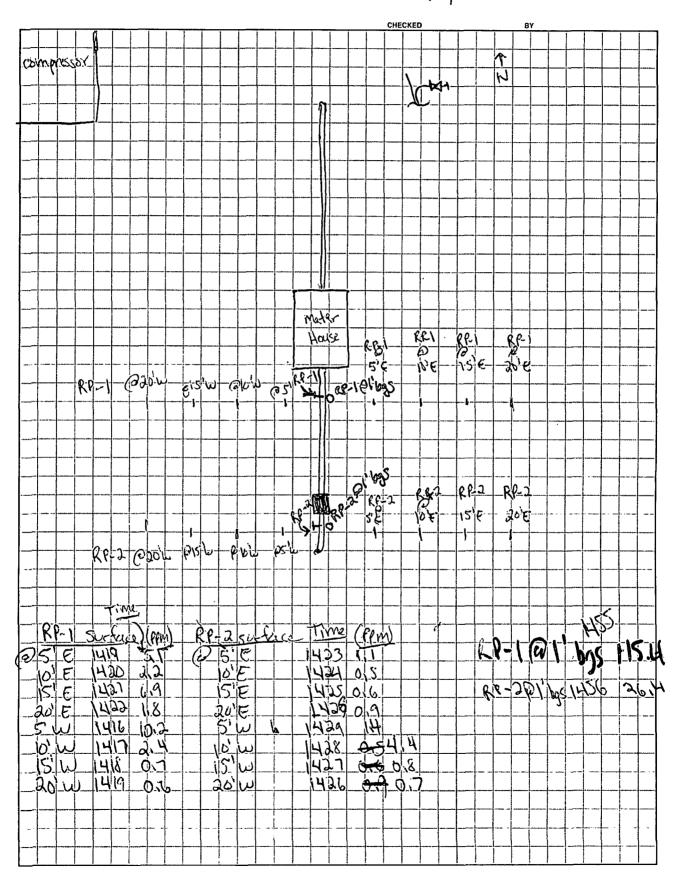
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Gu	idelines	NMOCD Site	Ranking: 20	100 ppm		10 ppm	50 ppm
6/16/2014	1115	West Composite	0.5	<4.7	<10.0	<0.047	<0.094
6/16/2014	1115	East Composite	1	<4.7	<10.0	<0.047	<0.093



APPENDIX A FIELD NOTES

CLIENT EPCS

DATE 6/13/14 BY STM



6-16-14 150 ague 5. Chappur	Release Information
Name	Rachel #2
	Latitude/Longitude
Location	
Location	Section, Township, Range
Reported To	
Area Supervisor	Dave Harrison (310-5705)
Diameter of Pipeline	Meter House
Source of Release	
Release Contents	j.
Release Volume	,
Subcontractor	Environtech
Disposal Facility	Environted
Yd ³ Contam. Soil	
PO/WO/AFE	

Notes:

Field Screening								
Rachel #	6-16-1	ate Y						
Location Name	Description	Depth (Feet BGS)	Time Collected	Time Screened	PID Reading (ppm)			
Rachel #2	RP. & Cepipe	1	1020	1040	3.0			
	RP-26 8'E	1,5	1030	1040	4.1			
	RP-1@5' &)	1035	(4)	4,3			
1	RP-1@2'W	05	1045	1058	69.			
	RP-1 Q5'W	0.5	1050	1058	7.3			
	RP.2 e5'W	05	1055	1059	8 5.0			
	West composite	6.5	1156	1112	6.0			
	East Composite	1, 0	1105	1115	4.9			
		i						

APPENDIX B SITE PHOTOGRAPHY

Site Photographs Enterprise Products Rachel #2 Meter Run Release



Photo 1: Field screening of the surface excavation east and west of meter run.



Photo 2: Excavation east of meter run at Rachel #2.

Site Photographs Enterprise Products Rachel #2 Meter Run Release

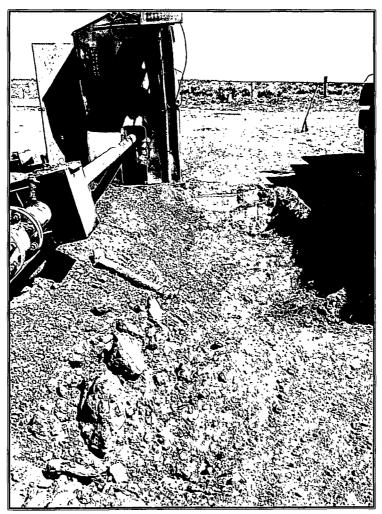
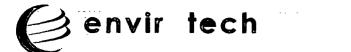


Photo 3: Final excavation east of meter run at Rachel #2.

APPENDIX C SOIL DISPOSAL DOCUMENTATION



Bill f La in MANIFEST # 47123

DATE 6-16-19 JOB # 97057-0642

PHONE: (505) 632-0615 • 5796 LLS HIGHWAY 64 • FARMINGTON NEW MEYICO 87401

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Bill of Lading

MANIFEST # 47124 DATE 6.16.19 JOB # 97057-0642

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

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Signature	s required prior to distribute	ion of the legal docum	ment.					

APPENDIX D LABORATORY ANALYTICAL REPORTS



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

OrderNo.: 1406721

June 20, 2014

Steve Moskal

Souder, Miller and Associates

401 W. Broadway

Farmington, NM 87401

TEL: (505) 325-5667

FAX (505) 327-1496

RE: Rachel #2

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/17/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1406721

Date Reported: 6/20/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: West Composite@.5'

Project: Rachel #2

Collection Date: 6/16/2014 11:00:00 AM

Lab ID: 1406721-001

Matrix: SOIL Received Date: 6/17/2014 7:45:00 AM

Analyses	Result	Result RL Qual Units		DF	Date Analyzed	Batch	
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	: BCN	
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/18/2014 7:06:02 PM	13738	
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/18/2014 7:06:02 PM	13738	
Surr: DNOP	97.0	57.9-140	%REC	1	6/18/2014 7:06:02 PM	13738	
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB	
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/18/2014 2:45:35 PM	13743	
Surr: BFB	97.5	80-120	%REC	1	6/18/2014 2:45:35 PM	13743	
EPA METHOD 8021B: VOLATILES					Analyst	: NSB	
Benzene	ND	0.047	mg/Kg	1	6/18/2014 2:45:35 PM	13743	
Toluene	ND	0.047	mg/Kg	1	6/18/2014 2:45:35 PM	13743	
Ethylbenzene	ND	0.047	mg/Kg	1	6/18/2014 2:45:35 PM	13743	
Xylenes, Total	ND	0.094	mg/Kg	1	6/18/2014 2:45:35 PM	13743	
Surr: 4-Bromofluorobenzene	112	80-120	%REC	1	6/18/2014 2:45:35 PM	13743	

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 1 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406721

Hall Environmental Analysis Laboratory, Inc. Date Reported: 6/20/2014

Matrix: SOIL

CLIENT: Souder, Miller and Associates

Client Sample ID: East Composite@1'

Project: Rachel #2

Collection Date: 6/16/2014 11:05:00 AM

Lab ID: 1406721-002

Received Date: 6/17/2014 7:45:00 AM

Analyses	Result RL Qual Units		DF	Date Analyzed	Batch	
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/18/2014 7:35:52 PM	13738
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	6/18/2014 7:35:52 PM	13738
Surr: DNOP	108	57.9-140	%REC	1	6/18/2014 7:35:52 PM	13738
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	6/18/2014 4:16:00 PM	13743
Surr: BFB	98.9	80-120	%REC	1	6/18/2014 4:16:00 PM	13743
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	6/18/2014 4:16:00 PM	13743
Toluene	ND	0.047	mg/Kg	1	6/18/2014 4:16:00 PM	13743
Ethylbenzene	ND	0.047	mg/Kg	1	6/18/2014 4:16:00 PM	13743
Xylenes, Total	ND	0.093	mg/Kg	1	6/18/2014 4:16:00 PM	13743
Surr: 4-Bromofluorobenzene	111	80-120	%REC	1	6/18/2014 4:16:00 PM	13743

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 2 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

20-Jun-14

1406721

WO#:

Client:

Souder, Miller and Associates

Project:

Rachel #2

Project: Rachel	#4 								
Sample ID MB-13738	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: PBS	Batch ID: 13738	RunNo: 19312							
Prep Date: 6/17/2014	Analysis Date: 6/17/2014	SeqNo: 558311 Units: mg/Kg							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Diesel Range Organics (DRO)	ND 10								
Motor Oil Range Organics (MRO)	ND 50								
Surr: DNOP	8.6 10.00	86.1 57.9 140							
Sample ID LCS-13738	SampType: LCS	ampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 13738	RunNo: 19312							
Prep Date: 6/17/2014	Analysis Date: 6/17/2014	SeqNo: 558312 Units: mg/Kg							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Diesel Range Organics (DRO)	63 10 50.00	0 126 60.8 145							
Surr: DNOP	4.4 5.000	87.9 57.9 140							
Sample ID MB-13755	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: PBS	Batch ID: 13755	RunNo: 19341							
Prep Date: 6/18/2014	Analysis Date: 6/18/2014	SeqNo: 559117 Units: %REC							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Surr: DNOP	8.4 10.00	84.0 57.9 140							
Sample ID LCS-13755	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 13755	RunNo: 19341							
Prep Date: 6/18/2014	Analysis Date: 6/18/2014	SeqNo: 559118 Units: %REC							
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual							
Surr: DNOP	4.3 5.000	85.2 57.9 140							

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E : Value above quantitation range
- J : Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 3 of 6

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1406721

20-Jun-14

Client:

Souder, Miller and Associates

Project:

Rachel #2

Sample ID MB-13743 MK

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

Client ID:

Batch ID: R19352

RunNo: 19352

Prep Date:

Analysis Date: 6/18/2014

SeqNo: 559936

Units: %REC

HighLimit

Analyte

PQL

SPK value SPK Ref Val %REC LowLimit

120

RPDLimit Qual

Surr: BFB

890

Result

1000

89.0

%RPD

Sample ID LCS-13743 MK

SampType: LCS

TestCode: EPA Method 8015D: Gasoline Range

Client ID: Prep Date:

LCSS

Batch ID: R19352 Analysis Date: 6/18/2014 RunNo: 19352 SeaNo: 559937

80

Units: %REC

Analyte

Result

SPK value SPK Ref Val

%REC

LowLimit HighLimit %RPD

Surr: BFB

1100

1000

106

120

TestCode: EPA Method 8015D: Gasoline Range

RPDLimit

Qual

Sample ID MB-13743

Client ID:

PBS

SampType: MBLK Batch ID: 13743

RunNo: 19352

Analyte

Prep Date: 6/17/2014 Analysis Date: 6/18/2014

Result

Result

SeqNo: 559944 %REC

Units: mg/Kg HighLimit

%RPD **RPDLimit**

Qual

Gasoline Range Organics (GRO) Surr: BFB

ND 5.0 890

PQL

1000

89.0

80

LowLimit

%RPD

Sample ID LCS-13743

Prep Date: 6/17/2014

Client ID: LCSS

SampType: LCS

Batch ID: 13743

SPK value SPK Ref Val

TestCode: EPA Method 8015D: Gasoline Range RunNo: 19352

120

Units: mg/Kg

Analyte Gasoline Range Organics (GRO) Surr: BFB

Analysis Date: 6/18/2014 SPK value SPK Ref Val **PQL**

0

SeqNo: 559946

LowLimit

HighLimit

RPDLimit

Qual

25 5.0 1100

25.00 1000 %REC 98.6 106

71.7 80

134 120

Qualifiers:

Ε

S

Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

- Analyte detected below quantitation limits J :
- RSD is greater than RSDlimit 0

Value above quantitation range

RPD outside accepted recovery limits R

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2. Reporting Detection Limit
- Page 4 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1406721**

20-Jun-14

Client:

Souder, Miller and Associates

Project:

Rachel #2

Sample ID MB-13743 MK	Sampi	SampType: MBLK			tCode: E	PA Method	8021B: Vo	olatiles		
Client ID: PBS	Batcl	Batch ID: R19352 RunNo: 19352								
Prep Date:	rep Date: Analysis Date: 6/18/2014		S	SeqNo:	559977	Units: %	REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLim	it %RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1 000		102	80	12	Λ		

Sample ID LCS-13743 MK	SampT	ype: LC	S	Tes	tCode: E	de: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batch	Batch ID: R19352 RunNo:													
Prep Date:	Analysis Da	Analysis Date: 6/18/2014			SeqNo: 559979			С							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120								

Sample ID MB-13743	SampT	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles								
Client ID: PBS	Client ID: PBS Batch ID				RunNo: 1								
Prep Date: 6/17/2014	Analysis Date: 6/18/2014			SeqNo: 559985			Units: mg/k	ίg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	ND	0.050	·										
Toluene	ND	0.050											
Ethylbenzene	ND	0.050											
Xylenes, Total	ND	0.10											
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120						

Sample ID LCS-13743	TestCode: EPA Method 8021B: Volatiles												
Client ID: LCS\$	Batch ID: 13743 RunNo: 19352												
Prep Date: 6/17/2014	Analysis D	ate: 6 /	18/2014	SeqNo: 559986		Units: mg/K	ζg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene	0.96	0.050	1.000	0	96.1	80	120						
Toluene	0.94	0.050	1.000	0	93.5	80	120						
Ethylbenzene	0.94	0.050	1.000	0	94.4	80	120						
Xylenes, Total	3.0	0.10	3.000	0	98.7	80	120						
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120						

Sample ID 14067	21-001AMS	SampT	ype: MS	3	TestCode: EPA Method 8021B: Volatiles							
Client ID: West	F											
Prep Date: 6/17	18/2014	S	SeqNo: 5	59988	Units: mg/Kg							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		0.92	0.047	0.9461	0	97.3	77.4	142				
Toluene		0.92	0.047	0.9461	0	96.8	77	132				
Ethylbenzene		0.95	0.047	0.9461	0	100	77.6	134				
Xylenes, Total		3.0	0.095	2.838	0	105	77.4	132				

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 5 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1406721

20-Jun-14

Client:

Souder, Miller and Associates

Project:

Rachel #2

Sample ID 1406721-001AMS

SampType: MS

TestCode: EPA Method 8021B: Volatiles

80

TestCode: EPA Method 8021B: Volatiles

Client ID: West Composite@.5

Batch ID: 13743

RunNo: 19352

Prep Date: 6/17/2014 Analysis Date: 6/18/2014

SeqNo: 559988

Units: mg/Kg

PQL

Analyte

Result

SPK value SPK Ref Val

%REC LowLimit

%RPD

RPDLimit

Qual

Surr: 4-Bromofluorobenzene

1.1

0.9461

121

HighLimit 120

s

Sample ID 1406721-001AMSD Client ID: West Composite@.5

SampType: MSD Batch ID: 13743

RunNo: 19352

Prep Date: 6/17/2014	Analysis [Date: 6 /	18/2014	\$	SeqNo: 5	59989	Units: mg/M	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.047	0.9434	0	95.5	77.4	142	2.19	20	
Toluene	0.90	0.047	0.9434	0	95.5	77	132	1.72	20	
Ethylbenzene	0.93	0.047	0.9434	0	98.6	77.6	134	2.07	20	
Xylenes, Total	2.9	0.094	2.830	0	103	77.4	132	2.26	20	
Surr: 4-Bromofluorobenzene	1.1		0.9434		118	80	120	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits 1;

0 RSD is greater than RSDlimit

RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Sample pH greater than 2.

Reporting Detection Limit

Page 6 of 6



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

EL: 303-343-39/3 FAX: 303-343-410/ Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM Work O	rder Number: 1406721		RcptNo: 1						
Received by/date:MOLg _T	1114								
Logged By: Celina Sessa 6/17/2014	7:45:00 AM	Celin	Sme						
Completed By: Celina Sessa 6/17/2014	9:06:15 AM	Celin !	C						
Reviewed By: () (6/17	LONIA	and ,	-						
Chain of Custody	1001								
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	o 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 preserve	d? Yes ✓	No 🗌							
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗆						
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials ⊻						
11. Were any sample containers received broken?	Yes 🗌	No 🗹	#						
			# of preserved bottles checked						
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No □	for pH: (<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 this order?	Yes 🗌	No 🗆	NA 🗹	7					
Person Notified:	Date								
By Whom:	Via: ☐ eMail	Phone Fax	☐ In Person						
Regarding:									
Client Instructions:									
17. Additional remarks:									
18. Cooler Information Cooler No Temp °C Condition Seal Intact 1 1.8 Good Yes	Seal No Seal Date	Signed By	}						

U	naın	-OT-Cl	istoay kecora		imic.									<i>,</i> T F		N		TAI	
Client:	51	NA		Standard	□ Rush	1											IEN" RAT		
		•		Project Name	e: .						vww.h						~1		•
Mailing	Address	401	W. Broadway	Rach	el #	2		49	01 H							 М 871	09		
	ති	1401		Project #:			Tel. 505-345-3975 Fax 505-345-4107												
Phone :		325	- 7535	5122855			Analysis Request												
email o	r Fax#:			Project Manager:			=	nly)	RO)				04)						T
QA/QC I	Package: dard		☐ Level 4 (Full Validation)	Steve Moskal			#B's (8021)	(Gas o	30 / M			OIMIS)	,PO4,S	2 PCB's					
Accredi		□ Othe	er	Sampler: J. Spraget On Ice: Z Yes Salvo			##	+ TPH (Gas only)	RO / DI	118.1)	504.1)	0770	O ₃ ,NO ₂	s / 8082		(AC			Į Ž
□ EDD	(Type)	<u> </u>	1	Sample Tem	perature: /ˈ,	*		TBE	B (G	7 pol	pol s		N,	cide	(A))-i-			>
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALING:	BTEX +★	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B-(VOA)	8270 (Semi-VOA)			Air Bubble
2/16/14	1100	Soi \	label Considered	14 40		-001	X	 "	×		<u>" </u>		†	1 -	Ĩ		-		+
	1105	501	West Composite es	14-	-	-002	Ť	-	X				1						+
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Date:	Time:	Relinquist	the Waller	Received by	1 0	Date Time									:				
	f necessary,	, samples sut	omitted to Hall Environmental may be sub-	contracted to other a	credited laboratori	ies. This serves as notice of th	is possi	bility.	Any su	ib-contr	acted d	ata will	e clea	nota	ated on	the ana	lytical repo	ort.	

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

Date: 9-24-2014 F
* Attach Additional Sheets If Necessary

Phone: (713)381-6684

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

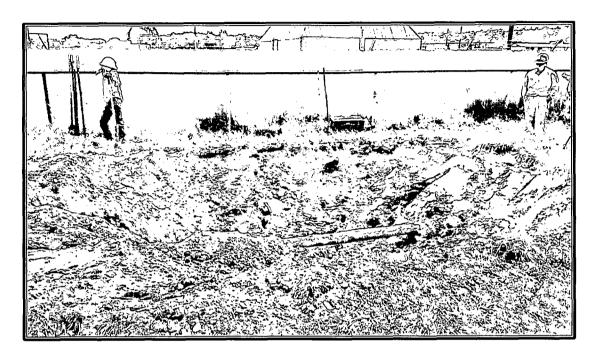
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

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

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				LOC	ATION	OF RE	LEASE			CUD SEI NL COM		
Unit Letter	Section	Township	Range	Feet from	North	South	Feet from	East	Vest	County		
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Source of R	elease. Inte	erriai corrosio	וזכ				Hour of Occurr @ 4:30 p.m.	ence:	@ 6:30 p		DISCOV	ery: 7/7/2014
Was Immed	liate Notice	Given?					o Whom? Notific	cation to			nith.	
			🛛 Yes	□ No □	Not	,			,	,	,	
Required												
By Whom?						Date and	Hour Notification	on 7/8/20	14 @ 9:00) a.m.		
Was a Wate	ercourse Re					If YES, V	olume Impactin	g the Wa	tercourse			
			☐ Yes	⊠ No								
If a Mataraa	uraa waa Ir	nnacted De	ooribo Eull	*								
		npacted, De			014 Ent	erprise per	sonnel respond	ed to a r	ossible lin	e leak on	latera	12B-28 a
							pipeline and app					
							ay. The excavat					
2104.												
Describe Ar	ea Affected	and Cleanu	n Action T	aken * Enter	nrise ner	sonnel res	onded to a pos	sible line	e leak on la	ateral 2B	28 a	Class II
							applied lock ou					
on the groun	nd surface.	The excavat	ion and re	pairs were co	mpleted	on August	14, 2104. The f	inal exca	vation din	nensions	measi	ıred
							. Approximatel					
	ted and trar	rsported to a	NMOCD	approved lan	d tarm ta	icility. A th	rd party correct	ive action	n report is	included	with tr	ns "final" c-
141. I hereby cer	tify that the	information	given abo	ve is true and	complet	e to the be	st of my knowle	dge and	understan	d that pu	rsuant	to NMOCD
							ase notifications					
which may e	endanger pu	ublic health c	or the envi	ronment. The	e accepta	ance of a C	-141 report by ti	he NMO	CD marke	d as "Fina	al Rep	ort" does not
							investigate and					
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Title: Directo	or Environn	nental				Approval Da	ate: 11/12/14	<u>.</u> =	expiration (Date:		
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E-mail Addr	ess: jefields	@eprod.con	n		(Conditions	of Approval:			1		
										Attache	ed 🔲	

\$NOS 1431736015

Enterprise Products Lateral 2B-28 Pipeline Release Latitude North 36.692349°, Longitude West -107.842714° SW/SW (Unit M) Section 25 T29N R10W San Juan County, New Mexico September 8, 2014



Submitted To: Enterprise Products Field Environmental-San Juan Basin 614 Reilly Avenue Farmington, NM 87401 Submitted By: Souder, Miller & Associates 401 West Broadway Farmington, NM 87401 (505)325-7535



Table of Contents

1.0	Executive Summary	. 1
2.0	Introduction	. 1
3.0	Site Ranking and Land Jurisdiction	. 1
4.0	Summary of Field Activities	. 2
5.0	Conclusions and Recommendations	. 2
6.0	Closure and Limitations	. 3

Figures:

Figure 1: Vicinity Map Figure 2: Site Map

Figure 3: Soil Contaminant Concentration Map

Tables:

Table 1: Release Information

Table 2: Site Ranking

Table 3: Summary of Laboratory Analysis

Appendices:

Appendix A: Photographic Documentation Appendix B: Soil Disposal Documentation Appendix C: Laboratory Analytical Reports

1.0 Executive Summary

On August 13 and 14, 2014 Souder, Miller & Associates (SMA) responded to oversee the excavation repairs of hydrocarbon release associated with the Lateral 2B-28 pipeline initially reported on July 7, 2014. However, due to restricted private property access, the pipeline excavation was delayed until permissible access could be obtained on August 13, 2014. The table below summarizes information about the pipeline repair and remediation activities.

	TABLE 1:	RELEASE INFOR	MATION								
Name		Lateral 2B-28	Pipeline	Release	10000						
	Latitude	e/Longitude	Section, Township, Range								
Location	36.692349°	-107.842714°	Unit M	Section 25	T 29N, R 10W						
Date Reported	July 7, 2014										
Reported to	Tom Long										
Land Owner	Private	Private									
Reported To	NM Oil Conser (BLM)	NM Oil Conservation Division (NMOCD)/Bureau of Land Management (BLM)									
Diameter of Pipeline	8 inches										
Source of Release	Internal Corrosion										
Release Contents	Natural Gas Li	quids/Condensate									
Release Volume	11.2 MCF										
Nearest Waterway	Unnamed Trib	utary Wash to Arme	enta Cany	on Wash							
Depth to Groundwater	Assumed to be	less than 50 feet									
Nearest Domestic Water Source	Less than 1,00	0 feet									
NMOCD Ranking	50										
SMA Response Dates	8/13-14/2014										
Subcontractors	West States E	nergy Contractors (WSEC)								
Disposal Facility	Envirotech Lar	ıdfarm									
Yd ³ Contaminated Soil Excavated and Disposed	58 (Reported o	on Completed Form	C-138)								

2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of a hydrocarbon release associated with the Lateral 2B-28 pipeline. The Lateral 2B-28 pipeline release was a result of internal corrosion of the 8-inch, steel pipeline. The release was initially reported on July 7, 2014. The pipeline is located in Unit M, Section 25, Township 29 North, Range 10 West; 36.692349°, -107.842714°, San Juan County, New Mexico. Figure 1, Vicinity Map, illustrates the location of the release.

3.0 Site Ranking and Land Jurisdiction

The release site is located approximately 950 feet east of Armenta Canyon Wash and 625 feet south of an irrigation canal on privately owned land with an elevation of approximately 5,570

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feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs). Figure 1 depicts the site vicinity and Figure 2 depicts the site location.

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No wells were located within 1,000 feet of the site. However, 6 wells were located within a 1 mile radius of the site. The physical location of this release is within the jurisdiction of the NMOCD.

This release location has been assigned a NMOCD ranking of 50 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On August 13, 2014, through August 14, 2014, SMA mobilized to the release site to oversee excavation activities during the repair of the pipeline and remediation activities. SMA guided the excavation activities by collecting soil samples for field screening with a calibrated photo-ionization detector (PID). Representatives from Enterprise, NMOCD and BLM were present during all remediation activities and witnessed all soil samples collected by SMA.

Soil samples were initially field screened with a calibrated PID. Samples suspected of having hydrocarbon contamination concentrations below regulatory standards were submitted for confirmation laboratory analysis per United States Environmental Protection Agency Methods: 8021 for benzene, toluene, ethylbenzene, and xylenes (BTEX); 8015 for diesel and gasoline range organics (DRO/GRO) and; Method 300.0 Anions for total chlorides. All samples were analyzed by Hall Environmental Analytical Laboratory in Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation and composite soil sample locations and laboratory results.

The final excavation dimensions were approximately 40 feet long by a maximum of 16 feet wide and a maximum of 5 feet deep, covering an area of approximately 580 square feet. In total, approximately 58 cubic yards of material were excavated and hauled to Envirotech Landfarm near Bloomfield, New Mexico for proper disposal and replaced with clean backfill material. In addition, approximately 475 linear feet along the access right-of-way were repaired with clean backfill material, for a total of 132 cubic yards of clean fill and topsoil used at the Lateral 2B-28 site. Soil disposal documentation is included in Appendix B.

5.0 Conclusions and Recommendations

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 50: 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH.

Laboratory analytical results for a sample collected on August 13, 2014 from the superficial topsoil of the excavation area was below NMOCD Guidelines. The topsoil was segregated and used for backfill. The remaining samples collected during the final excavation on August 14,

2014 were below laboratory detection limits and NMOCD Guidelines for benzene, BTEX, GRO/DRO and total chlorides.

Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 3. Laboratory reports are included in Appendix B.

SMA recommends no further activities at the Lateral 2B-28 site.

6.0 Closure and Limitations

The scope of our services consisted of the performance of a preliminary spill assessment, verification of release stabilization, regulatory liaison, oversight and control of remediation operations, disposal arrangements and documentation, project management, and preparation of this summary report. All work has been performed in accordance with generally accepted professional environmental consulting practices.

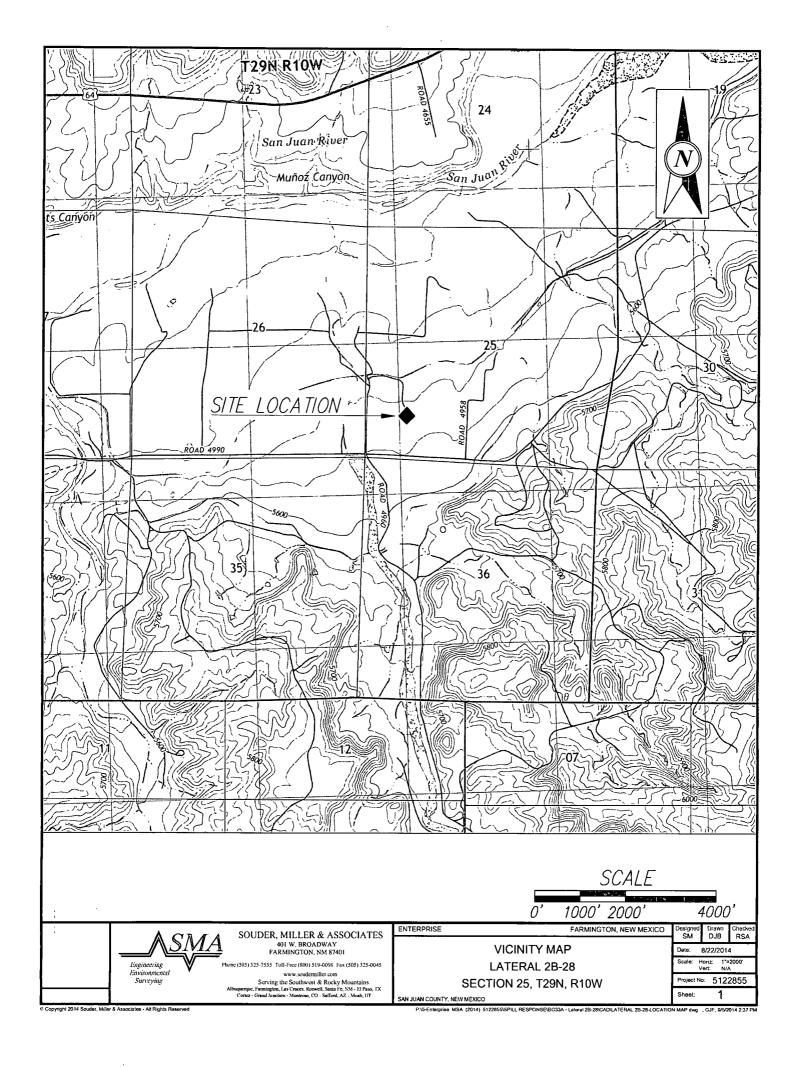
If there are any questions regarding this report, please contact either Steve Moskal or Reid Allan at 505-325-7535.

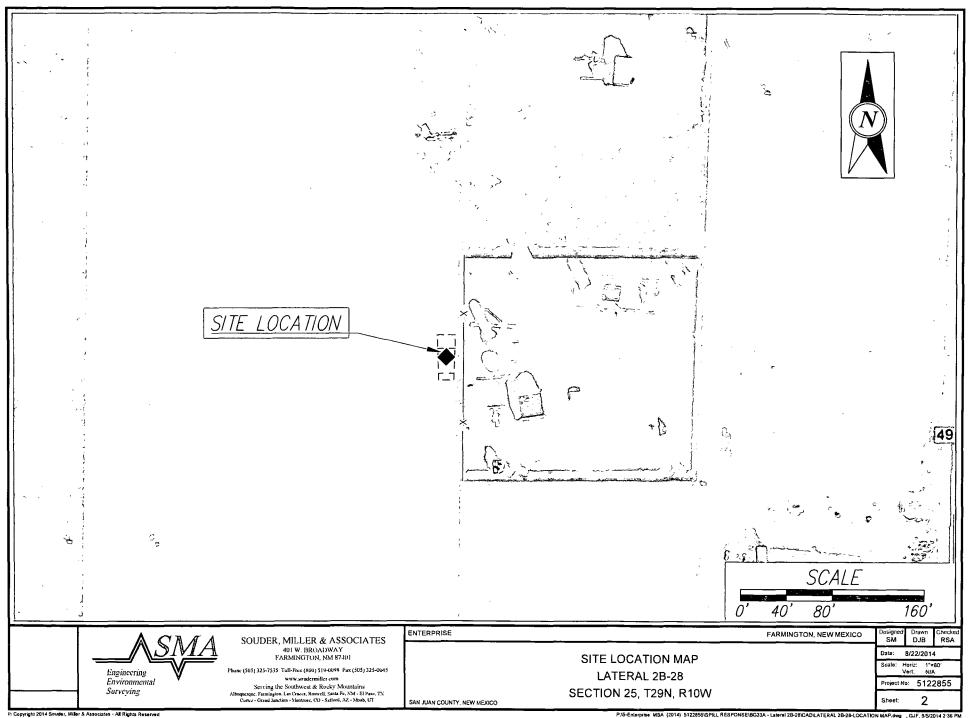
Submitted by:

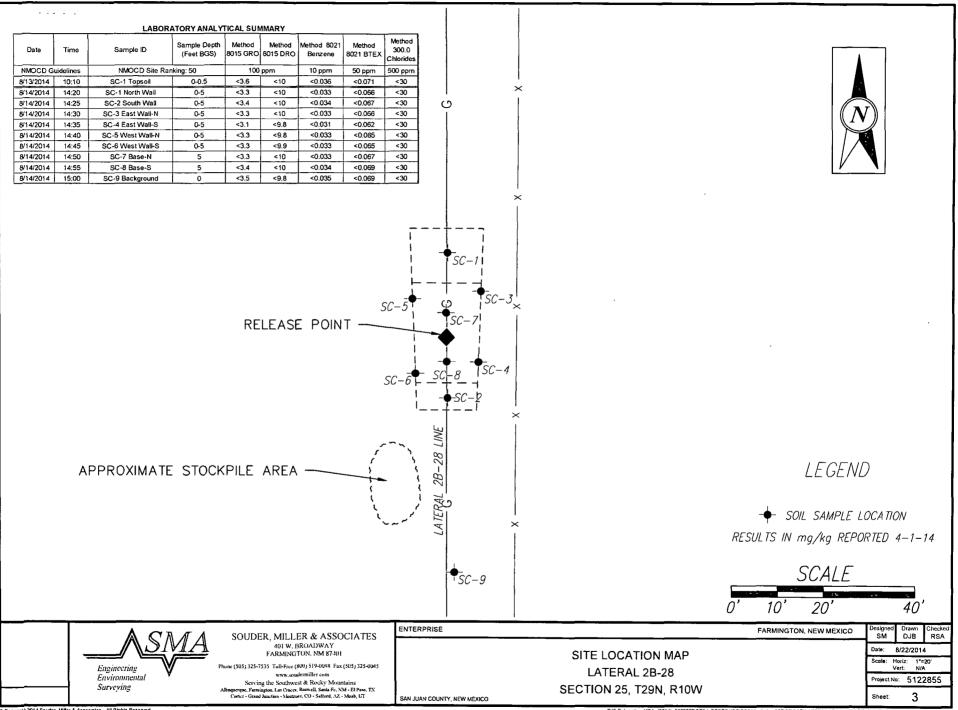
Reviewed by:

SOUDER, MILLER & ASSOCIATES

Steve Moskal Project Scientist Reid S. Allan, PG Principal Scientist **Figures**







Tables

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 50 BGS = 20	20	Field verification that	Groundwater is assumed		
50' to 99' = 10		release is located near Armenta Canyon Wash.	to be less than 50 feet below ground surface.		
>100' = 0		,	2000 8000000000000000000000000000000000		
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 200' = 20		Field verification that	Release is located within		
200'-1000' = 10	10	release is located 175 feet to the west of	1,000 feet of an irrigation canal.		
>1000' = 0		Armenta Canyon Wash.	migotion canal.		
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
<1000' from a water source? <200' for a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	20	NM State Engineer Water Well Database	No recorded water wells located with 1000', 6 wells located within a 1		
			mile radius.		
Total Site Ranking	50				
Soil Remedation Standards	0 to 9	10 to 19	>19		
Benzene	10 PPM	10 PPM	10 PPM		
BTEX	50 PPM	50 PPM	50 PPM		
TPH	5000 PPM	1000 PPM	100 PPM		



Enterprise Products Table 3: Summary of Laboratory Analysis Results in mg/Kg

LABORATORY ANALYTICAL SUMMARY

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	Method 300.0 Chlorides
NMOCD Guidelines NMOCD		NMOCD Site Ran	king: 50	100	ppm	10 ppm	50 ppm	500 ppm
8/13/2014	10:10	SC-1 Topsoil	0-0.5	<3.6	<10	<0.036	<0.071	<30
8/14/2014	14:20	SC-1 North Wall	0-5	<3.3	<10	<0.033	<0.066	<30
8/14/2014	14:25	SC-2 South Wall	0-5	<3.4	<10	<0.034	<0.067	<30
8/14/2014	14:30	SC-3 East Wall-N	0-5	<3.3	<10	<0.033	<0.066	<30
8/14/2014	14:35	SC-4 East Wall-S	0-5	<3.1	<9.8	<0.031	<0.062	<30
8/14/2014	14:40	SC-5 West Wall-N	0-5	<3.3	<9.8	<0.033	<0.065	<30
8/14/2014	14:45	SC-6 West Wall-S	0-5	<3.3	<9.9	<0.033	<0.065	<30
8/14/2014	14:50	SC-7 Base-N	5	<3.3	<10	<0.033	<0.067	<30
8/14/2014	14:55	SC-8 Base-S	5	<3.4	<10	<0.034	<0.069	<30
8/14/2014	15:00	SC-9 Background	0	<3.5	<9.8	<0.035	<0.069	<30



Appendix A Soil Disposal Documentation

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

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

97057-0651

Form C-138 Revised 08/01/11

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

1220 a. St. Francis Dr., Sama re, New orsos
REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Lateral 2B-28 Release Site
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter M Section 25 T 29N R 10W, GPS 36.692349, -107.842714, San Juan County, NM
4. Source and Description of Waste:
Source: Natural Gas Pipeline Release
Description: Exempt petroleum affected soil from clean-up efforts at pipeline release. Estimated Volume50 vd³ bbls Known Volume (to be entered by the operator at the end of the haul)5 vd³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
W 1
I, , representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load**
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
I, 8-11-14, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.
I, do hereby certify that
Representative/Agent Signature
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: West States Energy Contractors. Envirotech, Right, B+B Excavating
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: Great Grantee TITLE: Environmental Manager DATE: 8/13/14 SIGNATURE: Surface Waste Management Facility Authorized Agent 505-632-0615
202 025 0015

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MANIFEST # 47994

DATE 8-13-14 JOB # 97057-0651

FIIONE	1 (303) 632-0613 • 3796 0				XICO 8740		T			
LOAD	COM	PLETE DESCRIPT	ION OF SHIPME	NT			TRANSPO	DRTING	COMPAI	NY
NO.	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
7	Entuctions Lateral 28-28 Live u 1000 1000 1000	LFIT-4	Soil	A-1	12	_	B&B CxC	02	11:15	Nu Ra
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				-	24					
RESULT	S:	LANDFARM			EL	-	NOTES:		!	
소 287	CHLORIDE TEST	EMPLOYEE:	2 Anse	La						
	PAINT FILTER TEST	Certifi	cation of above re	ceival & pla	acement			,	<u> </u>	
By signing	g as the driver/transporter, I	certify the material	hauled from the a	above locati	ion has not	been ad	ded to or tampered	with. I ce	ertify the	material is from the above

mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load. TRANSPORTER CO. B. B. Excavating NAME Wes Byler SIGNATURE Web Byler

COMPANY CONTACT Wes Byler PHONE 505-716-3112 DATE 8-13-14

Signatures required prior to distribution of the legal document. White - Company Records, Yellow - Billing, Pink - Customer



COMPANY CONTACT Charlie

Signatures required prior to distribution of the legal document.

Bill of Lading

MANIFEST # __47996

DATE 8-13-14 JOB # 97057-015

PHONE	: (505) 632-0615 • 5796 U	.S. HIGHWAY 64	 FARMINGTON 	, NEW ME	XICO 8740)1				
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					24					
		_			•					
RESULT	<u>. </u>	LANDFARM	6		EL		NOTES:		i	
1287	CHLORIDE TEST	EMPLOYEE:	Sin	1					····	
	PAINT FILTER TEST		cation of above red							
mentioned	g as the driver/transporter, I ded Generator/Point of Origin a	nd that no addition	nal material has be	en added o	r mixed into	the load			,	



Signatures required prior to distribution of the legal document.

Bill of Lading

MANIFEST # 47997

DATE 8-13-14 JOB# 97057-0651

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401 COMPLETE DESCRIPTION OF SHIPMENT TRANSPORTING COMPANY LOAD NO. **DESTINATION** POINT OF ORIGIN GRID DRIVER SIGNATURE MATERIAL **YDS BBLS** COMPANY TRK# TIME 10 E-fech 615 11:50 A -10 RESULTS: NOTES: LANDFARM CHLORIDE TEST EMPLOYEE: Certification of above receival & placement PAINT FILTER TEST By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load. TRANSPORTER CO. Enviretach COMPANY CONTACT June 1 PHONE



MANIFEST #	48019	
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DATE 8-15-14 JOB# 97057-065/

PHONE: ((505)	632-0615	• 5796	U.S.	HIGHWAY	64	· FARMINGTON.	NEW MEXICO 87	4 01
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_	PAINT FILTER TEST									

mentioned Generator/Point of Origin and that no additional mat		
TRANSPORTER CO. Enviratech	NAME William To Wilson	SIGNATURE Well Cite his
COMPANY CONTACT TIMELY M.	PHONE 247-1/66	DATE 8-15-14
Signatures required prior to distribution of the legal document.	•	

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MANIFEST #	48020
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DATE 8-15-14 JOB # 97057 - 025

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD	COM	IPLETE DESCRIPT	ION OF SHIPMEN	TRANSP	ORTING	COMPA	NY			
NO.	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
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mentioned	d Generator/Point of Origin:	and that no addition	al material has be	en added d	or mixed int	n the loa	d			material is from the above
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COMPANY Signature	r CONTACT_ いとく とっしゃs required prior to distribution	on of the legal docu	PHONE				DATE	3-15-1	4	

envirotech (

MANIFEST #	48022	

DATE 8-15-14 JOB # 97057 - 01051

LOAD	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
NO.	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
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	CHLORIDE TEST	LANDFARM EMPLOYEE:				NOTES:				
	PAINT FILTER TEST -	Certific	Certification of above receival & placement							

by signing as the driver/transporter, I certify the material nauled	from the above location has not been added to d	or tampered with. I certify the material is	from the above
nentioned Generator/Point of Origin and that no additional mate	rial has been added or mixed into the load.	·	
TRANSPORTER CO. Right Trucking LLC	NAME CURT'S Rief1	SIGNATURE Cuty frisks	
COMPANY CONTACT Chante Pean		DATE 8-15-14	
Signatures required prior to distribution of the legal document			



MANIFEST #	48251
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DATE 8/15/14	JOB#	97057-0651
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PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD		CO	MPLETE DESCRIPT	TION OF SHIPMEN			TRANSPORTING COMPANY				
NO.	POINT C	F ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Topsoil	FARM	LATECAL 26-28	Topsoil		10		Richl Tendy	03	4:00	Contract fail
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MANIFEST # _482!	52	
DATE 8/8/14	JOB#_	97057-0651

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

OAD		COM	IPLETE DESCRIPT	TION OF SHIPME	NT			TRANSPO	RTING	COMPA	NY
NO.	POINT C	FORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
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	PAINT FILTE	R TEST	Certifi	cation of above re	ceival & pla	acement		•			

COMPANY CONTACT DID , PHONE 486-0898 DATE 8/10/14

Signatures required prior to distribution of the legal document.

Appendix C Laboratory Analytical Reports



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

August 18, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: (505) 325-5667

FAX

RE: BG33A Lateral 2B-28 OrderNo.: 1408688

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/14/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andy

4901 Hawkins NE

Albuquerque, NM 87109

Analytical ReportLab Order 1408688

Date Reported: 8/18/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-1

Project: BG33A Lateral 2B-28

Collection Date: 8/13/2014 10:10:00 AM

Lab ID: 1408688-001 Matrix: MEOH (SOIL) Received Date: 8/14/2014 8:15:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS		· · -		Analys	: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/14/2014 11:16:27 AM	1 14764
Surr: DNOP	101	57.9-140	%REC	1	8/14/2014 11:16:27 AM	1 14764
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Surr: BFB	92.0	80-120	%REC	1	8/14/2014 12:12:20 PM	R20580
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.036	mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Toluene	ND	0.036	mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Ethylbenzene	ND	0.036	mg/Kg	1	8/14/2014 12:12:20 PM	1 R20580
Xylenes, Total	ND	0.071	mg/Kg	1	8/14/2014 12:12:20 PM	R20580
Surr: 4-Bromofluorobenzene	100	80-120	%REC	1	8/14/2014 12:12:20 PM	R20580
EPA METHOD 300.0: ANIONS					Analys	: JRR
Chloride	ND	30	mg/Kg	20	8/14/2014 11:29:52 AM	1 14769

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 1 of 5

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408688

18-Aug-14

Client:

Souder, Miller and Associates

Result

Project:

BG33A Lateral 2B-28

Sample ID MB-14769

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: PBS

Batch ID: 14769

RunNo: 20595

Prep Date: 8/14/2014

Analysis Date: 8/14/2014

PQL

SeqNo: 599159

Units: mg/Kg

HighLimit

%RPD **RPDLimit**

Qual

Analyte Chloride

ND 1.5

Sample ID LCS-14769

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID: LCSS

Batch ID: 14769

RunNo: 20595

Prep Date: 8/14/2014

Analysis Date: 8/14/2014

SeqNo: 599160

Units: mg/Kg

%RPD

Qual

Analyte

PQL

1810

RPDLimit

Chloride

Result 270

SPK value SPK Ref Val %REC LowLimit 30

15.00

0

SPK value SPK Ref Val %REC LowLimit

110

HighLimit

Qualifiers:

R

- * . Value exceeds Maximum Contaminant Level.
- \mathbf{E} : Value above quantitation range
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit O
- RPD outside accepted recovery limits Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit Sample pH greater than 2.
- Reporting Detection Limit RL

Page 2 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408688

18-Aug-14

Client:

Souder, Miller and Associates

Project:

BG33A Lateral 2B-28

Sample ID MB-14764	Samp	Гуре: М Е	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Organics	
Client ID: PBS	Batcl	h ID: 14	764	F	RunNo: 2	0602				
Prep Date: 8/14/2014	Analysis [Date: 8/	14/2014	S	SeqNo: 5	99330	Units: mg/M	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10						-		
Surr: DNOP	9.3		10.00		93.3	57.9	140			
Sample ID LCS-14764	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range (Organics	
Client ID: LCSS	Batc	h ID: 14	764	۶	RunNo: 2	0602				
Prep Date: 8/14/2014	Analysis [Date: 8/	14/2014	\$	SeqNo: 5	99331	Units: mg/k	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	103	68.6	130			
					97.2		140			

Qualifiers:

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

Page 3 of 5

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408688

18-Aug-14

Client:

Souder, Miller and Associates

Project:

BG33A Lateral 2B-28

Sample ID MB-14756 MK	SampT	уре: М Е	BLK	Test	Code: El	PA Method	8015D: Gaso	line Rang	е	
Client ID: PBS	Batch	1D: R2	0580	R	tunNo: 2	0580				
Prep Date:	Analysis D	ate: 8/	14/2014	S	eqNo: 5	98844	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0	<u>-</u>							
Surr: BFB	860		1000		86.3	80	120			

Sample ID LCS-14756 MK	SampType: LCS			Tes	je						
Client ID: LCSS	Batc	h ID: R2	20580	F	RunNo: 2	0580					
Prep Date:	Analysis Date: 8/14/2014			8	SeqNo: 598845			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.3	65.8	139				
Surr: BFB	940		1000		94.5	80	120				

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O. RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 4 of 5

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408688

18-Aug-14

Client:

Souder, Miller and Associates

Project:

BG33A Lateral 2B-28

Sample ID MB-14756 MK	SampT	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batcl	h ID: R2	0580	F	RunNo: 2	0580				
Prep Date:	Analysis D	Date: 8/	14/2014	S	SeqNo: 5	98868	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		99.6	80	120			

Sample ID LCS-14756 MK	Sample ID LCS-14756 MK SampType: LCS				TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Batcl	h ID: R2	0580	F	RunNo: 2	0580					
Prep Date:	Analysis [Date: 8/	14/2014	S	SeqNo: 5	98869	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.86	0.050	1.000	0	86.2	80	120				
Toluene	0.85	0.050	1.000	0	84.6	80	120				
Ethylbenzene	0.87	0.050	1.000	0	86.9	80	120				
Xylenes, Total	2.7	0.10	3.000	0	91.6	80	120				
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120				

Qualifiers:

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

Page 5 of 5

- P Sample pH greater than 2.
- RL Reporting Detection Limit



nau Environmeniai Anatysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

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

Sample Log-In Check List

Client Name: SMA-FARM Wor	rk Order Number: 14	408688		RcptNo	: 1
Received by/date: UM 08/14	14)				
Logged By: Michelle Garcia 8/14/2	2014 8:15:00 AM		Mitall (Janua)	
	2014 8:29:38 AM		Mitale ((hum)	
Reviewed By:	. ()		,		
Chain of Custody	414				
1. Custody seals intact on sample bottles?	١	∕es □	No 🗌	Not Present ✓	
2. Is Chain of Custody complete?	١	res 🗹	No 🗌	Not Present	
3. How was the sample delivered?	<u>c</u>	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 Y	es 🗹	No 🗆	NA 🗆	
6. Sample(s) in proper container(s)?	,	Yes 🔽	No 🗆]	
7. Sufficient sample volume for indicated test(s)?	Y	′es 🗸	No 🗆		
8. Are samples (except VOA and ONG) properly prese	erved? Y	′es 🔽	No 🗌		
9. Was preservative added to bottles?	Υ	es 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?	· Y	'es 🗌	No 🗌	No VOA Vials	•
11. Were any sample containers received broken?	,	res 🗆	No 🗹	# of preserved	
40			\Box	bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Y	′es ¥	No L	for pH: (<2	or >12 unless noted)
13. Are matrices correctly identified on Chain of Custoo	dy? Y	es 🗹	No 🗆	Adjusted?	
14, is it clear what analyses were requested?	Y	'es 🗹	No 🗌		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Y	es 🗹	No 🗆	Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies with this ord	er? Y	es 🔲	No 🗆	NA 🗹	
				T	
Person Notified: By Whom:	Date:	 eMail [☐ Phone ☐ Fax	x in Person	
Regarding:	Z! VIZ.	Craign [
Client Instructions:	and a complex to a section the section of		and the second s		
17. Additional remarks:	·				_
18. Cooler Information	ct Seal No Sea	l Date	Signed By	<u>. </u>	

			stody Record	Turn-Around	,			-			ш	A I B	_	NI X	/TE	· ^	MI N	4EN	T A !	ı
Client:	5M	A		☐ Standard	Rust	<u> 5am</u>	e Day				A		LY:	SI:	5 L	Æ	30	RAT		
Mailing	Address	· Aol	W Brondway	B633A	Lateral	l 2B-	28		490)1 Ha	wkin:							109		
7		. NM	87401	Project #:							5-345			-	505-					
Phone	#: J 50	o5 3	25 7535	517	zz855			, S. X.	2.		a so	Sude o	Anal	ysis	Req	uest	, fo , e	Mary Mary	4	
email o	r Fax#:	Shown	Chulucke Surriller.com	Project Mana	-				only)	(jes				04)						
QA/QC Stan	Package:		□ Level 4 (Full Validation)	Sampler:	Mosl	kal		\$ (8021)	TPH (Gas o	(Gas/Diesel)				,PO4,S	8082 PCB's			4		
Accred D NEL		□ Othe	r	Sampler:), Sara Zere			+ =## B.s	+	8015B ((118.1)	AH)	,	O ₃ ,NO ₂	~		(Y)	-Julonek		:
	(Type)	T		Sample Tem	oppure sex	# 3		MTDE	MTBE) 8 0	od 4	jo jo	etals	Ž	cide	₹	<u> </u>	7		1
Date	Time	Matrix	Sample Request ID	II.	Preservative Type	HI N		EX +	BTEX + M	TPH Method	TPH (Method 418.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)	300.1	1	
3/13/A	1010	Soil	sc-1	1 toz Jas			-601	X		X								X		
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H	necessary,	samples subm	nitted to Hall Environmental may be subc	ontracted to other a	credited laboratorie	es. This serv	res as notice of this	possib	ility. A	ny sub	-contrac	ted data	will be	clear	y notat	ed on	the an	alytical rep	iort.	<u></u>



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

OrderNo.: 1408757

August 19, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: (505) 325-5667

FAX

RE: BG33A Lateral 2B-28

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 9 sample(s) on 8/15/2014 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

andel

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: BG33A Lateral 2B-28

Client Sample ID: SC-1 North Wall

Collection Date: 8/14/2014 2:20:00 PM

Lab ID: 1408757-001

Matrix: MEOH (SOIL)

Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analy	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/15/2014 11:23:03 A	M 14777
Surr: DNOP	74.8	57.9-140	%REC	1	8/15/2014 11:23:03 A	M 14777
EPA METHOD 8015D: GASOLINE RA	ANGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/15/2014 10:38:23 A	M R20606
Surr: BFB	92.9	80-120	%REC	1	8/15/2014 10:38:23 A	M R20606
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.033	mg/Kg	1	8/15/2014 10:38:23 A	M R20606
Toluene	ND	0.033	mg/Kg	1	8/15/2014 10:38:23 A	M R20606
Ethylbenzene	ND	0.033	mg/Kg	1	8/15/2014 10:38:23 A	M R20606
Xylenes, Total	ND	0.066	mg/Kg	1	8/15/2014 10:38:23 A	M R20606
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	8/15/2014 10:38:23 A	M R20606
EPA METHOD 300.0: ANIONS		\$			Analy	st: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 11:34:53 A	M 14788

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 1 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-2 South Wall

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:25:00 PM

Lab ID: 1408757-002 Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/15/2014 11:53:14 AM	14777
Surr: DNOP	83.0	57.9-140	%REC	1	8/15/2014 11:53:14 AM	14777
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Surr: BFB	93.6	80-120	%REC	1	8/15/2014 11:07:04 AM	R20606
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.034	mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Toluene	ND	0.034	mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Ethylbenzene	ND	0.034	mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Xylenes, Total	ND	0.067	mg/Kg	1	8/15/2014 11:07:04 AM	R20606
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/15/2014 11:07:04 AM	R20606
EPA METHOD 300.0: ANIONS					Analyst	: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 11:47:17 AM	14788

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 2 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-3 East Wall-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:30:00 PM

Lab ID: 1408757-003

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS	·			Analys	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/15/2014 12:23:18 PI	VI 14777
Surr: DNOP	82.7	57.9-140	%REC	1	8/15/2014 12:23:18 PI	M 14777
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/15/2014 11:35:44 Al	M R20606
Surr: BFB	94.8	80-120	%REC	1	8/15/2014 11:35:44 AI	M R20606
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.033	mg/Kg	1	8/15/2014 11:35:44 AI	M R20606
Toluene	ND	0.033	mg/Kg	1	8/15/2014 11:35:44 Al	M R20606
Ethylbenzene	ND	0.033	mg/Kg	1	8/15/2014 11:35:44 AI	M R20606
Xylenes, Total	ND	0.066	mg/Kg	1	8/15/2014 11:35:44 Al	M R20606
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/15/2014 11:35:44 Al	M R20606
EPA METHOD 300.0: ANIONS					Analys	st: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 11:59:41 AI	M 14788

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 3 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-4 East Wall-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:35:00 PM

Lab ID: 1408757-004

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analy	st: BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/15/2014 12:53:20 P	M 14777
Surr: DNOP	83.2	57.9-140	%REC	1	8/15/2014 12:53:20 P	M 14777
EPA METHOD 8015D: GASOLINE R	ANGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	8/15/2014 12:04:23 P	M R20606
Surr: BFB	95.6	80-120	%REC	1	8/15/2014 12:04:23 P	M R20606
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.031	mg/Kg	1	8/15/2014 12:04:23 P	M R20606
Toluene	ND	0.031	mg/Kg	1	8/15/2014 12:04:23 P	M R20606
Ethylbenzene	ND	0.031	mg/Kg	1	8/15/2014 12:04:23 P	M R20606
Xylenes, Total	ND	0.062	mg/Kg	1	8/15/2014 12:04:23 P	M R20606
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	8/15/2014 12:04:23 P	M R20606
EPA METHOD 300.0: ANIONS					Analy	st: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 12:12:06 P	M 14788

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 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-5 West Wall-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:40:00 PM

Lab ID: 1408757-005

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/15/2014 12:02:55 PM	۸ 14777
Surr: DNOP	135	57.9-140	%REC	1	8/15/2014 12:02:55 PM	И 14777
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/15/2014 12:32:58 PM	M R20606
Surr: BFB	94.6	80-120	%REC	1	8/15/2014 12:32:58 PM	/ R20606
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.033	mg/Kg	1	8/15/2014 12:32:58 PM	и R20606
Toluene	ND	0.033	mg/Kg	1	8/15/2014 12:32:58 PM	/ R20606
Ethylbenzene	ND	0.033	mg/Kg	1	8/15/2014 12:32:58 PM	и R20606
Xylenes, Total	ND	0.065	mg/Kg	1	8/15/2014 12:32:58 PM	и R20606
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/15/2014 12:32:58 PM	и R20606
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 12:24:31 PM	A 14788

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 5 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 8/19/2014

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-6 West Wall-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:45:00 PM

Lab ID: 1408757-006

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/15/2014 12:24:24 PI	M 14777
Surr: DNOP	135	57.9-140	%REC	1	8/15/2014 12:24:24 PI	M 14777
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Surr: BFB	94.8	80-120	%REC	1	8/15/2014 1:01:40 PM	R20606
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.033	mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Toluene	ND	0.033	mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Ethylbenzene	ND	0.033	mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Xylenes, Total	ND	0.065	mg/Kg	1	8/15/2014 1:01:40 PM	R20606
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/15/2014 1:01:40 PM	R20606
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 12:36:56 PM	A 14788

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 6 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-7 Base-N

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:50:00 PM

Lab ID: 1408757-007

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS	<u> </u>			Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/15/2014 12:45:43 PI	VI 14777
Surr: DNOP	136	57.9-140	%REC	1	8/15/2014 12:45:43 PI	VI 14777
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Surr: BFB	97.0	80-120	%REC	1	8/15/2014 1:30:24 PM	R20606
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.033	mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Toluene	ND	0.033	mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Ethylbenzene	ND	0.033	mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Xylenes, Total	ND	0.067	mg/Kg	1	8/15/2014 1:30:24 PM	R20606
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	8/15/2014 1;30:24 PM	R20606
EPA METHOD 300.0: ANIONS					Analys	t: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 12:49:21 PI	M 14788

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 7 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample 1D: SC-8 Base-S

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 2:55:00 PM

Lab ID: 1408757-008

Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/15/2014 1:07:03 PM	14777
Surr: DNOP	134	57.9-140	%REC	1	8/15/2014 1:07:03 PM	14777
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	3.4	mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Surr: BFB	95.0	80-120	%REC	1	8/15/2014 1:59:09 PM	R20606
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.034	mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Toluene	ND	0.034	mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Ethylbenzene	ND	0.034	mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Xylenes, Total	ND	0.069	mg/Kg	1	8/15/2014 1:59:09 PM	R20606
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/15/2014 1:59:09 PM	R20606
EPA METHOD 300.0: ANIONS					Analys	: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 1:01:46 PM	14788

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 greater than 2.
- RL Reporting Detection Limit

Lab Order 1408757

Date Reported: 8/19/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: SC-9 Background

Project: BG33A Lateral 2B-28

Collection Date: 8/14/2014 3:00:00 PM

Lab ID: 1408757-009 Matrix: MEOH (SOIL) Received Date: 8/15/2014 8:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analysi	: BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/15/2014 1:28:26 PM	14777
Surr: DNOP	134	57.9-140	%REC	1	8/15/2014 1:28:26 PM	14777
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Surr: BFB	95.4	80-120	%REC	1	8/15/2014 2:27:51 PM	R20606
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.035	mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Toluene	ND	0.035	mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Ethylbenzene	ND	0.035	mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Xylenes, Total	ND	0.069	mg/Kg	1	8/15/2014 2:27:51 PM	R20606
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	8/15/2014 2:27:51 PM	R20606
EPA METHOD 300.0: ANIONS					Analyst	:: JRR
Chloride	ND	30	mg/Kg	20	8/15/2014 1:39:01 PM	14788

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 greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1408757

19-Aug-14

Client:

Souder, Miller and Associates

Project:

BG33A Lateral 2B-28

Sample ID MB-14788

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBS

Batch ID: 14788

RunNo: 20611

Prep Date:

8/15/2014

Analysis Date: 8/15/2014

SeqNo: 599565

Units: mg/Kg

%RPD

Qual

Analyte Chloride

Result ND

PQL SPK value SPK Ref Val %REC 1.5

LowLimit

HighLimit

RPDLimit

Sample ID LCS-14788

SampType: LCS

TestCode: EPA Method 300.0: Anions

Client ID:

LCSS

Batch ID: 14788

RunNo: 20611

Prep Date: 8/15/2014 Analysis Date: 8/15/2014

SeqNo: 599566

Units: mg/Kg

Analyte

PQL SPK value SPK Ref Val

%REC 93.1

%RPD

Qual

Chloride

15.00

90

HighLimit 110

1.5

RPDLimit

14

LowLimit

Qualifiers:

R

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits

RPD outside accepted recovery limits

- RSD is greater than RSDlimit O
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- Sample pH greater than 2. RLReporting Detection Limit

P

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1408757

19-Aug-14

Client:

Souder, Miller and Associates

Project:

BG33A Lateral 2B-28

Sample ID MB-14777	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batc	h ID: 14	777	F	unNo: 2	0599				
Prep Date: 8/14/2014	Analysis [Date: 8/	15/2014	\$	eqNo: 5	99319	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10						_		
Surr: DNOP	7.8		10.00		78.4	57.9	140			

Sample ID LCS-14777	SampT	SampType: LCS			TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 14777			RunNo: 20599							
Prep Date: 8/14/2014	Analysis Date: 8/15/2014			SeqNo: 599320			Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	48	10	50.00	0	96.6	68.6	130				
Surr: DNOP	3.9		5.000		78.6	57.9	140				

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R · RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1408757

19-Aug-14

Client:

Souder, Miller and Associates

1000

Project:

Surr: BFB

BG33A Lateral 2B-28

Sample ID 5ML RB	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: PBS	Batch	1D: R2	0606	F	RunNo: 20	0606				
Prep Date:	Analysis C	ate: 8/	15/2014	S	SeqNo: 59	99729	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0	. <u>-</u>							
Surr: BFB	920		1000		92.3	80	120			
Sample ID 2.5UG GRO LCS	SampT	ype: LC	s	Tes	Code: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID: LCSS	Batch	n ID: R2	0606	F	RunNo: 20	0606				
Prep Date:	Analysis D	ate: 8/	15/2014	S	eqNo: 59	99730	Units: mg/F	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	29	5.0	25.00	0	118	65.8	139			

Sample ID	1408757-001AMS	SampT	ype: MS	3	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	SC-1 North Wall	Batch	ID: R2	0606	F	RunNo: 2	0606				
Prep Date:		Analysis D	Analysis Date: 8/15/2014			SeqNo: 599732			Units: mg/Kg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	e Organics (GRO)	20	3.3	16.40	0	122	71.8	132			
Surr: BFB		690		656.2		105	80	120			

103

80

120

1000

Sample ID 1408757-001AM	SD Sam	Type: M	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID: SC-1 North Wal	l Bat	ch ID: R2	20606	F	RunNo: 2	0606				
Prep Date:	Analysis	Date: 8	/15/2014	8	SeqNo: 5	99733	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	3.3	16.40	0	126	71.8	132	3.23	20	
Surr: BFB	700		656.2		107	80	120	n	n	

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 12 of 13

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: 1408757

19-Aug-14

Client: Souder, Miller and Associates

Project: BG33A Lateral 2B-28

Sample ID 5ML RB	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: R20606			RunNo: 20606						
Prep Date:	Analysis Date: 8/15/2014			S	SeqNo: 599744			(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		102	80	120			

Sample ID 100NG BTEX LC	S Samp	Type: LC	S	Tes	tCode: El	8021B: Volat	iles				
Client ID: LCSS	Batc	h ID: R2	0606	F	RunNo: 2	0606					
Prep Date:	Analysis [Date: 8/	15/2014	9	99745	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	_HighLimit_	%RPD	RPDLimit	Qual	
Benzene	1.1	0.050	1.000	0	109	80	120				
Toluene	1.1	0.050	1.000	0	108	80	120				
Ethylbenzene	1.1	0.050	1.000	0	109	80	120				
Xylenes, Total	3.3	0.10	3.000	0	109	80	120				
Surr: 4-Bromofluorobenzene	1.1		1.000		113	80	120				

Sample ID 1408757-002AM	S Samp	Туре: М	8	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID: SC-2 South Wa	II Bat	ch ID: R2	20606	F	RunNo: 2	0606					
Prep Date:	Analysis	Date: 8/	15/2014	9	SeqNo: 5	99748	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.71	0.034	0.6748	0	105	77.4	142				
Toluene	0.72	0.034	0.6748	0	106	77	132				
Ethylbenzene	0.73	0.034	0.6748	0	108	77.6	134				
Xylenes, Total	2.2	0.067	2.024	0	108	77.4	132				
Surr: 4-Bromofluorobenzene	0.76		0.6748		112	80	120				

Sample ID 1408757-002AM	SD SampT	D SampType: MSD TestCode: EPA Method 8021B: Volatiles										
Client ID: SC-2 South Wal	I Batch	1D: R2	0606									
Prep Date: Analysis Date: 8/15/2014 SeqNo: 599749 Units: mg/Kg												
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD_	RPDLimit	Qual		
Benzene	0.73	0.034	0.6748	0	107	77.4	142	1.88	20			
Toluene	0.72	0.034	0.6748	0	107	77	132	0.644	20			
Ethylbenzene	0.74	0.034	0.6748	0	109	77.6	134	1.15	20			
Xylenes, Total	2.2	0.067	2.024	0	109	77.4	132	0.584	20			
Surr: 4-Bromofluorobenzene	0.76		0.6748		113	80	120	0	0			

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 13 of 13

- P Sample pH greater than 2.
- 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: SMA-FARM	Work Order Number:	1408757		RcptNo: 1	
Received by/date:	08/15/14				
Logged By: Lindsay Mangin	8/15/2014 8:00:00 AM		Judy Hlago		
Completed By: Lindsay Mangin	8/15/2014 8:08:26 AM		Amely Allego		
Reviewed By:	08/15/14		000		:
Chain of Custody	<u> </u>			····· ··· · · · · · · · · · · · · · ·	
1. Custody seals intact on sample bottles?		Yes	No [**	Not Present ✓	
2. Is Chain of Custody complete?		Yes 🟏	No	Not Present	
How was the sample delivered?		Courier			
Log In					
4. Was an attempt made to cool the sample	es?	Yes 🗹	No 🔝	NA :	
5. Were all samples received at a temperat	ure 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 te	st(s)?	Yes 🗸	No 🗔		
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🗹	No 🖂		٠
9. Was preservative added to bottles?		Yes	No 🗸	NA .	
10.VOA vials have zero headspace?		Yes 📋	No III	No VOA Vials	
11. Were any sample containers received br	oken?	Yes 🗀	No 🗹	# of preserved	
12.Does paperwork match bottle labels?		Yes 🛂	No 🗇	bottles checked for pH:	
(Note discrepancies on chain of custody)				(<2 or >12 unle	ess noted)
13. Are matrices correctly identified on Chain	of Custody?	Yes 🗸	No .	Adjusted?	
4. Is it clear what analyses were requested?	•	Yes 🔽	No 📖	Observation of Name	
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No . ·	Checked by:	
Special Handling (if applicable)					
i 16. Was client notified of all discrepancies w	ith this order?	Yes 🗔	No 🗆	NA 🗹	
Person Notified:	Date:		CONTRACTOR OF THE PARTY OF THE	• • • • • • • • • • • • • • • • • • • •	
By Whom:	Via:	eMail	Phone [] Fax	In Person	
Regarding:			THE R. P. LEWIS CO., LANSING, MICH. 40, 100, 100, 100, 100, 100, 100, 100,		
Client Instructions:		A TANAHAMAN SAMA LITTU AND		·	
17. Additional remarks:					
18. <u>Cooler Information</u>					
Cooler No Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By		

Ch	ain-of-	Custody Record	Turn-Around	Time:] 🛌		L	TA I	1 E		w	TD		NN	IEN	TA	1	
Client:	SMA		□ Standard	☑ Rush	Sauc Day]	E .	_							_	RAT			
			Project Name	9:	J									al.co					
Address:	401 113	Browlingy	8633	A late	al 28-28		4901	Hawk	dns M	۱E -	Alb	ugue	erque	e, N N	vl 871	109			
fara	a in La	NM , 87401	Project #:			1		505-3				_	-		4107				
Phone #:	5 6 5-	375-7535		5122855	>					Α	naly	sis l	Requ	uest	b	4737			•
email or F	ax#: 51-0	ven moskal@ Souder	Project Mana	- ,	•	=	BTEX + MTBE + TPH (Gas only)	9901				Q	္တ						
CAVCC Pa	ckage.		Struc	Mos	kal	(8021)	as c					8,40	PCB's			S			
☐ Standa		☐ Level 4 (Full Validation)	0 10-0	کی تحصو		SOFT I	E E	2		٠.		P. P.		ľ		or de			
			Sampler:		eve	 	+ TPH (Gas	8.1	74.1)	()	Ŧ	Ž	8			٦			or N
	·		Samplevien	eaule a l	JINON STATE		MTBE -	2 Z)d 5(9d 8	o P	2	ides	8	9	3			<u>></u>
			Container	Dropon active		\$	¥ ₹	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	ابد			Bubbles
Date	Time	Sample Request ID	Type and #	Preservative Type	HEAL No.	創	BTEX	<u> </u>	B (N	8		ons	7 P	똃	0)	300.1			Bg
				<u>.</u>	1408757	一回	<u></u>	1	日	<u> </u>	8	Ā	8081	8	82	62	\perp		Ą
14/14	1420	SCI North wall	1402		-001	X	_ >									<u> </u>			
/14/14	1425	5c-2 South coall	1402	~	-002	X									1				
/19/19	1430	5c-3 Fast wall-D	1402	_	-003	X		4_	Ŀ						<u></u>	ΧL			
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<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

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

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

Form C-141 Revised August 8, 2011

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

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

	•	F	Releas	e Notific	ation	and C	orrective	Acti	ion			
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CORRECTIVE ACTION REPORT

Property:

Santa Rosa 4 #1 Well Tie Release **NE 1/4, S4 T29N R9W** San Juan County, New Mexico

September 9, 2014 Apex Project No. 7030414G027

Prepared for:

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

Prepared by:

her M. Woods Heather M. Woods, P.G. Senior Project Manager

Elizabeth Scaggs, P.G. Senior Program Manager

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CORRECTIVE ACTION REPORT

Santa Rosa 4 #1 Well Tie Release NE 1/4, S4 T29N R9W San Juan County, New Mexico

Apex Project No. 7030414G027

1.0 INTRODUCTION

1.1 Site Description & Background

The Santa Rosa 4 #1 Well Tie Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 4 in Township 29 North and Range 9 West in rural San Juan County, New Mexico (36.75924N, 107.77893W), referred to hereinafter as the "Site" or "subject Site". The Site is located approximately 350 feet northeast of the Santa Rosa 4 #1 well pad, on private land. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately southwest to northeast.

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of apparently dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location.

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



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

^{*}Based on anticipated groundwater depth at <50 feet below grade surface (bgs).

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

- Depth to groundwater is anticipated to be less than 50 feet bgs based on shallow depth to groundwater measurements reported in nearby water wells identified on the Office of the State Engineer (OSE) website database.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. A private water well was identified on the OSE website database approximately 660 feet west of the Site, which is greater than the 200 foot ranking distance for private domestic water sources, resulting in a wellhead protection ranking of "0". The San Juan River, a potential drinking water source, is located approximately 700 feet south of the Site, and is considered under the "Distance to Surface Water" ranking in the following bullet.
- The Site is approximately 215 feet southwest of the wash in Caballo Canyon and 560 feet north of the Citizens Irrigation Canal. The San Juan River is located approximately 140 feet south of the Citizens Irrigation Canal (700 feet south of the Site). Based on this proximity, a ranking for distance to surface water was assigned at "10".

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a potential leak. An unknown quantity of apparently dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location. During the corrective action activities, Halo Services, Inc. provided heavy equipment and labor support, and Heather Woods, an Apex environmental professional, provided environmental support.

Soil samples (S-1 through S-5) and stockpile samples (SP-1 and SP-2) were collected subsequent to the pipeline repair activities. Analytical results for the confirmation and stockpile samples indicate that adversely affected soils were not identified at the Site. The excavation was backfilled with the stockpiled soil and contoured to surrounding grade.

The surface expression of the initial excavation measured approximately 10 feet long by 7 feet wide, with a total depth of approximately 6 feet bgs. The excavation was later expanded to accommodate the replacement of an entire length (40 feet) of pipeline.



The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated sands, silty-sands, and clayey-sands.

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.

Apex's soil sampling program included the collection of five (5) final confirmation samples (S-1 through S-5), from the excavation for laboratory analysis. Additionally, two (2) composite samples (SP-1 and SP-2) were collected from stockpiled soils to determine the potential to reuse these soils as excavation backfill. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

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

3.3 Laboratory Analytical Methods

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

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

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 NMAC 19.15.30 *Remediation*. 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 reporting limits associated with the final confirmation samples (S-1 through S-5) collected from the excavated area and stockpile samples (SP-1 and SP-2) to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

 The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD Remediation Action Level.



- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD Remediation Action Level.
- 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 28 milligrams per Kilogram (mg/Kg), which are below the OCD Remediation Action Levels for a Site ranking of "30".
- The laboratory analyses of the stockpile samples (SP-1 and SP-2) do not indicate benzene, total BTEX, or TPH GRO/DRO concentrations above the OCD *Remediation Action Levels* for a Site ranking of "30".

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

5.0 FINDINGS AND RECOMMENDATIONS

The Santa Rosa 4 #1 Well Tie Release Site is located within the Enterprise pipeline ROW in the NE ¼ of Section 4 in Township 29 North and Range 9 West in rural San Juan County, New Mexico, (36.75912N, 107.77916W). The Site is located approximately 350 feet northeast of the Santa Rosa 4 #1 well pad, on private land. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately southwest to northeast.

On July 30, 2014, Enterprise shut in the Santa Rosa 4 #1 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface characterized by a vent hole at the release location.

- 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 sands, silty sands, and clayey sands.
- The surface expression of the initial excavation measured approximately 10 feet long by 7 feet wide, with a total depth of approximately 6 feet bgs. The excavation was later expanded to accommodate the replacement of an entire length (40 feet) of pipeline.
- Prior to backfilling, five (5) final confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the OCD Remediation Action Levels for a Site ranking of "30".
- Stockpiled soils were used to backfill the excavation based on analytical results which
 indicated that the stockpiled soils do not exhibit COC concentrations above the OCD
 Remediation Action Levels for a Site ranking of "30". The area was contoured to
 surrounding grade following backfilling activities.



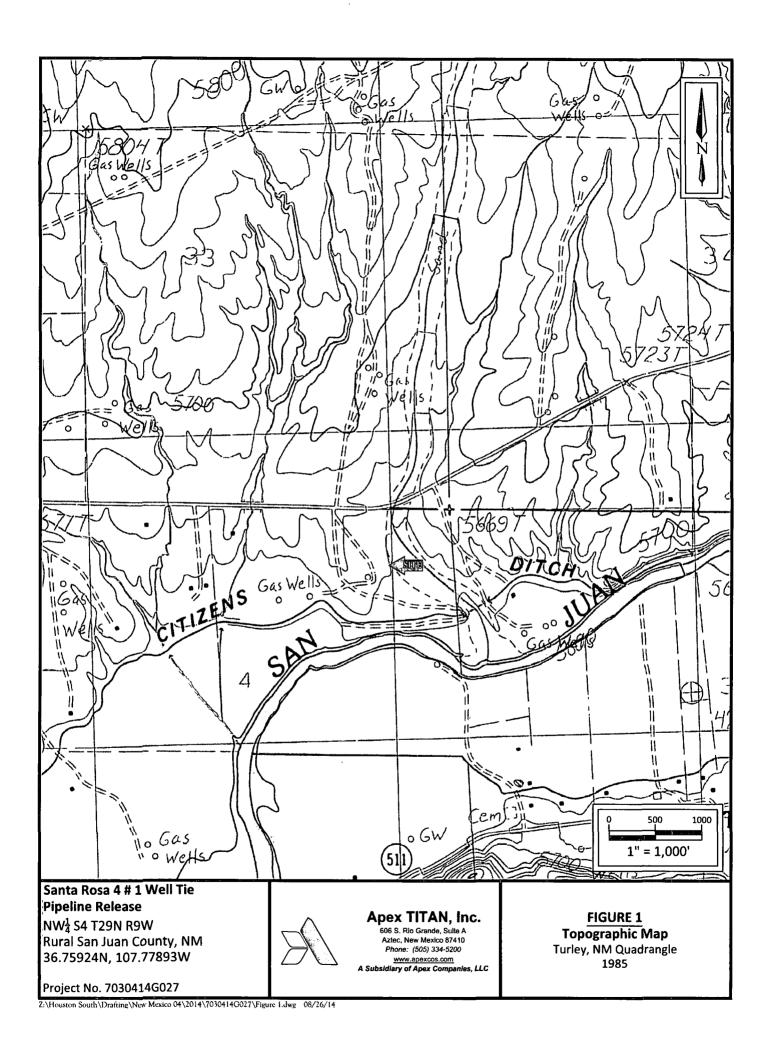
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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





Pipeline Release NW¹/₄ S4 T29N R9W Rural San Juan County, NM 36.75924N, 107.77893W

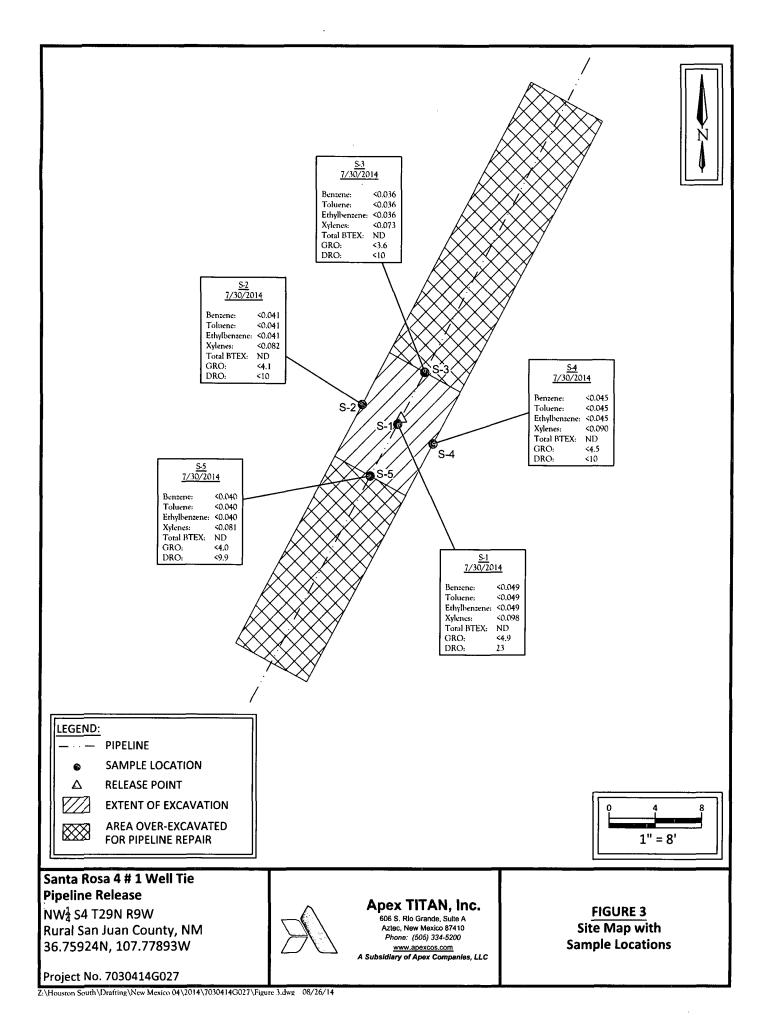
Project No. 7030414G027



Apex TITAN, Inc. 606 S. Rio Grande, Suite A Aztec, New Mexico 87410 Phone: (505) 334-5200

www.apexcos.com
A Subsidiary of Apex Companies, LLC

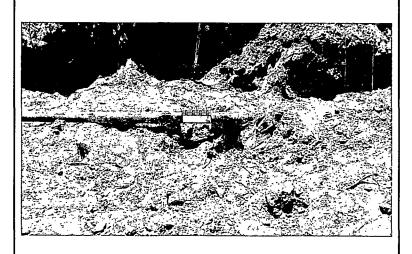
FIGURE 2 Site Vicinity Map 2013 Aerial Photograph





Photograph 1

View of excavation at the release source during excavation and pipeline repair activities, facing southeast.



Photograph 2

View of final pipeline repair access excavation, facing southwest.





TABLE 1 Santa Rosa 4#1 Well Tie Pipeline Release Soil analytical summary

Sample I.D.	Date	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH	TPH		
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO		
								(mg/kg)	(mg/kg)		
	•••	Natural Resources vision, Remediation	10	NE	NE	NE	50	10	00		
Stockpile Confirmation Samples											
SP-1	7/30/2014	Stockpile	<0.048	<0.048	<0.048	<0.096	ND	<4.8	28		
SP-2	7/30/2014	Stockpile	<0.057	<0.057	<0.057	<0.11	ND	<5.7	15_		
				Final Confir	mation Samples						
S-1	7/30/2014	6	<0.049	<0.049	<0.049	<0.098	ND	<4.9	23		
S-2	7/30/2014	5 to 6	<0.041	<0.041	<0.041	<0.082	ND	<4.1	<10		
S-3	7/30/2014	5 to 6	<0.036	<0.036	<0.036	<0.073	ND	<3.6	<10		
S-4	7/30/2014	5 to 6	<0.045	<0.045	<0.045	<0.090	ND	<4.5	<10		
S-5	7/30/2014	5 to 6	<0.040	<0.040	<0.040	<0.081	ND	<4.0	<9.9		

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

NE = Not Established

ND = Not Detected above Laboratory Reporting Limits



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

August 04, 2014

Heather Woods Enterprise Field Services 614 Reilly Ave. Farmington, NM 87401

TEL: (505) 599-2141

FAX

RE: Santa Rosa 4 #1

OrderNo.: 1407E30

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/31/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-1

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:19:00 AM

Lab ID: 1407E30-001 Matrix: MEOH (SOIL)

Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	23	10	mg/Kg	1	7/31/2014 12:00:50 PM	A 14526
Surr: DNOP	102	57.9-140	%REC	1	7/31/2014 12:00:50 PM	/ 14526
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/31/2014 11:32:29 AM	/ R20285
Surr: BFB	93.0	80-120	%REC	1	7/31/2014 11:32:29 AM	A R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Toluene	ND	0.049	mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Ethylbenzene	ND	0.049	mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Xylenes, Total	ND	0.098	mg/Kg	1	8/2/2014 1:44:50 AM	R20318
Surr: 4-Bromofluorobenzene	95.4	80-120	%REC	1	8/2/2014 1:44:50 AM	R20318

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 1 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-2

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:23:00 AM

Lab ID: 1407E30-002

Matrix: MEOH (SOIL) Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/31/2014 12:22:19 PN	1 14526
Surr: DNOP	108	57.9-140	%REC	1	7/31/2014 12:22:19 PM	1 14526
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	7/31/2014 12:01:04 PM	1 R20285
Surr: BFB	91.9	80-120	%REC	1	7/31/2014 12:01:04 PN	1 R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.041	mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Toluene	ND	0.041	mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Ethylbenzene	ND	0.041	mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Xylenes, Total	ND	0.082	mg/Kg	1	8/2/2014 2:14:48 AM	R20318
Surr: 4-Bromofluorobenzene	94.7	80-120	%REC	1	8/2/2014 2:14:48 AM	R20318

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 2 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-3

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:26:00 AM

Lab ID: 1407E30-003

Matrix: MEOH (SOIL) Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/31/2014 12:43:57 PM	/ 14526
Surr: DNOP	101	57.9-140	%REC	1	7/31/2014 12:43:57 PM	14526
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	7/31/2014 12:29:37 PM	/ R20285
. Surr: BFB	93.4	80-120	%REC	1	7/31/2014 12:29:37 PM	A R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.036	mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Toluene	ND	0.036	mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Ethylbenzene	ND	0.036	mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Xylenes, Total	ND	0.073	mg/Kg	1	8/2/2014 2:44:55 AM	R20318
Surr: 4-Bromofluorobenzene	88.2	80-120	%REC	1	8/2/2014 2:44:55 AM	R20318

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 3 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-4

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:30:00 AM

Lab ID: 1407E30-004 Matrix: MEOH (SOIL)

Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/31/2014 10:20:16 AI	vi 14526
Surr: DNOP	99.0	57.9-140	%REC	1	7/31/2014 10:20:16 Al	M 14526
EPA METHOD 8015D: GASOLINE R.	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	7/31/2014 12:58:20 PI	и R20285
Surr: BFB	94.1	80-120	%REC	1	7/31/2014 12:58:20 PI	M R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.045	mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Toluene	ND	0.045	mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Ethylbenzene	ND	0.045	mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Xylenes, Total	ND	0.090	mg/Kg	1	8/2/2014 3:14:58 AM	R20318
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	8/2/2014 3:14:58 AM	R20318

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 greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: S-5

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:32:00 AM

Lab ID: 1407E30-005

Matrix: MEOH (SOIL) Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS	<u>-</u>		· <u> </u>	Analys	st: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	7/31/2014 10:50:35 Al	M 14526
Surr: DNOP	96.3	57.9-140	%REC	1	7/31/2014 10:50:35 A	M 14526
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	7/31/2014 1:26:57 PM	R20285
Surr: BFB	94.3	80-120	%REC	1	7/31/2014 1:26:57 PM	R20285
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.040	mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Toluene	ND	0.040	mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Ethylbenzene	ND	0.040	mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Xylenes, Total	ND	0.081	mg/Kg	1	8/2/2014 3:45:04 AM	R20318
Surr: 4-Bromofluorobenzene	92.5	80-120	%REC	1	8/2/2014 3:45:04 AM	R20318

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 5 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: SP-1

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:35:00 AM

Lab ID: 1407E30-006

Matrix: MEOH (SOIL) Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	28	10	mg/Kg	1	7/31/2014 11:20:49 AN	1 14526
Surr: DNOP	95.8	57.9-140	%REC	1	7/31/2014 11:20:49 AM	14526
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/31/2014 1:55:34 PM	R20285
Surr: BFB	94.3	80-120	%REC	1	7/31/2014 1:55:34 PM	R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	1	8/2/2014 4:15:11 AM	R20318
Toluene	ND	0.048	mg/Kg	1	8/2/2014 4:15:11 AM	R20318
Ethylbenzene	ND	0.048	mg/Kg	1	8/2/2014 4:15:11 AM	R20318
Xylenes, Total	ND	0.096	mg/Kg	1	8/2/2014 4:15:11 AM	R20318
Surr: 4-Bromofluorobenzene	99.0	80-120	%REC	1	8/2/2014 4:15:11 AM	R20318

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 6 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1407E30

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services

Client Sample ID: SP-2

Project: Santa Rosa 4 #1

Collection Date: 7/30/2014 10:45:00 AM

Lab ID: 1407E30-007

Matrix: MEOH (SOIL) Received Date: 7/31/2014 7:50:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analysi	: BCN
Diesel Range Organics (DRO)	15	10	mg/Kg	1	7/31/2014 11:51:18 AM	1 14526
Surr: DNOP	96.5	57.9-140	%REC	1	7/31/2014 11:51:18 AM	1 14526
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.7	mg/Kg	1	7/31/2014 2:24:12 PM	R20285
Surr: BFB	94.6	80-120	%REC	1	7/31/2014 2:24:12 PM	R20285
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.057	mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Toluene	ND	0.057	mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Ethylbenzene	ND	0.057	mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Xylenes, Total	ND	0.11	mg/Kg	1	8/2/2014 4:45:04 AM	R20318
Surr: 4-Bromofluorobenzene	92.0	80-120	%REC	1	8/2/2014 4:45:04 AM	R20318

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 7 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1407E30

04-Aug-14

Client:

Enterprise Field Services

Project:

Santa Rosa 4 #1

Sample ID MB-14526	SampT	SampType: MBLK			TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batch ID: 14526			F	RunNo: 20268						
Prep Date: 7/31/2014	Analysis Date: 7/31/2014			S	SeqNo: 589335			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	9.3		10.00		92.7	57.9	140				
Sample ID LCS-14526	SampT	ype: LC	s	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batcl	h ID: 14	526	F	RunNo: 2	0268					
Prep Date: 7/31/2014	Analysis [Date: 7/	31/2014	\$	SeqNo: 5	89336	Units: mg/k	ζg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	47	10	50.00	0	94.5	68.6	130	-			
Surr: DNOP	4.5		5.000		89.6	57.9	140				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1407E30

04-Aug-14

Client:

Enterprise Field Services

Project: Santa Ro	Cosa 4 #1
Sample ID MB-14511 MK	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: R20285 RunNo: 20285
Prep Date:	Analysis Date: 7/31/2014 SeqNo: 589940 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 5.0 900 1000 90.4 80 120
Sample ID LCS-14511 MK	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: R20285 RunNo: 20285
Prep Date:	Analysis Date: 7/31/2014 SeqNo: 589941 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Gasoline Range Organics (GRO)	32 5.0 25.00 0 127 71.7 134
Surr: BFB	1000 1000 103 80 120
Sample ID MB-14534 MK	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: R20318 RunNo: 20318
Prep Date:	Analysis Date: 8/1/2014 SeqNo: 590802 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	890 1000 88.5 80 120
Sample ID LCS-14534 MK	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: R20318 RunNo: 20318
Prep Date:	Analysis Date: 8/1/2014 SeqNo: 590803 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	910 1000 91.5 80 120
Sample ID MB-14534	SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range
Client ID: PBS	Batch ID: 14534 RunNo: 20318
Prep Date: 7/31/2014	Analysis Date: 8/1/2014 SeqNo: 590808 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Surr: BFB	890 1000 88.5 80 120
Sample ID LCS-14534	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range
Client ID: LCSS	Batch ID: 14534 RunNo: 20318
Prep Date: 7/31/2014	Analysis Date: 8/1/2014 SeqNo: 590809 Units: %REC
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual

Qualifiers:

Surr: BFB

* Value exceeds Maximum Contaminant Level.

910

1000

- 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

80

120

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

91.5

Page 9 of 11

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

0.84

0.83

0.85

2.8

1.0

0.050

0.050

0.050

0.10

1.000

1.000

1.000

3.000

1.000

WO#:

1407E30

04-Aug-14

Client: Enterprise Field Services

Project: Santa Rosa 4 #1

Sample ID MB-14534 MK	SampT	SampType: MBLK			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch ID: R20318			F	RunNo: 20318					
Prep Date:	Analysis [Analysis Date: 8/1/2014		9	SeqNo: 590821			(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		101	80	120			
Sample ID LCS-14534 MK	Sampl	ype: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batcl	n ID: R2	0318	F	RunNo: 2	0318				
Prep Date:	Analysis [Date: 8/	1/2014	8	SeqNo: 5	90822	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sample ID MB-14534	SampType: MBLK			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batch	n ID: 14	534	F	RunNo: 2	0318				
Prep Date: 7/31/2014	Analysis D	Analysis Date: 8/1/2014			SegNo: 590827 Units: %REC			С		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		101	80	120			

0

0

0

0

83.7

82.8

84.6

94.1

104

80

80

80

80

80

120

120

120

120

120

Sample ID LCS-14534	SampType: LCS			Tes	TestCode: EPA Method 8021B: Volatiles					
Client ID: LCSS	Batch	n ID: 14	1534	F	RunNo: 2	0318				
Prep Date: 7/31/2014	Analysis Date: 8/1/2014			5	SeqNo: 5	90828	Units: %RE			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120		• •	

Sample ID MB-14511 MK	SampType: MBLK			Tes	tCode: E					
Client ID: PBS	Batch ID: R20318		F	RunNo: 20318						
Prep Date:	Analysis Date: 8/1/2014		9	SeqNo: 590838			(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								

Qualifiers:

Benzene

Toluene

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

O RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P Sample pH greater than 2.

RL Reporting Detection Limit

Page 10 of 11

Hall Environmental Analysis Laboratory, Inc.

WO#:

RPDLimit

RPDLimit

%RPD

%RPD

1407E30

04-Aug-14

Qual

Qual

Client:

Enterprise Field Services

Project:

Santa Rosa 4 #1

Sample ID MB-14511 MK

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

Client ID: PBS

Batch ID: R20318

RunNo: 20318

Prep Date:

Analysis Date: 8/1/2014

SeqNo: 590838

Units: mg/Kg HighLimit

Analyte

Client ID: LCSS

Result PQL SPK value SPK Ref Val

%REC

LowLimit Surr: 4-Bromofluorobenzene 0.99 1.000 99.0

80 120

Sample ID LCS-14511 MK

SampType: LCS

TestCode: EPA Method 8021B: Volatiles

Batch ID: R20318

RunNo: 20318

Prep Date:

Analysis Date: 8/1/2014

SeqNo: 590839

Units: mg/Kg

· '	•				•		•	•
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	
Benzene	0.95	0.050	1.000	0	95.2	80	120	_
Toluene	0.94	0.050	1.000	0	93.7	80	120	
Ethylbenzene	0.96	0.050	1.000	0	96.2	80	120	
Xylenes, Total	3.0	0.10	3.000	0	101	80	120	
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120	

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range E

Analyte detected below quantitation limits

0 RSD is greater than RSDlimit

R RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

P

Sample pH greater than 2. Reporting Detection Limit Page 11 of 11



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:	Enterprise		Work C	order Numbe	r: 1407 E	30			Rcp	tNo: 1	
Received by/da	te: U	*	MIZI	14							
	1/	_	7/21/201	'			(Simber)	Herio			
Logged By:	Lindsay Mar						() (). h.b. km				
Completed By:	Lindsay Mar	ngin 	07/21	4 8:06:47 AN /,, <i>(</i>	И		Committee	Home			
Reviewed By:	IΥ	g-	اد ار م	/14							
Chain of Cus		~				e 1		. ,			
1	als intact on sar				Yes		No		Not Present	•	
	Custody comple				Yes	 Y	No	ii	Not Present	•	
3. How was th	e sample delive	red?			Cour	<u>ier</u>					
Log In											
4. Was an att	empt made to c	ool the samp	les?		Yes	~	No		NA		
5. Were all sa	mples received	at a tempera	ture of >0° C	to 6.0°C	Yes	V i	No	. !	NA		
6. Sample(s)	in proper contai	ner(s)?			Yes	V	No	L l			
7, Sufficient s	ample volume fo	or indicated te	est(s)?		Yes	V	No]			
8. Are sample:	s (except VOA	and ONG) pro	perly preserve	ed?	Yes	Y	No				
9. Was preser	vative added to	bottles?			Yes	[-;	No		NA	:	
10.VOA vials h	ave zero heads	pace?		,	Yes	l ji	No	[7	No VOA Vials	.	
11. Were any s	sample containe	rs received b	roken?		Yes		No		. # of preserved		
									bottles checked	d	
	work match bot epancies on cha)		Yes		No	'!	for pH:	(<2 or :	>12 unless noted)
1	s correctly ident	•	•		Yes	Y	No		Adjust e d	?	
1	hat analyses we				Yes	V	No	1.!			
i	Iding times able				Yes		No		Checked	by:	
(ii iio, notily	Customer for a	utilonzation.,									
Special Hand	dling (if app	licable)									
	notified of all dis		ith this order?		Yes	H	No	1,1	NA	V :	
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Client	Instructions:										
17. Additional	remarks:	·			·						
18. <u>Cooler Infe</u>						_					
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* Attach Additional Sheets If Necessary

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

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

Form C-141

Revised August 8, 2011

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

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

Revised August 8, 2011

Form C-141

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

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

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District I
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Form C-141 Revised August 8, 2011

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

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CORRECTIVE ACTION REPORT

Property:

Lateral 3D-4 Pipeline Release SE 1/4, S36 T28N R12W San Juan County, New Mexico

July 31, 2014 Apex Project No. 7030414G023

Prepared for:

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

Prepared by:

Heather M. Woods, P.G. Senior Project Manager

Elizabeth Scaggs, P.G. Senior Program Manager

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CORRECTIVE ACTION REPORT

Lateral 3D-4 Pipeline Release SE 1/4, S36 T28N R12W San Juan County, New Mexico

Apex Project No. 7030414G023

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 3D-4 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 28 North and Range 12 West in San Juan County, New Mexico (36.618420N 108.057990W), referred to hereinafter as the "Site" or "subject Site". The Site is located on cultivated land owned by the Navajo Nation, and operated by the Navajo Agricultural Products Industry (NAPI). The property surrounding the Site is primarily agricultural, with occasional oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2013, initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident.

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 using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.

2.0 SITE RANKING

The Site is subject to regulatory oversight by the Navajo Nation Environmental Protection Agency (NNEPA). Due to the absence of published NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) utilized the available 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 to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



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

^{*}Based on anticipated groundwater depth of <50 feet below grade surface (bgs).

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

- The Site is approximately 400 feet south and east-southeast from the heads of two small un-named ephemeral washes, resulting in a ranking of "10" for distance to potential surface water.
- No water wells were identified on the Office of the State Engineer website database within the search radius. However, increased moisture content was observed in the base of the excavation at approximately 9.5 feet bgs, resulting in a ranking of "20" for depth to groundwater.
- No water sources were identified within the search radius.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2014, initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Aaron Bryant and Heather Woods, Apex environmental professionals, provided environmental support.

Excavation activities associated with the pipeline repair were completed on June 20, 2014. Soil samples (Conf-1 through Conf-7) and stockpile samples (N-SP, E-SP, and W-SP) were collected subsequent to the pipeline repair activities. Analytical results for the confirmation and stockpile soil samples indicate that adversely affected soils were not identified at the Site. The excavation was backfilled with the stockpiled soil and contoured to surrounding grade.

The overall surface expression of the final excavation measured approximately 41 feet long by 13 feet wide, with a total depth of approximately 8 feet bgs.

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



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 B.

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.

Apex's soil sampling program included the collection of ten (10) final confirmation samples (Conf-1 through Conf-7) and stockpile samples (N-SP, E-SP, and W-SP) from the resulting excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated areas 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 forms 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) using EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) using EPA SW-846 Method #8015.

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

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the NNEPA. Due to the absence of published NNEPA regulatory guidance, Apex utilized the available New Mexico EMNRD OCD guidance and rules. 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 NMAC 19.15.30 *Remediation*. 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 reporting limits (RLs) associated with the final confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".

 The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above laboratory RLs, which are below the OCD RAL.



- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate total BTEX concentrations ranging from below the laboratory RLs to 1.7 milligrams per Kilogram (mg/Kg), which are below the OCD RAL.
- The laboratory analyses of the confirmation sample collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory detection limits to 30 mg/Kg which are below the OCD RAL.

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 3D-4 Pipeline Release Site is located within the Enterprise pipeline ROW in the SE ¼ of Section 36 in Township 28 North and Range 12 West in San Juan County, New Mexico. The Site is located on cultivated land owned by the Navajo Nation, and operated by NAPI. The property surrounding the Site is primarily agricultural, with occasional oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On June 6, 2014, Enterprise shut in the Lateral 3D-4 pipeline and on June 18, 2014, initiated excavation activities at the Site in an attempt to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leak was identified by vapor monitoring at the ground surface. No surface expression of the release was evident.

- 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 sands, silty sands, and silty clays.
- The overall surface expression of the final excavation measured approximately 41 feet long by 13 feet wide, with a total depth of approximately 8 feet bgs.
- Prior to backfilling, ten (10) final excavation confirmation and stockpile samples were collected 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 "30".
- Stockpiled soils were used to backfill the excavation based on analytical results which indicated that the stockpiled soils did not exhibit COC concentrations above the OCD RALs for a site ranking of "30". The area was contoured to surrounding grade following backfilling activities.

Based on the laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

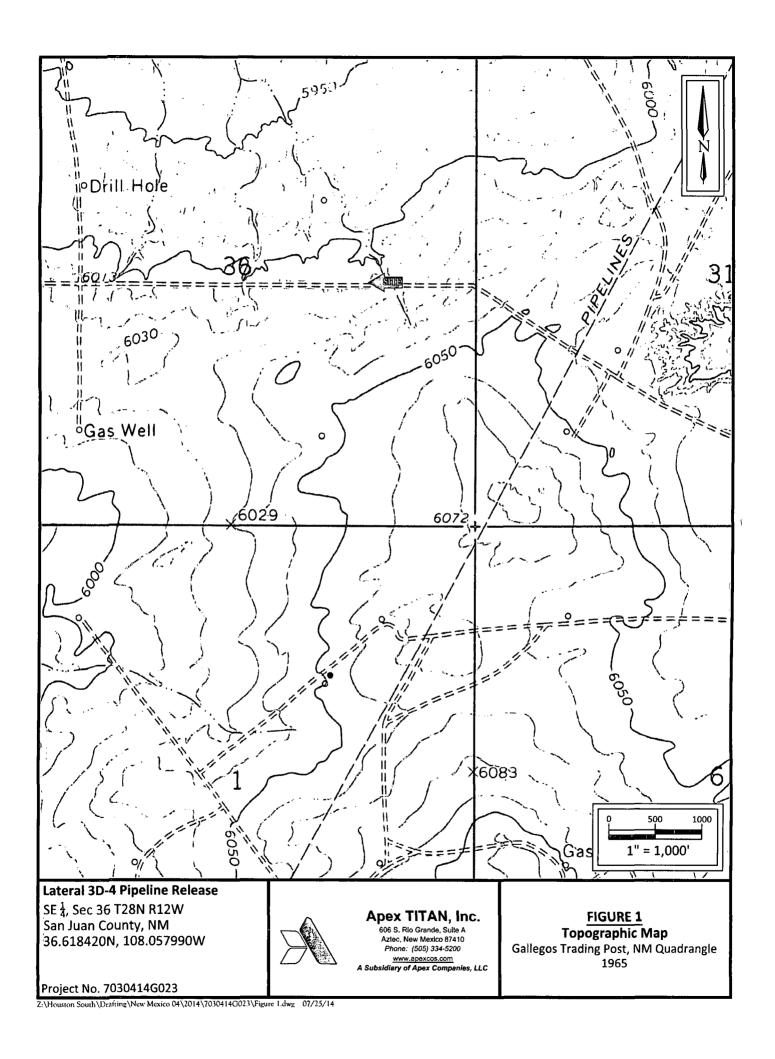
Enterprise Field Services LLC Corrective Action Report Lateral 3D-4 Pipeline Release July 31, 2014

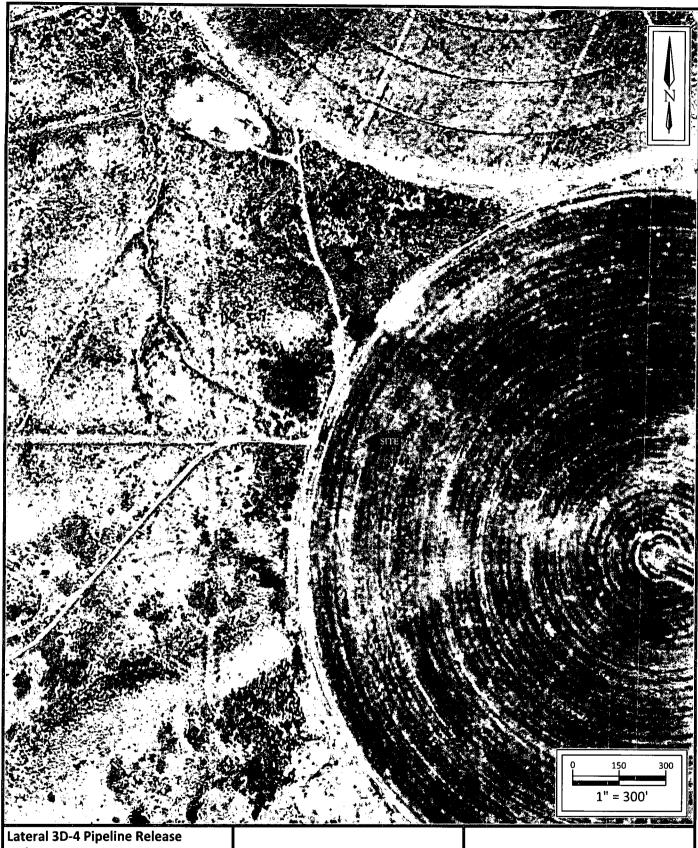


does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

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.

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SE ¹/₄, Sec 36 T28N R12W San Juan County, NM 36.618420N, 108.057990W

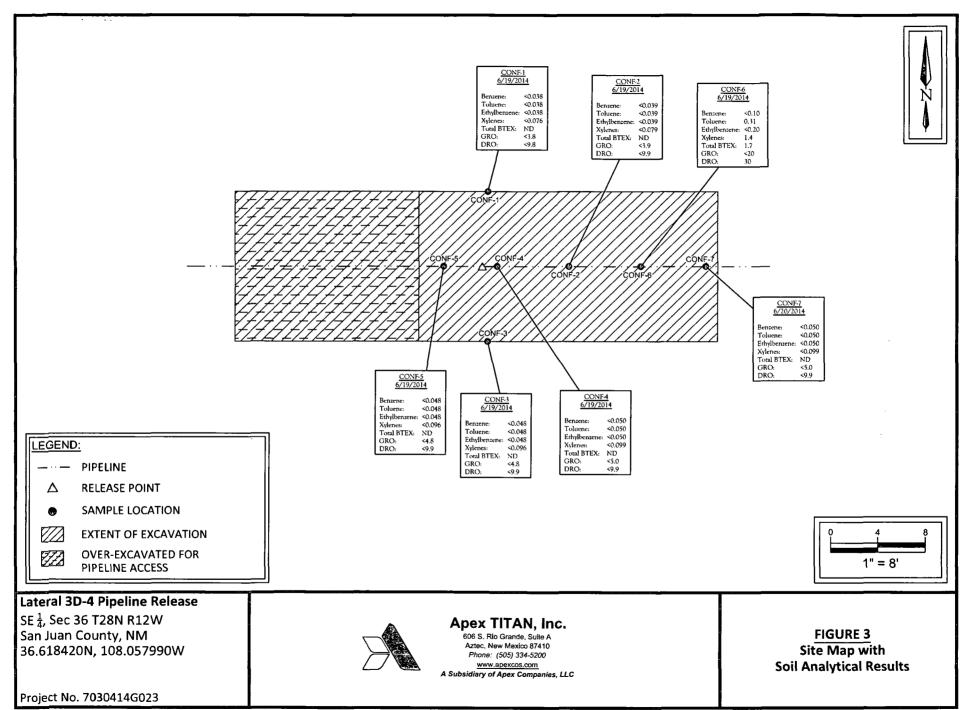
Project No. 7030414G023



Apex TITAN, Inc. 606 S. Rio Grande, Sulte A Aztec, New Mexico 87410 Phone: (505) 334-5200

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FIGURE 2 Site Vicinity Map 2013 Aerial Photograph

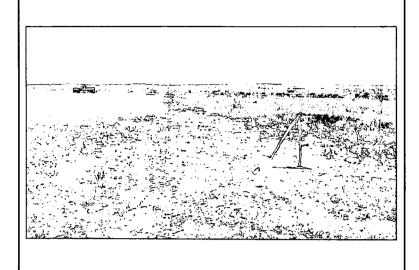


Z:\Houston South\Drafting\New Mexico 04\2014\7030414G023\Figure 3.dwg 07/29/14



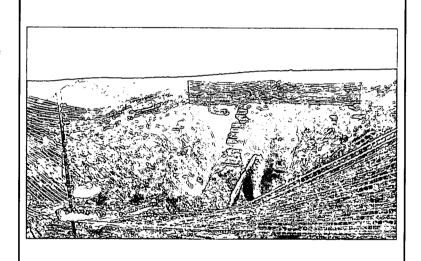
Photograph 1

View of site prior to excavation activities, facing west.



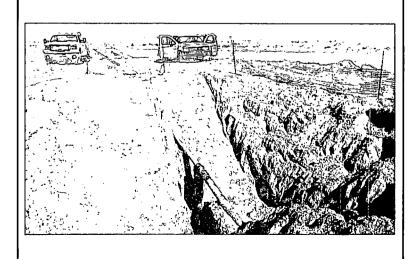
Photograph 2

View of initial excavation to locate the source of the release, facing east.



Photograph 3

View of initial excavation to locate the source of the release, facing west.







Photograph 4

General overview of the final excavation prepared for the installation of replacement pipeline, facing east.

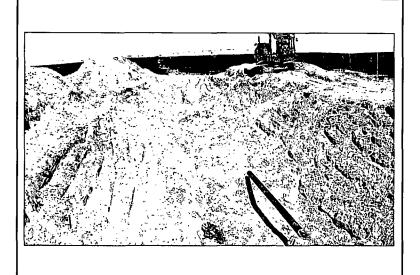




TABLE 1 Lateral 3D-4 Pipeline Release SOIL ANALYTICAL SUMMARY

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)
11		Natural Resources vision, Remediation	10	NE	NE	NE	50	10	00
				Final Confin	nation Samples				
CONF-1	6/19/2014	6 to 8	<0.038	<0.038	<0.038	<0.076	ND	<3.8	<9.8
CONF-2	6/19/2014	8	<0.039	<0.039	<0.039	<0.079	ND	<3.9	<9.9
CONF-3	6/19/2014	6 to 8	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.9
CONF-4	6/19/2014	8	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.9
CONF-5	6/19/2014	6 to 8	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<9.9
CONF-6	6/19/2014	8	<0.10	0.31	<0.20	1.4	1.7	<20	30
CONF-7	6/20/2014	6 to 8	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<9.9
N-SP	6/19/2014	Stockpile	<0.042	<0.042	<0.042	<0.083	ND	<4.2	<10
E-SP	6/19/2014	Stockpile	<0.041	<0.041	<0.041	<0.082	ND	<4.1	<9.8
S-SP	6/19/2014	Stockpile	<0.043	<0.043	<0.043	<0.087	ND	<4.3	<10

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

NE = Not Established

ND = Not Detected



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

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

June 23, 2014

Kyle Summers

Apex Titan, Inc.

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603 FAX (214) 350-2914

RE: 3D-4 OrderNo.: 1406958

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 9 sample(s) on 6/20/2014 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

Order

4901 Hawkins NE

Albuquerque, NM 87109

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-1

Project: 3D-4

Collection Date: 6/19/2014 8:10:00 AM

Lab ID: 1406958-001

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	6/20/2014 12:01:12 PM	13803
Surr: DNOP	122	57.9-140	%REC	1	6/20/2014 12:01:12 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Surr: BFB	93.2	80-120	%REC	1	6/20/2014 9:48:44 AM	R19403
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.038	mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Toluene	ND	0.038	mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Ethylbenzene	ND	0.038	mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Xylenes, Total	ND	0.076	mg/Kg	1	6/20/2014 9:48:44 AM	R19403
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	6/20/2014 9:48:44 AM	R19403

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 1 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/23/2014

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-2

Project: 3D-4

Collection Date: 6/19/2014 8:15:00 AM

Lab ID: 1406958-002

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI	ORGANICS				Analyst	: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 12:23:10 PM	13803
Surr: DNOP	120	57.9-140	%REC	1	6/20/2014 12:23:10 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Surr: BFB	94.4	80-120	%REC	1	6/20/2014 10:17:25 AM	R19403
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.039	mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Toluene	ND	0.039	mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Ethylbenzene	ND	0.039	mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Xylenes, Total	ND	0.079	mg/Kg	1	6/20/2014 10:17:25 AM	R19403
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	6/20/2014 10:17:25 AM	R19403

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 2 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-3

Project: 3D-4

Collection Date: 6/19/2014 8:20:00 AM

Lab ID: 1406958-003

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 12:45:05 PM	13803
Surr: DNOP	118	57.9-140	%REC	1	6/20/2014 12:45:05 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Surr: BFB	93.1	80-120	%REC	1	6/20/2014 10:46:07 AM	R19403
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.048	mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Toluene	ND	0.048	mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Ethylbenzene	ND	0.048	mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Xylenes, Total	ND	0.096	mg/Kg	1	6/20/2014 10:46:07 AM	R19403
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	6/20/2014 10:46:07 AM	R19403

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 greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-4

Project: 3D-4

Collection Date: 6/19/2014 8:25:00 AM

Lab ID: 1406958-004

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS	_			Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 1:07:10 PM	13803
Surr: DNOP	123	57.9-140	%REC	1	6/20/2014 1:07:10 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/20/2014 11:14:48 Af	л R19403
Surr: BFB	94.2	80-120	%REC	1	6/20/2014 11:14:48 AM	И R19403
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.050	mg/Kg	1	6/20/2014 11:14:48 At	л R19403
Toluene	ND	0.050	mg/Kg	1	6/20/2014 11:14:48 AM	/ R19403
Ethylbenzene	ND	0.050	mg/Kg	1	6/20/2014 11:14:48 AM	/ R19403
Xylenes, Total	ND	0.099	mg/Kg	1	6/20/2014 11:14:48 AM	/ R19403
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	6/20/2014 11:14:48 AM	л R19403

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 greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-5

Project: 3D-4

Collection Date: 6/19/2014 8:30:00 AM

Lab ID: 1406958-005

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS	•			Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 1:28:58 PM	13803
Surr: DNOP	113	57.9-140	%REC	1	6/20/2014 1:28:58 PM	13803
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	6/20/2014 11:43:25 AM	/ R19403
Surr: BFB	93.6	80-120	%REC	1	6/20/2014 11:43:25 AM	/ R19403
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	1	6/20/2014 11:43:25 AN	/ R19403
Toluene	ND	0.048	mg/Kg	1	6/20/2014 11:43:25 AM	/ R19403
Ethylbenzene	ND	0.048	mg/Kg	1	6/20/2014 11:43:25 AN	/ R19403
Xylenes, Total	ND	0.096	mg/Kg	1	6/20/2014 11:43:25 AM	/ R19403
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	6/20/2014 11:43:25 AN	/ R19403

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 greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: CONF-6

Project: 3D-4

Collection Date: 6/19/2014 8:35:00 AM

Lab ID: 1406958-006

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	SE ORGANICS	•			Analys	t: BCN
Diesel Range Organics (DRO)	30	10	mg/Kg	1	6/20/2014 2:13:53 PM	13803
Surr: DNOP	91.5	57.9-140	%REC	1	6/20/2014 2:13:53 PM	13803
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	20	mg/Kg	5	6/20/2014 12:12:10 PM	R19403
Surr: BFB	113	80-120	%REC	5	6/20/2014 12:12:10 PM	1 R19403
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.10	mg/Kg	5	6/20/2014 12:12:10 PM	1 R19403
Toluene	0.31	0.20	mg/Kg	5	6/20/2014 12:12:10 PM	1 R19403
Ethylbenzene	ND	0.20	mg/Kg	5	6/20/2014 12:12:10 PM	1 R19403
Xylenes, Total	1.4	0.40	mg/Kg	5	6/20/2014 12:12:10 PM	1 R19403
Surr: 4-Bromofluorobenzene	107	80-120	%REC	5	6/20/2014 12:12:10 PM	1 R19403

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 6 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: N-SP

Project: 3D-4

Collection Date: 6/19/2014 8:40:00 AM

Lab ID: 1406958-007

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANC	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/20/2014 2:12:40 PM	13803
Surr: DNOP	111	57.9-140	%REC	1	6/20/2014 2:12:40 PM	13803
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	6/20/2014 12:40:52 PM	/ R19403
Surr: BFB	97.3	80-120	%REC	1	6/20/2014 12:40:52 PM	/ R19403
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.042	mg/Kg	1	6/20/2014 12:40:52 PM	/ R19403
Toluene	ND	0.042	mg/Kg	1	6/20/2014 12:40:52 PM	/ R19403
Ethylbenzene	ND	0.042	mg/Kg	1	6/20/2014 12:40:52 PM	/ R19403
Xylenes, Total	ND	0.083	mg/Kg	1	6/20/2014 12:40:52 PM	/ R19403
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	6/20/2014 12:40:52 PM	/ R19403

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 7 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: E-SP

3D-4 Project:

Collection Date: 6/19/2014 8:45:00 AM

1406958-008 Lab ID:

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	:: BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	6/20/2014 2:34:28 PM	13803
Surr: DNOP	117	57.9-140	%REC	1	6/20/2014 2:34:28 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE	•	1		Analyst	:: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Surr: BFB	96.0	80-120	%REC	1	6/20/2014 1:09:35 PM	R19403
EPA METHOD 8021B: VOLATILES					Analyst	:: NSB
Benzene	ND	0.041	mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Toluene	ND	0.041	mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Ethylbenzene	ND	0.041	mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Xylenes, Total	ND	0.082	mg/Kg	1	6/20/2014 1:09:35 PM	R19403
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	6/20/2014 1:09:35 PM	R19403

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
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit

Page 8 of 12

- Sample pH greater than 2.
- Reporting Detection Limit

Lab Order 1406958

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: S-SP

Project: 3D-4

Collection Date: 6/19/2014 8:50:00 AM

Lab ID: 1406958-009

Matrix: MEOH (SOIL) Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/20/2014 2:56:12 PM	13803
Surr: DNOP	115	57.9-140	%REC	1	6/20/2014 2:56:12 PM	13803
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Surr: BFB	97.3	80-120	%REC	1	6/20/2014 1:38:18 PM	R19403
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.043	mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Toluene	ND	0.043	mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Ethylbenzene	ND	0.043	mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Xylenes, Total	ND	0.087	mg/Kg	1	6/20/2014 1:38:18 PM	R19403
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	6/20/2014 1:38:18 PM	R19403

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 9 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406958

23-Jun-14

Client:

Apex Titan, Inc.

Project:

3D-4

Sample ID MB-13803	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015D: Diesel Range Organics					
Client ID: PBS	Batch	n ID: 13	803	RunNo: 19402						
Prep Date: 6/20/2014	Analysis D	Analysis Date: 6/20/2014			SeqNo: 5	61328	Units: mg/h	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 8.3	10	10.00		83.4	57.9	140			
Sample ID LCS-13803	SampT	ype: LC	<u></u>	Tes	tCode: El	PA Method	8015D: Dies	el Range (Organics	
Client ID: LCSS	Batch	n ID: 13	803	F	RunNo: 1	9402				
Prep Date: 6/20/2014	Analysis D	Date: 6/	20/2014	S	SeqNo: 5	61594	Units: mg/F	ζg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	60.8	145			
Diesei Range Organics (DRO)	00	10	00.00	Ū	100	00.0				

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

D. Comple pU greater than 2

Page 10 of 12

P Sample pH greater than 2. RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

820

759.9

WO#:

1406958 23-Jun-14

Client:

Apex Titan, Inc.

Gasoline Range Organics (GRO) Surr. BFB 960 1000 96.1 80 120	Client:	Apex Tita	ın, Inc.									
Client ID: PBS	Project:	3D-4										
Prep Date:	Sample ID	5ML RB	SampT	ype: ME	BLK	Tes	tCode: EI	PA Method	8015D: Gaso	line Rang	е	
Analyte	Client ID:	PBS	Batch	ID: R1	9403	F	RunNo: 1	9403				
Sample D 2.5UG GRO SampType: LCS TestCode: EPA Method 8015D: Gasoline Range	Prep Date:		Analysis D	ate: 6/	/20/2014	5	SeqNo: 5	61855	Units: mg/k	(g		
Surr: BFB 960 1000 96.1 80 120 Sample ID 2.5UG GRO LCS SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561856 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Q Gasoline Range Organics (GRO) 28 5.0 25.00 0 112 71.7 134 Surr: BFB 1100 1000 106 80 120 Sample ID 1406958-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561858 Units: mg/Kg Asample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit_	Qual
Client ID: LCSS Batch ID: R19403 RunNo: 19403 •	e Organics (GRO)		5.0	1000		96.1	80	120				
Prep Date: Analysis Date: 6/20/2014 SeqNo: 561856 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Q Gasoline Range Organics (GRO) 28 5.0 25.00 0 112 71.7 134 Surr: BFB 1100 1000 106 80 120 Sample ID 1406958-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD MSD RunNo: <td>Sample ID</td> <td>2.5UG GRO LCS</td> <td>SampT</td> <td>ype: LC</td> <td>:s</td> <td>Tes</td> <td>tCode: El</td> <td>PA Method</td> <td>8015D: Gaso</td> <td>line Rang</td> <td>e</td> <td></td>	Sample ID	2.5UG GRO LCS	SampT	ype: LC	:s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Analyte	Client ID:	LCSS	Batch	ID: R1	9403	F	RunNo: 1	9403				
Gasoline Range Organics (GRO) 28 5.0 25.00 0 112 71.7 134 Surr: BFB 1100 1000 106 80 120 Sample ID 1406958-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Prep Date:		Analysis D	ate: 6/	/20/2014	\$	SeqNo: 5	61856	Units: mg/K	(g		
Surr: BFB 1100 1000 106 80 120 Sample ID 1406958-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561858 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qualter	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID 1406958-001AMS SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561858 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit	Gasoline Rang	e Organics (GRO)	28	5.0	25.00	0	112	71.7	134			
Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561858 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Surr: BFB		1100		1000		106	80	120			
Prep Date: Analysis Date: 6/20/2014 SeqNo: 561858 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Sample ID	1406958-001AMS	SampT	ype: MS	5	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Client ID:	CONF-1	Batch	ID: R1	9403	F	RunNo: 1	9403				
Gasoline Range Organics (GRO) 21 3.8 19.00 0 113 71.8 132 Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Prep Date:		Analysis D	ate: 6/	/20/2014	5	SeqNo: 5	61858	Units: mg/K	ζg		
Surr: BFB 810 759.9 107 80 120 Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quality	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID 1406958-001AMSD SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Gasoline Rang	e Organics (GRO)	21	3.8	19.00	0	113	71.8	132			
Client ID: CONF-1 Batch ID: R19403 RunNo: 19403 Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Surr: BFB		810		759.9		107	80	120			
Prep Date: Analysis Date: 6/20/2014 SeqNo: 561859 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Sample ID	1406958-001AMS) SampT	уре: М \$	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu	Client ID:	CONF-1	Batch	ID: R1	9403	F	RunNo: 1	9403				
	Prep Date:		Analysis D	ate: 6/	20/2014	9	SeqNo: 5	61859	Units: mg/K	(g		
Sasoline Range Organics (GRO) 22 3.8 19.00 0 117 71.8 132 4.07 20	Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	Sasoline Rang	e Organics (GRO)	22	3.8	19.00	0	117	71.8	132	4.07	20	

Qualifiers:

Surr: BFB

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- 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

109

80

120

0

0

Page 11 of 12

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1406958 23-Jun-14

Client:

Apex Titan, Inc.

Project:

3D-4

Sample ID 5ML RB	SampT	SampType: MBLK			tCode: El	PA Method	8021B: Volat	tiles		
Client ID: PBS	Batch ID: R19403		, F	RunNo: 19403						
Prep Date:	Analysis Date: 6/20/2014			SeqNo: 561870			Units: mg/k	ίg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID 100NG BTEX LC:	S Samp	Type: LC	S	TestCode: EPA Method 8021B: Volatiles						
Client ID: LCSS	Bato	h ID: R1	9403	F	RunNo: 1	9403				
Prep Date:	Analysis I	Date: 6/	20/2014	SeqNo: 561871			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	105	80	120			
Toluene	1.0	0.050	1.000	0	103	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			
Xylenes, Total	3.1	0.10	3.000	0	103	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			

Sample ID 1406958-002AMS	Samp	Type: MS	6	Tes	tCode: E	tCode: EPA Method 8021B: Volatiles					
Client ID: CONF-2	Bate	ch ID: R1	9403	RunNo: 19403							
Prep Date:	Analysis	Date: 6/	20/2014	\$	SeqNo: 5	61874	Units: mg/k	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.87	0.039	0.7880	0.006123	109	77.4	142			-	
Toluene	0.85	0.039	0.7880	0.02518	105	77	132				
Ethylbenzene	0.85	0.039	0.7880	0.008503	106	77.6	134				
Xylenes, Total	2.6	0.079	2.364	0.04146	108	77.4	132				
Surr: 4-Bromofluorobenzene	0.94		0.7880		119	80	120				

Sample ID 1406958-002AM	SD SampT	ype: MS	SD	Tes	TestCode: EPA Method 8021B: Volatiles						
Client ID: CONF-2	Batch	n ID: R1	9403	F	RunNo: 19403						
Prep Date:	Analysis D	20/2014	8	SeqNo: 5	61875	Units: mg/k	ζg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.84	0.039	0.7880	0.006123	106	77.4	142	3.20	20		
Toluene	0.83	0.039	0.7880	0.02518	102	77	132	2.68	20		
Ethylbenzene	0.83	0.039	0.7880	0.008503	104	77.6	134	2.33	20		
Xylenes, Total	2.6	0.079	2.364	0.04146	106	77.4	132	1.61	20		
Surr: 4-Bromofluorobenzene	0.97		0.7880		123	80	120	0	0	S	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Value above quantitation range E
- Analyte detected below quantitation limits
- RSD is greater than RSDlimit O
- 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 Н
- Not Detected at the Reporting Limit
- Sample pH greater than 2.
- Reporting Detection Limit

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Hall Environmental Analysis Laboratory 4901 Hawkins NE

Website: www.hallenvironmental.com

Sample Log-In Check List

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

Client Name: Southwest Geoscience	Work Order Number:	1406958	}		RcptN	o: 1
Received by/date:	66/11/1	÷				
4	04/2018/	**	o standard	410		
Logged By: Lindsay Mangin	6/20/2014 8:00:00 AM		0	neegs.C		
Completed By: Lindsay Mangin	6/20/2014 8:31:53 AM		Fredry!	Hergo		
Reviewed By:	06/2014					•
Chain of Custody						
1. Custody seals intact on sample bottles?		Yes	No		Not Present ▼	•
2. Is Chain of Custody complete?		Yes 🗸	. No	. :	Not Present	
3. How was the sample delivered?		Courier				
Log In						
4. Was an attempt made to cool the samples	3?	Yes M	<u>∕</u> No	. "	NA	
5. Were all samples received at a temperature	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	(s)?	Yes 😾	. No	:		
8. Are samples (except VOA and ONG) properly preserved?				: .		
9. Was preservative added to bottles?		Yes :	No.	✓	NA	
10.VOA vials have zero headspace?	•	Yes [17	No VOA Vials	;- [
11. Were any sample containers received broken	ken?	Yes -	No	V .	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	ⁿ No	: !	for pH:	2 or >12 unless noted)
13. Are matrices correctly identified on Chain of	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	<i>r</i> :
Special Handling (if applicable)						
16. Was client notified of all discrepancies with	this order?	Yes	i N o		NA ·	.
Person Notified:	Date:	· · · · · · · · · · · · · · · · · · ·		na zwiep		
By Whom:	Via:	eMail	Phone	Fax	In Person	
Regarding:						
Client Instructions:						
17. Additional remarks:						
18. Cooler Information						
		Seal Date	Signed I	3y		
1 1.8 Good Ye	98	ttel leave of the likelik deal	<u>L</u>			
Page 1 of 1	LIMBOUR CANADA (C. S. C. M. CAMA).		ar valva i		. 4	

		CHAIN OF CUSTODY RECORD
Apex TITAN, Inc.	Laboratory: HALL	ANALYSIS REQUESTED Lab use only Due Date:
	Laboratory:	
GEOSCIENCE Environmental & Hydrogeologic Consultants	Address: ABO.	Temp. of coolers when received (C°): 17
Office Location AZTEC, NM	Contact: FREEM AN	1 2 3 4 7 5
	Phone:	/ / / / / Page of 1
Project Manager Kyle Summers	PO/SO#: 70364/46623	
Sampler's Name	Sampler's Signature	25 / / / / / / / / / / / / / / / / / / /
Sampler's Name AARON BRYANT HEATHER WOOD.	Heather M. Woods	
Proj. No. Project Name	No/Type of Containers	*/>/ / / / / /
10301110023	1 x 40z	
Matrix Date Time C G I Identifying Ma	arks of Sample(s) Line of Dund VOA A/G 250 P/O	Lab Sample ID (Lab Use Only)
5 6-19-14 0816 X CONF	-1 1	XX 1406958-001
1 0815 X CONF	-2	XX002
U820 X CONF		XX -023
0825 X CONF	-4	XX -cxt
0830 X CONF	-5	X X -05
0835 X CONF	-6	$\chi \chi$
6840 X N-S		X X -007
0845 X E-S	P	XX -008
1 1 0850 X S-S	P	XX
		-00
	350% Rush 2100% Rush Same Day	
Bettinquished by (Signature) Date: 19/14 5	Time: Received by: (Signature) Date: 1991	lid 10 1 (m)
Relinquished by (Signature) Date:	Time: Received by (Signature) Date:	Time: Payky: RB 21200
	Time: Received by (Signature) Date:	14 0806
Relinquished by (Signature) Date:	Time: Received by (Signature) Date:	J
Relinquished by (Signature) Date:	Time: Received by: (Signature) Date:	Field Services
Matrix WW - Wastewater W - Water Container VOA - 40 ml vial A/G - Amber / 0	S - Soil SD - Solid L - Liquid A - Air Bag C - Dr Glass 1 Liter 250 ml - Glass wide mouth P/C	- Charcoal tube SL - sludge. O - Oil O - Plastic or other



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

OrderNo.: 1406A14

June 26, 2014

Kyle Summers

APEX TITAN

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603

FAX

RE: Enterprise Lateral 3D-4

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/21/2014 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,

John Caldwell

Supervisor

4901 Hawkins NE

Albuquerque, NM 87109

John Collwell

Lab Order 1406A14

Date Reported: 6/26/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: APEX TITAN

Client Sample ID: Conf 7

Project:

Enterprise Lateral 3D-4

Collection Date: 6/20/2014 4:36:00 PM

Lab ID:

1406A14-001

Received Date: 6/21/2014 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/24/2014 11:23:48 PM	13833
Surr: DNOP	82.6	57.9-140	%REC	1	6/24/2014 11:23:48 PM	13833
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	6/24/2014 5:44:39 PM	13836
Surr: BFB	88.4	80-120	%REC	1	6/24/2014 5:44:39 PM	13836
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	6/24/2014 5:44:39 PM	13836
Toluene	ND	0.050	mg/Kg	1	6/24/2014 5:44:39 PM	13836
Ethylbenzene	ND	0.050	mg/Kg	1	6/24/2014 5:44:39 PM	13836
Xylenes, Total	ND	0.099	mg/Kg	1	6/24/2014 5:44:39 PM	13836
Surr: 4-Bromofluorobenzene	97.8	80-120	%REC	1	6/24/2014 5:44:39 PM	13836

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
- Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 4

- Sample pH greater than 2.
- Reporting Detection Limit RL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406A14

26-Jun-14

Client:

APEX TITAN

Project: Enterpri	ise Lateral 3D-4	
Sample ID MB-13833	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: PBS	Batch ID: 13833 RunNo: 19428	
Prep Date: 6/23/2014	Analysis Date: 6/23/2014 SeqNo: 561973 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Diesel Range Organics (DRO)	ND 10	
Surr: DNOP	7.5 10.00 75.3 57.9 140	
Sample ID LCS-13833	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 13833 RunNo: 19428	
Prep Date: 6/23/2014	Analysis Date: 6/23/2014 SeqNo: 561976 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Diesel Range Organics (DRO)	46 10 50.00 0 92.3 68.6 130	
Sum: DNOP	3.6 5.000 72.8 57.9 140	
Sample ID MB-13859	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: PBS	Batch ID: 13859 RunNo: 19466	
Prep Date: 6/24/2014	Analysis Date: 6/24/2014 SeqNo: 563203 Units: %REC	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Surr: DNOP	9.6 10.00 96.4 57.9 140	
Sample ID LCS-13859	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 13859 RunNo: 19466	
Prep Date: 6/24/2014	Analysis Date: 6/24/2014 SeqNo: 563204 Units: %REC	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Surr: DNOP	4.7 5.000 94.6 57.9 140	
Sample ID MB-13809	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: PBS	Batch ID: 13809 RunNo: 19464	
Prep Date: 6/20/2014	Analysis Date: 6/24/2014 SeqNo: 563212 Units: %REC	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Surr: DNOP	8.1 10.00 81.1 57.9 140	
Sample ID LCS-13809	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 13809 RunNo: 19464	
Prep Date: 6/20/2014	Analysis Date: 6/24/2014 SeqNo: 563213 Units: %REC	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit C	Qual
Surr: DNOP	3.8 5.000 76.7 57.9 140	

Qualifiers:

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

Page 2 of 4

- Sample pH greater than 2.
- RLReporting Detection Limit

OC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1406A14 26-Jun-14

Client:

APEX TITAN

Project:

Enterprise Lateral 3D-4

Sample ID 5ML RB

SampType: MBLK

TestCode: EPA Method 8015D: Gasoline Range

LowLimit

80

Client ID: PBS Batch ID: R19462

RunNo: 19462

Prep Date:

Analysis Date: 6/24/2014

Units: %REC

Analyte

SPK value SPK Ref Val Result PQL

SeqNo: 563599

%REC

%RPD **RPDLimit** Qual

Surr: BFB

980

1000

98.3

HighLimit 120

Sample ID 2.5UG GRO LCS

Analysis Date: 6/24/2014

PQL

TestCode: EPA Method 8015D: Gasoline Range

Client ID: LCSS SampType: LCS

RunNo: 19462

Prep Date:

Batch ID: R19462

SeqNo: 563600

Units: %REC

Analyte

SPK value SPK Ref Val

HighLimit

%RPD **RPDLimit** Qual

Surr: BFB

Result 1100

1000

%REC LowLimit 107

80

SampType: MBLK

120

Sample ID MB-13836

6/23/2014

TestCode: EPA Method 8015D: Gasoline Range RunNo: 19478

Client ID: Prep Date:

PBS

Result

ND

850

Batch ID: 13836 Analysis Date: 6/24/2014

SeqNo: 563632

SPK value SPK Ref Val %REC LowLimit

Units: mg/Kg HighLimit

120

Analyte Surr: BFB

Gasoline Range Organics (GRO)

5.0

RPDLimit

Qual

1000

85.0

80

%RPD

Sample ID LCS-13836

LCSS

SampType: LCS Batch ID: 13836 TestCode: EPA Method 8015D: Gasoline Range

RunNo: 19478

Page 3 of 4

Analyte

Surr: BFB

Client ID:

Prep Date: 6/23/2014

Analysis Date: 6/24/2014 **PQL**

SeqNo: 563633

102

100

Units: mg/Kg

%RPD

RPDLimit

Qual

Gasoline Range Organics (GRO)

Result 26 1000 5.0

SPK value SPK Ref Val 25.00

1000

%REC

0

LowLimit

HighLimit

134 120

71.7 80

- Qualifiers:
- Е Value above quantitation range
- RSD is greater than RSDlimit 0
- Value exceeds Maximum Contaminant Level.
- Analyte detected below quantitation limits
- R RPD outside accepted recovery limits Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Sample pH greater than 2.

RL

Reporting Detection Limit

Not Detected at the Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#:

1406A14

26-Jun-14

Client:

APEX TITAN

Project:

Enterprise Lateral 3D-4

Sample ID 5ML RB

SampType: MBLK

TestCode: EPA Method 8021B: Volatiles

LowLimit

LowLimit

80

Client ID: PRS

Batch ID: R19462

RunNo: 19462

Prep Date:

Analysis Date: 6/24/2014

SeqNo: 563614

110

Units: %REC

Analyte

Result **PQL**

1.000

HighLimit

1.1

SPK value SPK Ref Val %REC

120

%RPD **RPDLimit** Qual

Surr: 4-Bromofluorobenzene

Sample ID 100NG BTEX LCS

TestCode: EPA Method 8021B: Volatiles

Client ID:

LCSS Batch ID: R19462

RunNo: 19462

Prep Date:

Analyte

Analysis Date: 6/24/2014 POL

SampType: LCS

SeqNo: 563615

Units: %REC HighLimit

Qual

Surr: 4-Bromofluorobenzene

Result 1.2 SPK value SPK Ref Val 1.000

%REC 117

80

%RPD **RPDLimit**

Sample ID MB-13836

Result

ND

ND

ND

ND

0.90

Result

0.98

0.95

0.94

SampType: MBLK

TestCode: EPA Method 8021B; Volatiles RunNo: 19478

120

Client ID:

PBS

Batch ID: 13836

SeqNo: 563675

Units: mg/Kg

Analyte

Prep Date: 6/23/2014 Analysis Date: 6/24/2014 **PQL**

SPK value SPK Ref Val %REC LowLimit

HighLimit

RPDLimit %RPD

Qual

Benzene Toluene

Ethylbenzene Xylenes, Total 0.050 0.050 0.050

0.10

1.000

89.8

80

120

Sample ID LCS-13836

Surr: 4-Bromofluorobenzene

Surr: 4-Bromofluorobenzene

SampType: LCS

PQL

0.050

RunNo: 19478

TestCode: EPA Method 8021B: Volatiles

Client ID: LCSS

Prep Date: 6/23/2014

Batch ID: 13836 Analysis Date: 6/24/2014

SeqNo: 563676

Units: mg/Kg

%RPD **RPDLimit** Qual

Page 4 of 4

Analyte Benzene Toluene

> Ethylbenzene Xylenes, Total

0.050 1.000 0.050 1.000 0.10

SPK value SPK Ref Val 1.000 0

0

%REC 97.5

94.8

LowLimit

80 80

80

HighLimit 120

120

120

3.0 1.1

3.000 1.000

0 94.4 0 98.4 107

80 80

120 120

Qualifiers: Value exceeds Maximum Contaminant Level.

Value above quantitation range Е

Analyte detected below quantitation limits

Spike Recovery outside accepted recovery limits

RSD is greater than RSDlimit 0

R RPD outside accepted recovery limits В

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Sample pH greater than 2.

RLReporting Detection Limit

Analyte detected in the associated Method Blank



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

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

Sample Log-In Check List

Client Name: **APEX AZTEC** RcptNo: 1 Work Order Number: 1406A14 Received by/date: Ashley Gallegos Logged By: 6/21/2014 10:00:00 AM 6/21/2014 12:08:47 PM Completed By: **Ashley Gallegos** Reviewed By: **Chain of Custody** Yes No 🗆 Not Present 1. Custody seals intact on sample bottles? Yes 🗹 No 🗌 Not Present 2. Is Chain of Custody complete? 3. How was the sample delivered? Courier Log In Yes 🗹 No 🗆 NA 🗆 4. Was an attempt made to cool the samples? 5. Were all samples received at a temperature of >0° C to 6.0°C Yes 🔽 No 🗆 NA 🗌 Yes 🗸 No 🗌 6. Sample(s) in proper container(s)? Yes 🗹 No 🗌 7. Sufficient sample volume for indicated test(s)? ~ 8. Are samples (except VOA and ONG) properly preserved? Yes Nο NA 🗀 No 🗹 9. Was preservative added to bottles? Yes No VOA Vials 🗹 No 🗌 10.VOA vials have zero headspace? No 🗹 \sqcup 11. Were any sample containers received broken? Yes # 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? Yes V No 🗔 14. Is it clear what analyses were requested? Yes No 🗌 Checked by: Yes 🗹 15. Were all holding times able to be met? (If no, notify customer for authorization.) Special Handling (if applicable) Yes 🗆 NA 🗹 No 🗌 16. Was client notified of all discrepancies with this order? Person Notified: Date: eMail Phone Fax In Person Via: By Whom: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No | Temp °C | Condition | Seal Intact | Seal No Seal Date Good Yes

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Date	Time	Matrix	Sample Request ID		Preservative	HEALENDS	+	+	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	Pesticides	8260B (VOA)	(Semi-VOA)				Bubbles (Y
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Н	necessary,	samples subi	mitted to Hall Environmental may be subc	ontracted to other ac	aredited laboratorie	es. This serves as notice of this	possib	offity. A	Any su									alytical	report.	-	

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

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

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

Form C-141

Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr.

		·				3t. Franc e, NM 875						
		F	Releas	e Notific				e Act	ion			
		_				ERATOR			☐ Initial R	enort		Final Repo
Name of C	ompany:	Enterprise I	Field Sen	vices LLC		Contact: The			mida ix	СРОП		mai repoi
		Ave, Farmir				Telephone N						
Facility Na									thering Lir	ie		
Surface Ov	vner: BLM			Mineral (Owner:	BLM			API No.			
				LOCA	ATION	OF REL	EASE			_		
Unit Letter N	Section 18	Township 27N	Range 10W	Feet from the 669		South Line	Feet from the 1868	Eas	WestLine	County San Jua	an	
		Latitude	36.56	9831		Longitude	<u>-107.9</u>	39898		RCVD SI	EP 2'	14
		_			URF	OF RELE				- OIL CON	s di	
Type of Rel	ease: Natur	al Gas		10/11	OILL		Release: 47	.89	Volume R			
Source of R	elease: Sus	spected Inter	nal Corros	sion			lour of Occu @ 12:15 a.m		Date and 6/25/2014			ry:
Was Immed	iate Notice							ırtesy N	otification to I	VMOCD -	- Cory	Smith; BLM
Required			☐ Yes	□ No 🖾 1	Not	-Shari Keto	ham			DIS	ī.3	
By Whom?							our 7/3/201					
Was a Wate	ercourse Re		☐ Yes	⊠ No		If YES, Vol	ume Impacti	ng the \	Vatercourse			
If a Waterco	urse was Ir	npacted, Des	scribe Full	y.*								
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* Attach Additional Sheets If Necessary

Date:

8-25 -2014

Phone: (713)381-6595

+hus/43232171



CORRECTIVE ACTION REPORT

Property:

Argo #500 Well Tie Release SW 1/4, S18 T27N R10W San Juan County, New Mexico

August 11, 2014 Apex Project No. 7030414G025

Prepared for:

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

Prepared by:

Heather M. Woods, P.G. Senior Project Manager

Elizabeth Scaggs, P.G. Senior Program Manager

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whh.	CHAIN D	. Exception of 100 boild Waste Modephanoe Forms	
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CORRECTIVE ACTION REPORT

Argo #500 Well Tie Release SW 1/4, S18 T27N R10W San Juan County, New Mexico

Apex Project No. 7030414G025

1.0 INTRODUCTION

1.1 Site Description & Background

The Argo #500 well tie release site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 18 in Township 27 North and Range 10 West in rural San Juan County, New Mexico (36.57066N, 107.94039W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to the Argo #500 well pad, on public land managed by the United States Bureau of Land Management (BLM). The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location.

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 using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.

2.0 SITE RANKING

The local BLM office, located in Farmington, NM, has indicated to Enterprise that they concur with the established New Mexico OCD rules and standards pertaining to corrective actions and remediation goals for oil and gas releases in northwest New Mexico. 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 to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:



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

^{*}Based on anticipated groundwater depth at <50 feet below grade surface (bgs).

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

- The Site is approximately 400 feet west of the Kutz Wash ordinary high-water mark.
 Based on this proximity, a maximum ranking for distance to surface water was assigned at "10"
- No water wells were identified on the Office of the State Engineer website database within one mile of the Site. However, the proximity of the Site to Kutz Wash indicates a potential depth to water of less than 50 feet bgs, resulting in a ranking of "20" for depth to groundwater.
- No water sources were identified within 1,000 feet of the Site.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a potential leak. An unknown quantity of natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location. Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Kyle Summers and Heather Woods, Apex environmental professionals, provided environmental support.

The total depth of the final excavation measured approximately 14 feet bgs in the release footprint. The overall average surface expression of the excavation measured approximately 21 feet long by 13 feet wide.

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

Based on field photoionziation detector (PID) screening, approximately 80 cubic yards of hydrocarbon affected soils were transported to the Envirotech, Inc. (Envirotech) landfarm near Hilltop, NM for disposal/remediation. The executed C-138 form is provided in Appendix B. The remaining stockpiled soil was sampled to verify that it was unaffected, and the excavation was subsequently backfilled with clean imported fill and the remaining stockpiled soils. The Site was



then contoured to surrounding grade. The area will ultimately be reseeded with a BLM-approved seed mix.

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 PID fitted with a 10.6 eV lamp to estimate excavation limits.

Apex's soil sampling program included the collection of six (6) composite confirmation samples (S-1 through S-6), from the resulting excavation for laboratory analysis. Additionally, one (1) composite sample (SP-1) was collected from remaining stockpiled soils to determine the potential to reuse these soils as excavation backfill. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

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

3.3 Laboratory Analytical Methods

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

Laboratory results are summarized in Table 1, 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 and the United States BLM. The local BLM office, located in Farmington, NM, has indicated to Enterprise that they concur with the established New Mexico OCD rules and standards pertaining to corrective actions and remediation goals for oil and gas releases in northwest New Mexico. 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 NMAC 19.15.30 *Remediation*. 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 reporting limits associated with the final confirmation samples (S-1 through S-6) collected from the excavated area and stockpile sample (SP-1) to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "30".



- The laboratory analyses of confirmation samples collected from soils remaining in place do not indicate benzene concentrations above the laboratory reporting limits, which are below the OCD Remediation Action Level.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above the laboratory reporting limits, which are below the OCD Remediation Action Level.
- The laboratory analyses of the confirmation samples do not indicate TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD Remediation Action Level of 100 milligram per Kilogram (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 Argo #500 well tie release site is located within the Enterprise pipeline ROW in the SW ¼ of Section 18 in Township 27 North and Range 10 West in rural San Juan County, New Mexico, (36.57066N, 107.94039W). The Site is located adjacent to the Argo #500 well pad, on public land managed by the United States BLM. The Site is surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On July 9, 2014, Enterprise shut in the Argo #500 well tie pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of dry natural gas and condensate/water mixture was released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and possible minor liquids at the ground surface characterized by a soil mound and vent hole at the release location.

- 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 total depth of the final excavation was approximately 14 feet bgs. The surface expression of the final excavation measured approximately 21 feet long by 13 feet wide.
- Prior to backfilling, six (6) final confirmation samples were collected from the resulting excavation for laboratory analyses. Additionally, one (1) composite sample was collected from remaining stockpiled soils to determine the potential to reuse these soils as excavation backfill. Based on analytical results, soils remaining in place do not exhibit benzene or total BTEX concentrations above laboratory RLs, which are below the OCD Remediation Action Levels. Laboratory analytical results for soils remaining in place do not exhibit concentrations of combined TPH GRO/DRO above the OCD Remediation Action Level of 100 mg/Kg for a Site ranking of "30".
- A total of approximately 80 cubic yards of hydrocarbon affected soils were transported to the Envirotech landfarm near Hilltop, NM for disposal/remediation. The excavation was backfilled with clean imported fill and stockpiled soil not impacted by COCs above applicable OCD Remediation Action Levels based on laboratory analytical results. The area was then contoured to the surrounding grade. The area will ultimately be reseeded with a BLM-approved seed mix.



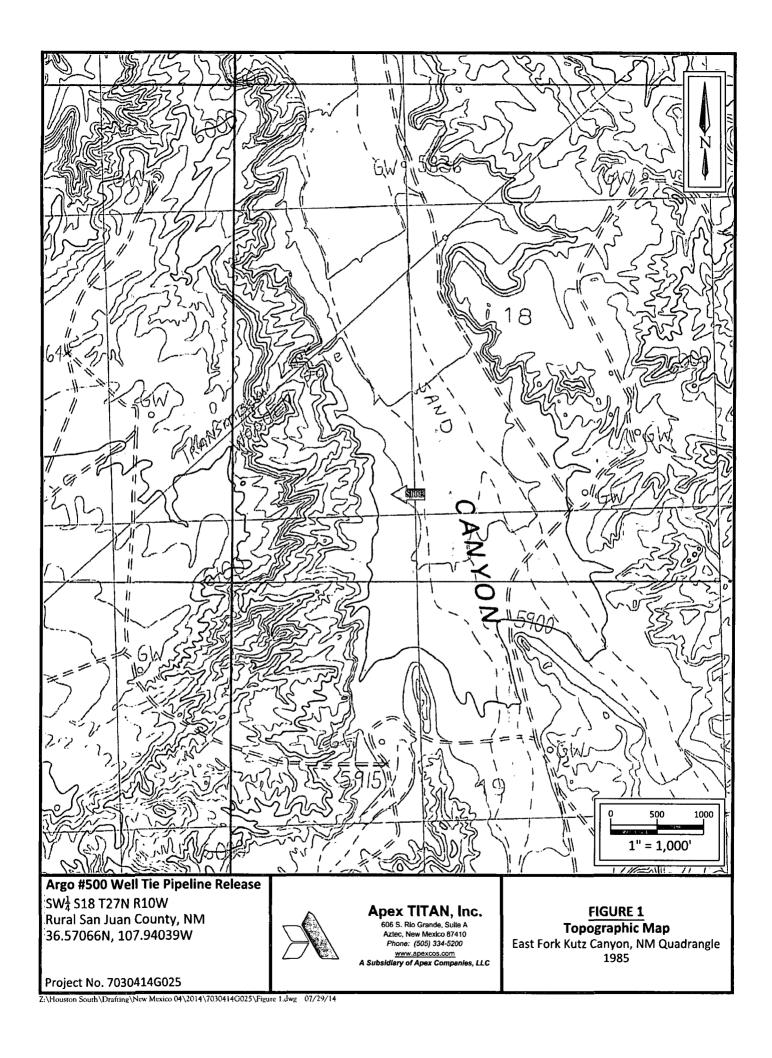
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

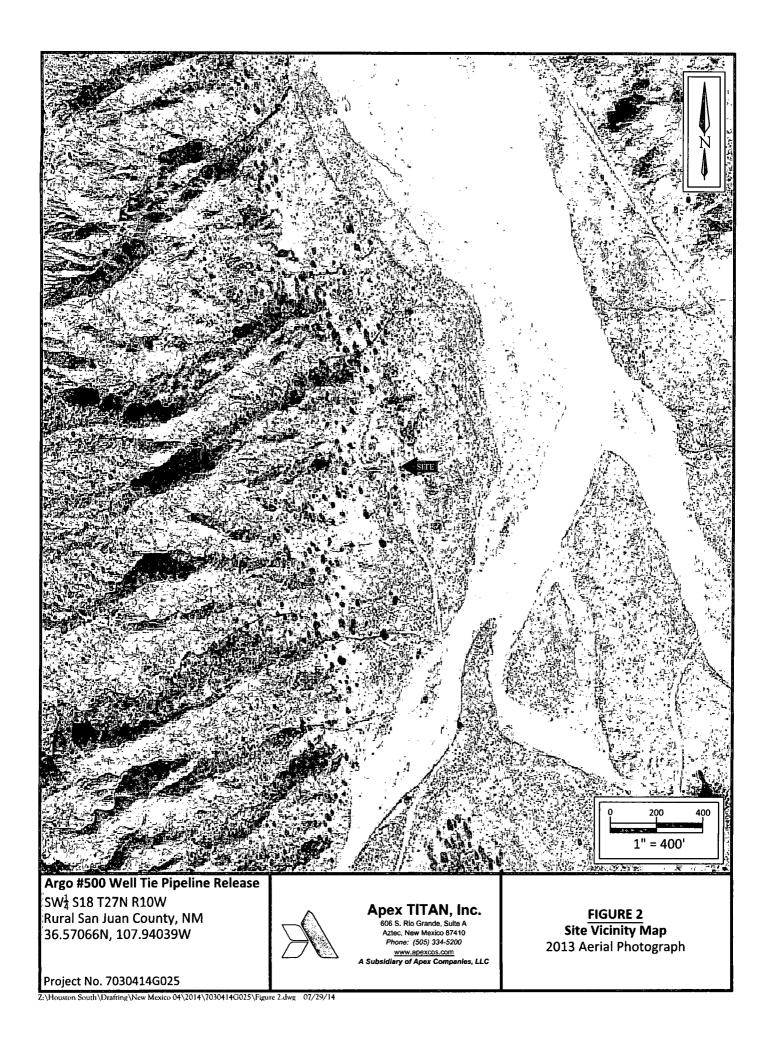
6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

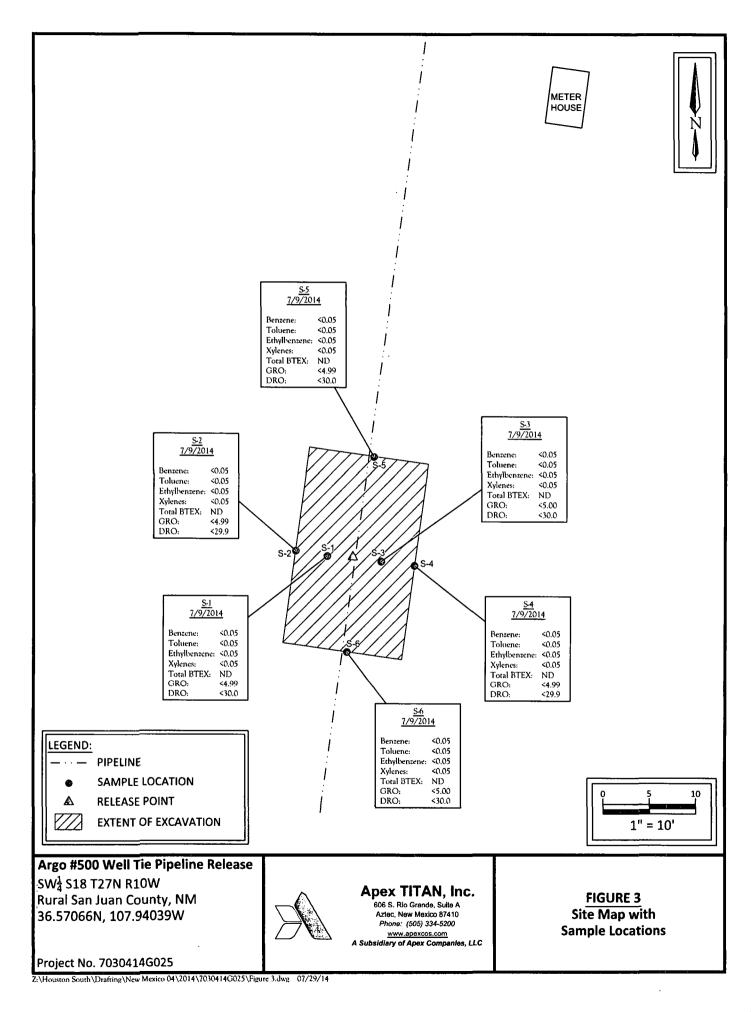
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work 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.







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

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

Form C-138 Revised 08/01/11

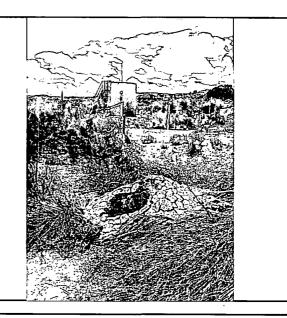
*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REOUEST FOR APPROVAL TO ACCEPT SOLID WASTE 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401 Originating Site: Argo #500 Well Tie Location of Material (Street Address, City, State or ULSTR): Unit Letter N Section 18 T 27N R 10W, GPS 36.5569831, -107.939898, San Juan County, NM Source and Description of Waste: Source: Natural Gas Pipeline Release Description: Exempt petroleum affected soil from clean-up efforts at pipeline release. Estimated Volume 50 (vd³) bbls Known Volume (to be entered by the operator at the end of the haul) bbls 5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS , representative or authorized agent for ____Enterprise Field Services, LLC **Generator Signature** certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with nonexempt 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** 7-8-14, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete **Generator Signature** the required testing/sign the Generator Waste Testing Certification. towirotech, Inc do hereby certify that , representative for ' Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC. Transporter: West States Energy Contractors. NOSE Excavation **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) TITLE: Waste Coordinator PRINT NAME **TELEPHONE NO.:** SIGNATURE: Surface Waste Management Facility Authorized Agent 505-632-0615



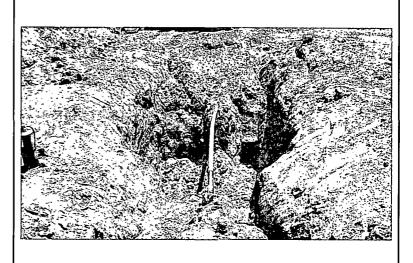
Photograph 1

View of site prior to excavation activities, facing south-southwest.



Photograph 2

View during repair/excavation activities, facing south.



Photograph 3

View of final excavation, facing east.

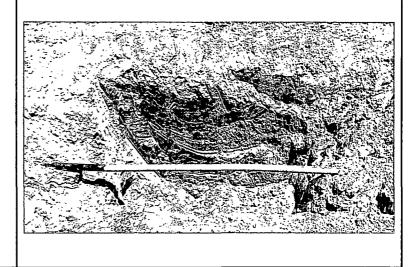




TABLE 1 Argo #500 Well Tie Pipeline Release SOIL ANALYTICAL SUMMARY

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	TPH DRO
								(mg/kg)	(mg/kg)
41	•••	Natural Resources vision, Remediation	10	NE	NE	NE	50	10	00
				Stockpile Conf	irmation Samples				
SP-1	7/9/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
				Final Confirm	nation Samples				•
S-1	7/9/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-2	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-3	7/9/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0
S-4	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-5	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-6	7/9/2014	11 to 13	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0

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

NE = Not Established ND = Not Detected



Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17204

Samples Received: 7/9/2014 4:05:00PM

Job Number: 97057-0352 Work Order: P407041

Project Name/Location: Argo #500

Tim Cain, Laboratory Manager

Entire Report Reviewed By:

Date:

7/11/14

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Project Name:

Argo #500

614 Reilly Ave Farmington NM, 87401 Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P407041-01A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-2	P407041-02A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-3	P407041-03A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-4	P407041-04A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-5	P407041-05A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.
S-6	P407041-06A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.

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Farmington NM, 87401

614 Reilly Ave

Project Name:

Argo #500

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-1 P407041-01 (Solid)

		Reporting			_				
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: Bromochlorobenzene	·	102 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		100 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-2

P407041-02 (Solid)

D22 07/10/14 022 07/10/14	O7/10/14	Method	Notes
· -	07/10/14	EDA 9031D	
· -	07/10/14	EDA 9031D	
07/10/14		EPA 8021B	
	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8021B	
022 07/10/14	07/10/14	EPA 8021B	
022 07/10/14	07/10/14	EPA 8021B	
07/10/14	07/10/14	EPA 8015D	
122 07/10/14	07/10/14	EPA ROISTO	
)))	22 07/10/14 22 07/10/14 22 07/10/14 22 07/10/14	22 07/10/14 07/10/14 22 07/10/14 07/10/14 22 07/10/14 07/10/14 22 07/10/14 07/10/14 22 07/10/14 07/10/14	22 07/10/14 07/10/14 EPA 8021B 22 07/10/14 07/10/14 EPA 8021B 22 07/10/14 07/10/14 EPA 8021B 22 07/10/14 07/10/14 EPA 8021B 22 07/10/14 07/10/14 EPA 8021B

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envirotech-inc.com



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-3

P407041-03 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		93.1 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: Bromochlorobenzene		93.8 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Nonhalogenated Organics by 8015						_			
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401 Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-4 P407041-04 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021		_							
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: Bromochlorohenzene		102 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.4 %	80-	120	1428022	07/10/14	07/10/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-5 P407041-05 (Solid)

	Reporting							
Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
· · · · · · · · · · · · · · · · · · ·								
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
	96.2 %	80-1	120	1428022	07/10/14	07/10/14	EPA 8021B	
	93.8 %	80-1	120	1428022	07/10/14	07/10/14	EPA 8021B	
ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	
	ND ND ND ND ND ND ND	Result Limit ND 0.05 ND 0.8 ND 0.9 ND 0.9 ND 0.9 ND 0.9 P6.2 % 93.8 %	ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg 80-4	ND	ND	ND	ND	ND

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5796 US Highway 64, Farmington, NM 87401

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865

Ph (970) 259-0615 Fr (800) 362-1879



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

S-6

P407041-06 (Solid)

	n - 1	Reporting	** **	5 21.7	n . •				
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021	·		·						
Benzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		100 %	80-1	'20	1428022	07/10/14	07/10/14	EPA 8021B	
Surragate: Bromochlorobenzene		103 %	80-1	120	1428022	07/10/14	07/10/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1428022 - Purge and Trap EPA 5030A			Ç.1110							.1003
				D 1-		10.1.1.1				
Blank (1428022-BLK1)				Prepared &	Analyzed:	10-Jul-14				
Benzene	ND	0.001	mg/kg							
Toluene	ND	0.001	**							
Ethylbenzene	ND	0.001	*							
p,m-Xylene	ND	0.001	**							
o-Xylene	ND	0.001	"							
Total Xylenes	ND	0.001	"							
Total BTEX	ND	0.001	"							
Surrogate: 1,3-Dichlorobenzene	14.1		ug/L	50.0		88.9	80-120			
Surrogate: Bromochlorobenzene	46.3		"	50.0		92.7	80-120			
Duplicate (1428022-DUP1)	Sou	rce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Benzene	ND	0.001	mg/kg		ND				30	
Toluene	ND	0.001	**		ND				30	
Ethylbenzene	ND	0.001	n		ND				30	
p,m-Xylene	ND	0.001	**		ND				30	
o-Xylene	ND	0.001	•		ND				30	
Surrogate: 1,3-Dichlorobenzene	44.4		ug/L	50.0		88.7	80-120			
Surrogate: Bromochlorobenzene	46.7		"	50.0		93.3	80-120			
Matrix Spike (1428022-MS1)	Sou	rce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Benzene	47.1		ug/L	50.0	ND	94.2	39-150			
Toluene	47.0			50.0	ND	94.1	46-148			
Ethylbenzene	47.0		n	50.0	ND	94.1	32-160			
o,m-Xylene	93.6		"	100	ND	93.6	46-148			
o-Xylene	46.9		u	50.0	ND	93.7	46-148			
Surrogate: 1,3-Dichlorobenzene	46.4		n	50.0		92.8	80-120			
Surrogate: Bromochlorobenzene	49.1		"	50.0		98.1	80-120			

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5796 US Highway 64, Farmington, NM 87401

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Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1428022 - Purge and Trap EPA 5030A					_					
Blank (1428022-BLK1)				Prepared &	Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
Duplicate (1428022-DUP1)	Sou	rce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		ND				30	
Matrix Spike (1428022-MS1)	Sour	rce: P407040-	01	Prepared &	: Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	0.44		mg/L	0.450	ND	97.8	75-125			

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Ph (970) 259-0615 Fr (800) 362-1879



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number: Project Manager: 97057-0352

τ.

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1428023 - DRO Extraction EPA 3550C										
Blank (1428023-BLK1)				Prepared: 1	10-Jul-14 A	Analyzed: 1	1-Jul-14			
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg					NATE.		
Duplicate (1428023-DUP1)	Sour	ce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND				30	
Matrix Spike (1428023-MS1)	Sour	ce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Diesel Range Organics (C10-C28)	219		mg/L	250	7.96	84.5	75-125			

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Ph (970) 259-0615 Fr (800) 362-1879



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:04

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

17204

CHAIN OF CUSTODY RECORD

Client:			Project Nan	ne / Location	on:					20/DED					VALY	'SIS /	PAF	RAME	TER	 S				
Enterprise Field Se	rvices		Argo .	± 500													,							_
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hwoods @aq	excos. co	m	14. We	ods						801	380	826	<u>0</u>				-							l
Client Phone No.:			Client No.:							pot	Ę.	hod	leta	igi		Ĭ	910	=	w			-	8	tact
(903) 821-5603				<u>-</u>						Meti	(Me	Met	8	¥		with	ple	418.	읪			(٥	e E
Sample No./ Identification	Sample Date	Samp Time	l La	b No.		Volume ntainers	Pro HNO ₃	eserval HCI	tive COW	TPH (Method 8015) G	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	PC.	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
5-1	7/9/14	123	5 P407	041-01	1-40	z Glass	ļ. <u></u>		Υ	х	χ													1
5-2	7/9/14	123	3 -	02	1-4	oz Glass			x	Ą	æ													Ù
S-3	7/9/14	1310	, -	03	1-4	oz Glass			X)¢	p												\prod	Ц
5-4	7/9/14	1312	<u>-</u>	04	1-4	oz Glass			χ	X	γ													Ц
S-5	7/9/14	1335	; -	95	1-4	oz Glas	1		Х	χ.	ķ										_			
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Relinquished by: (Signature)							Recei	ved t	oy: (S	ignati	ure)					•								
Sample Matrix																					+-			
Soil 📶 Solid 🗀 Sludge 🗌	Aqueous [Othe	r 🗆																					
☐ Sample(s) dropped off after	hours to see	cure dro	p off area.		,	1	•	_																ᆿ
RUSH				E	3 6	N Q	Ĭ ľ () †	e (C P) y		P	ay	Key	r /	KB Z	21	121	00 , H				
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Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17203

Samples Received: 7/9/2014 4:05:00PM

Job Number: 97057-0352 Work Order: P407040

Project Name/Location: Argo #500

Entire Report Reviewed By:			Date:	7/11/14	
	Tim Cain, La	boratory Manager			

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:01

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SP-1	P407040-01A	Soil	07/09/14	07/09/14	Glass Jar, 4 oz.

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Project Name:

Argo #500

614 Reilly Ave Farmington NM, 87401 Project Number: 97057-0352
Project Manager: Kyle Summers-Apex TITAN

Reported:

11-Jul-14 14:01

SP-1 P407040-01 (Solid)

	Reporting							
Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	
ND	0.05	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8021B	_
	100 %	80-	-120	1428022	07/10/14	07/10/14	EPA 8021B	
	97.8 %	80-	-120	1428022	07/10/14	07/10/14	EPA 8021B	
ND	4.99	mg/kg	1	1428022	07/10/14	07/10/14	EPA 8015D	
ND	30.0	mg/kg	1	1428023	07/10/14	07/10/14	EPA 8015D	
	ND ND ND ND ND ND ND ND	ND 0.05 ND 0.05	ND 0.05 mg/kg ND 0.05 mg/kg	ND	Result Limit Units Dilution Batch ND 0.05 mg/kg 1 1428022 97.8 % 80-120 1428022 ND 4.99 mg/kg 1 1428022	ND	ND	ND

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Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:01

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1428022 - Purge and Trap EPA 5030A										
Blank (1428022-BLK1)				Prepared &	Analyzed:	· 10-Inl-14				
Benzene	ND	0.001	mg/kg	1 Tepareu o	c Analyzeu.	. 10-341-14				
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001								
p,m-Xylene	ND	0.001	**							
o-Xylene	ND	0.001	**							
Total Xylenes	ND	0.001	#							
Total BTEX	ND	0.001								
Surrogate: 1,3-Dichlorobenzene	44.4		ug/L	50.0		88.9	80-120			
Surrogate: Bromochlorohenzene	46.3		"	50.0		92.7	80-120			
Duplicate (1428022-DUP1)	Sou	ırce: P407040-	-01	Prepared &	Analyzed:	10-Jul-14				
Benzene	ND	0.001	mg/kg		ND				30	
Toluene	ND	0.001	*		ND				30	
Ethylbenzene	ND	0.001	**		ND				30	
p,m-Xylene	ND	0.001	**		ND				30	
o-Xylene	ND	0.001	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	44.4		ug/L	50.0	-	88.7	80-120			
Surrogate: Bromochlorobenzene	46.7		"	50.0		93.3	80-120			
Matrix Spike (1428022-MS1)	Sou	ırce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Benzene	47.1		ug/L	50.0	ND	94.2	39-150			
Toluene	47.0		**	50.0	ND	94.1	46-148			
Ethylbenzene	47.0		•	50.0	ND	94.1	32-160			
p,m-Xylene	93.6		"	100	ND	93.6	46-148			
o-Xylene	46.9			50.0	ND	93.7	46-148			
Surrogate: 1,3-Dichlorobenzene	46.4		"	50.0		92.8	80-120	_		
Surrogate: Bromochlorobenzene	49.1		"	50.0		98.1	80-120			

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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

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Ph (970) 259-0615 Fr (800) 362-1879



Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:01

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1428022 - Purge and Trap EPA 5030A				_		_			_	
Blank (1428022-BLK1)				Prepared &	Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg							
Duplicate (1428022-DUP1)	Sour	ce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		ND				30	
Matrix Spike (1428022-MS1)	Sour	ce: P407040-	01	Prepared &	Analyzed:	10-Jul-14				
Gasoline Range Organics (C6-C10)	0.44		mg/L	0.450	ND	97.8	75-125			

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Farmington NM, 87401

Project Name:

Argo #500

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:01

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1428023 - DRO Extraction EPA 3550C										
Blank (1428023-BLK1)				Prepared:	10-Jul-14 A	analyzed: 1	1 <u>-Jul-</u> 14			
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
Duplicate (1428023-DUP1)	Sou	rce: P407040-	01_	Prepared &	& Analyzed:	10-Jul-14				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		ND		-		30	
Matrix Spike (1428023-MS1)	Sou	rce: P407 <u>040</u> -	01	Prepared &	k Analyzed	10-Jul-14				
Diesel Range Organics (C10-C28)	219		mg/L	250	7.96	84.5	75-125			

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Farmington NM, 87401

Project Name:

Project Manager:

Argo #500

614 Reilly Ave

Project Number: 9

97057-0352 Kyle Summers-Apex TITAN

Reported: 11-Jul-14 14:01

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17203

Client: Enterprise Fuld Se,	ruices (LC	Project Name / Location Avgo #500	on:	•	-			TPH (Method 8015) GRe A以の				Α	NALY	/SIS	/ PAF	RAMI	ETEF	RS				
Email results to: KSummers @c	spexcos.c	om	Sampler Name:						3	(£)	<u>(</u>		-										
hwoods Capa	excos. Co		H. Woods						8015	1 802	826	ဟ				-							
Client Phone No.:			Olient No.: 97 <i>0</i> 57-	A					por	thoc	hod	/letal	nion		H/F	910	=	ш				Cool	tact
(903)821-5603			7+05+-	055	<u>, </u>				Met	Σ	(Met	8 /	۸/ر		with	able	418	E C				e C	ie L
Sample No./ Identification	Sample Date	Sampl Time	e Lab No.	No./	Volume intainers	Pr HNO ₃	eserval HCI	Cotal	TPH (BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	CO Table 910-1	TPH (418.1)	CHLORIDE				Sample	Sample Intact
SP-1	7/9/14	100	5 P407040-01	1-4	oz Glass			Х	X	Х												Y	У
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☐ Sample(s) dropped off after	hours to sec	cure drop	off area.	ろ _を	anvi	ir/	\ #	A	- h		Par	4 Ke	u i	R.B	212	200							
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EZOE HE Highway	4 - Coursinate	- NIA 0	7401 - EOE 422 041E - 1	Theon Commi				^					~ · · ·				_			_			

<u>District I</u> 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 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

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

Form C-141

Revised August 8, 2011

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

·		F	Releas	e Notific	atio	n and C	orrective	Acti	on				
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		Ave, Farmi					No. 505-599						
		al 3A Loop					pe: Natural G		hering I	ine			
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Surface O	wner: NA	PI/Navajo T	ribal	Mineral	Owne	r: NAPI/Nav	ajo Tribal	·····	API No	D			
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Unit Letter	Section	Township	Range	Feet from		h South	Feet from	Eas	West	County			
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NATURE OF RELEASE DIST. 3													
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By Whom?							Hour 6/13/201						
Was a Watercourse Reached?						If YES, Vo	olume Impactir	ng the W	atercourse	•			
			☐ Yes	⊠ No									
		npacted, De											
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) wide by sixte						
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			given abov	e is true and	compl	ete to the bes	st of my knowle	edge and	understa	nd that pu	rsuant	to NMOCD	
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CORRECTIVE ACTION REPORT

Property:

Lateral 3A-Loop Pipeline Release SE 1/4, S21 T28N R12W San Juan County, New Mexico

July 28, 2014 Apex Project No. 7030414G022 OIL CONS. DIV DIST. 3

AUG 28 2014

Prepared for:

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

Prepared by:

Heather M. Woods, P.G. Senior Project Manager

Elizabeth Scaggs, P.G. Senior Program Manager

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Арр	endix C	: Photographic Documentation	
Арр	endix D	: Table	
Арр	endix E	: Laboratory Analytical Reports & Chain of Custody Documentation	



CORRECTIVE ACTION REPORT

Lateral 3A-Loop Pipeline Release SE 1/4, S21 T28N R12W San Juan County, New Mexico

Apex Project No. 7030414G022

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 3A-Loop pipeline release site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southeast (SE) ¼ of Section 21 in Township 28 North, Range 12 West in rural San Juan County, New Mexico (36.64071N 108.11091W), referred to hereinafter as the "Site" or "subject Site". The Site is located on land owned by the Navajo Nation, and is adjacent to center-pivot irrigation farmland operated by the Navajo Agricultural Products Industry (NAPI). The 3A-Loop Enterprise natural gas gathering pipeline traverses the area from southwest to northeast.

On June 12, 2014, Enterprise shut in the Lateral 3A-Loop pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of a failed weld. The leak was identified by an area of distressed vegetation. No other surface expression was observed 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 using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.

2.0 SITE RANKING

The Site is subject to regulatory oversight by the Navajo Nation Environmental Protection Agency (NNEPA). Due to the absence of published NNEPA regulatory guidance, Apex TITAN, Inc. (Apex) utilized the available 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 to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the following table:

1



Rankin	Ranking Criteria							
	<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 anticipated groundwater depth of <50 feet below grade surface (bgs).

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

- The Site is approximately 100 feet south of an un-named ephemeral wash which drains
 to the Gallegos Canyon west of the Site. This wash appears to only convey water during
 significant rain events, but might be considered a surface water body by some entities.
- The Site is not within a Wellhead Protection Area as no water wells were identified on the Office of the State Engineer website database within one mile of the Site.

3.0 RESPONSE ACTIONS

3.1 Soil Excavation Activities

On June 12, 2014, Enterprise initiated excavation activities at the Site to locate and repair a potential leak. The leak was subsequently identified and repaired. The substance released consisted primarily of dry natural gas due to a failed weld in the pipeline. During the corrective action activities, Energy Maintenance Services USA, Inc. (EMS) provided heavy equipment and labor support, and Kyle Summers and Heather Woods, Apex environmental professionals, provided environmental support.

Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site, resulting in an initial excavation of approximately 30 feet long by 13 feet wide, and 6 to 8 feet bgs. Confirmation samples S-1 through S-8 were collected from the floors and sidewalls of the excavation to evaluate soils remaining in place. Subsequent analytical results indicated that the floor of the excavation (S-1) and northwest sidewall (S-2) near the release still exhibited evidence of hydrocarbon impact.

The Site was over-excavated on June 16, 2014, to remove material from the northwest sidewall and excavation floor near the point of release. Confirmation samples S-9, S-10, and S-12 indicated that the northwest wall, the deeper portion of the northeast wall, and the excavation floor on the northwest side of the pipeline no longer showed evidence of hydrocarbon impact. However, confirmation sample S-11 concentrations from the excavation floor on the southeast side remained above acceptable levels.

The Site was again over-excavated on June 25, 2014, to remove additional material from the excavation floor on the southeast side. Confirmation samples S-13, S-14, and S-15 were then collected to from the excavation floor on the southeast side, the deeper portion of the southeast sidewall, and the deeper portion of the northwest sidewall.



The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty-sands.

The total depth of the final excavation reached approximately 16 feet bgs near the source of the release and averaged 6 feet bgs in the remaining excavation footprint. The final surface expression of the excavation measured approximately 35 feet long by 17 feet wide.

A total of approximately 160 cubic yards of hydrocarbon affected soils were transported to the 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 local unaffected soils.

Figure 3 is a site map that indicates the approximate location of the final 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 aid in determining the excavation limits.

Apex's soil sampling program included the collection of fifteen (15) discrete confirmation samples (S-1 through S-15) from the resulting excavation for laboratory analysis. Additionally, five (5) composite samples (SP-1 through SP-4, and SP-2R) were collected from the stockpiled soils to determine the potential to reuse these soils as excavation backfill. Stockpile soil sample SP-2 was resampled as SP-2R after the initial sample indicated a slightly elevated total TPH concentration of 103.6 milligrams per Kilogram (mg/Kg) that did not correlate to the apparent physical characteristics of the soil. The subsequent analytical result indicated no evidence of hydrocarbon impact. Affected soils were added to the stockpile associated with sample SP-4 subsequent to initial sampling and based on field screening results, the cumulative soils associated with SP-1 and SP-4 were transported to the landfarm for proper disposal/treatment. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The confirmation soil samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in coolers, which were secured with custody seals. The sample coolers and completed chain-of-custody form were relinquished to Envirotech Analytical Laboratory in Farmington, New Mexico and/or to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico for 24-hour rush analysis.

3.3 Laboratory Analytical Methods

The confirmation soil sample was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA SW-846 Method #8021, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) using 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 NNEPA. Due to the absence of published NNEPA regulatory guidance, Apex utilized the available New Mexico EMNRD OCD guidance and rules. 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 NMAC 19.15.30 *Remediation*. 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 reporting limits (RLs) associated with the final confirmation samples for soils remaining in place to the OCD *Remediation Action Levels* for sites having a total ranking score of "40". Soils associated with confirmation samples S-1, S-2, and S-11 were removed by over-excavation and are not included in the following discussion.

- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate benzene concentrations above laboratory RLs, which are below the OCD Remediation Action Level.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above laboratory RLs, which are below the OCD Remediation Action Level.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory detection limits to 42.2 mg/Kg, which are below the OCD Remediation Action Level.

Stockpile soil sample SP-2 was resampled as SP-2R after the initial sample indicated a slightly elevated total TPH concentration of 103.6 mg/Kg that did not correlate to the apparent physical characteristics of the soil. The subsequent analytical results did not indicate evidence of hydrocarbon impact.

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 3A-Loop pipeline release site is located within the pipeline ROW in the SE ¼ of Section 21 in Township 28 North, Range 12 West in rural San Juan County, New Mexico. The Site is located on land owned by the Navajo Nation, and is adjacent to center-pivot irrigation farmland operated by the NAPI. The 3A-Loop Enterprise natural gas gathering pipeline traverses the area from southwest to northeast.

On June 12, 2014, Enterprise shut in the Lateral 3A-Loop pipeline and initiated excavation activities at the Site in an attempt to locate and repair a subsurface leak. The leak was subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of failed weld. The leak was identified by an area of distressed vegetation. No other surface expression was observed 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 Remediation Action Levels using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The total depth of the final excavation reached approximately 16 feet bgs near the source of the release and averaged 6 feet bgs in the remaining excavation footprint. The surface expression of the final excavation measured approximately 35 feet long by 17 feet wide.
- Prior to backfilling, final confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit benzene or total BTEX concentrations above laboratory RLs, which are below the OCD Remediation Action Levels. Laboratory analytical results for soils remaining in place did not exhibit concentrations of combined TPH GRO/DRO above the OCD Remediation Action Level of 100 mg/Kg for a Site ranking of "40".
- A total of approximately 160 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 stockpiled soils not impacted by COCs above applicable OCD Remediation Action Levels based on laboratory analytical results. The area was then contoured to the surrounding grade.

Mr. Steve Austin, Senior Hydrologist for the NNEPA Water Quality Program, provided approval via email to backfill the excavation on July 7, 2014, based on laboratory analytical data.

Based on the laboratory analytical, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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

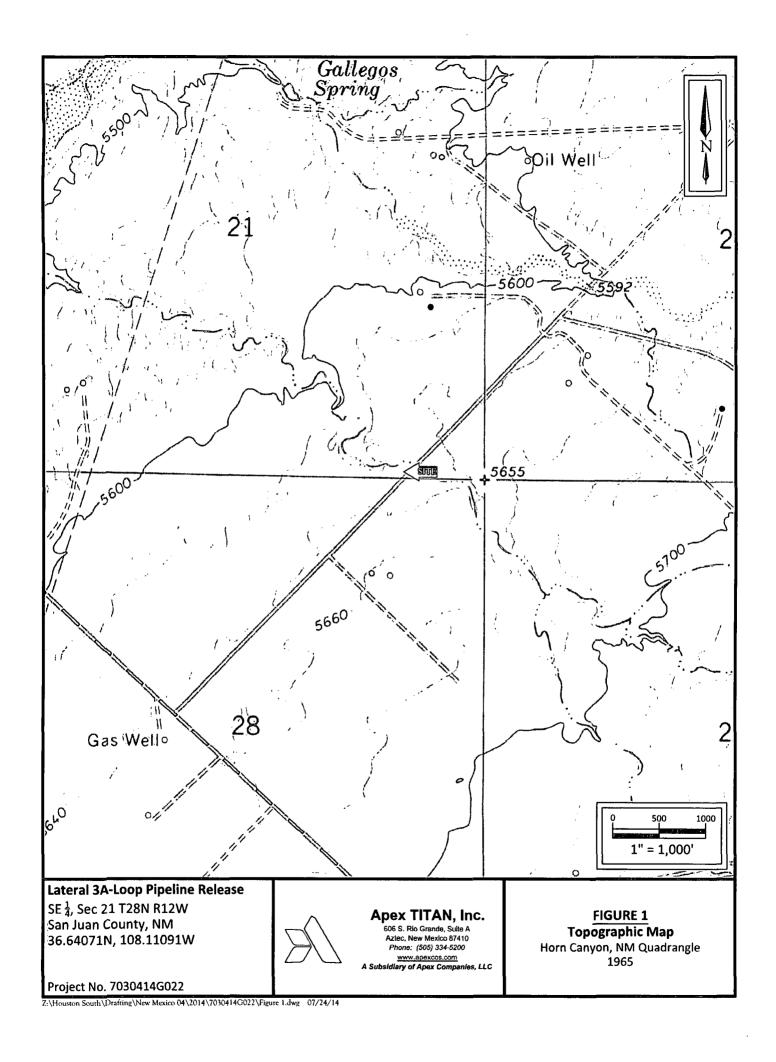
Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

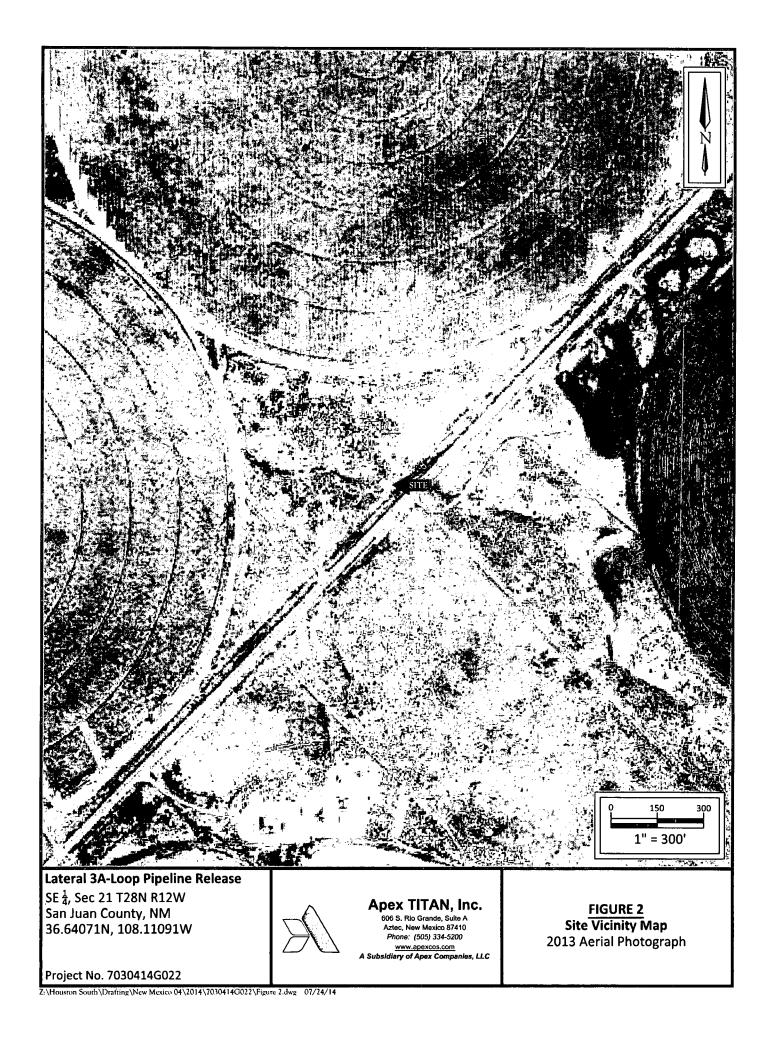
This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution 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,

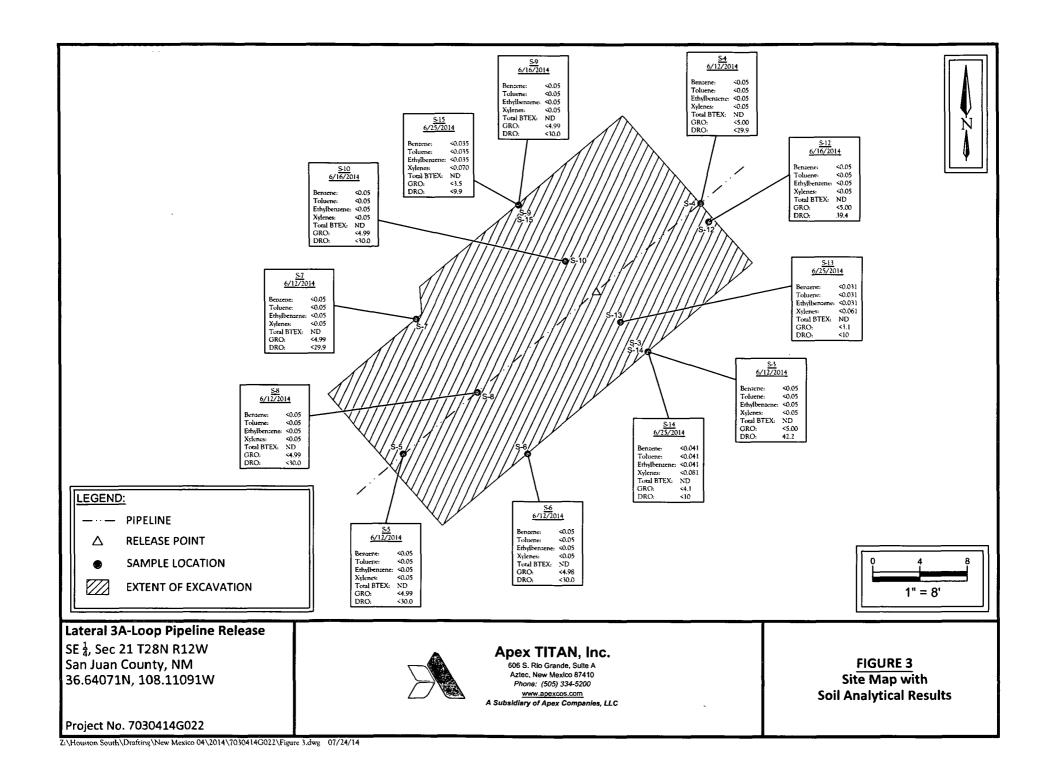
Enterprise Field Services LLC Corrective Action Report Lateral 3A-Loop Pipeline Release July 28, 2014



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.







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

State of New Mexico

Energy Minerals and Natural Resources 9 7857 - 6643

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

Form C-138 Revised 08/01/11

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE	
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401	
2. Originating Site: Lateral 3A Loop Natural Gas Gathering Line	
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter P Sec 21 T 28N R 12W, GPS 36.640560, -108.110925, San Juan County, NM	
4. Source and Description of Waste: Source: Natural Gas Pipeline Release Description: Exempt petroleum affected soil from clean-up efforts at pipeline release. Estimated Volume 50 (vd³) bbls Known Volume (to be entered by the operator at the end of the haul)	
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS	
I, , representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)	
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. **Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load**	
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)	
☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)	
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS	
I, 6-11-14, representative for Enterprise Field Services, LLC authorize Envirotech, Inc. to complete Generator Signature the required testing/sign the Generator Waste Testing Certification. I, London representative for Environment of the document of the required testing/sign the Generator Waste Testing Certification.	
Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.	
5. Transporter: IMI, West States Energy Contractors or unknown trucking company on OCD approved haulers list. EMS OCD Permitted Surface Waste Management Facility Mess Frequent:	
Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011 Address of Facility: family, NM	·N
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. Kerdra Rusung TITLE: Environmental Manager DATE: 6/16/14 SIGNATURE: Surface Waste Management Facility Authorized Spant 505-632-0615	



MANIFEST # 47120

DATE 6-16-14 JOB# 97057-8643

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			erial has been added or mixed into the load		
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COMPAN	CONTACT MIKE		PHONE	DATE 6-16-14	
Signature	s required prior to dist	ribution of the legal document.			



MANIFEST #	4712	21		
	Lf.		G7457-	0/47

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

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ignatures required prior to distribution of the legal document.								
White - Company Records. Yellow - Billing, Pink - Customer								



MANIFEST # 47262

DATE 6-25-14 JOB # 97057-0643

PHONE (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

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COMPANY CONTACT BUEK	PHONE	DATE 6-25-14



MANIFEST # 47263

DATE 6.25.14 JOB # 97057-0643

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON NEW MEXICO 87401

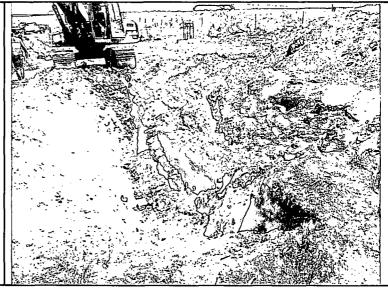
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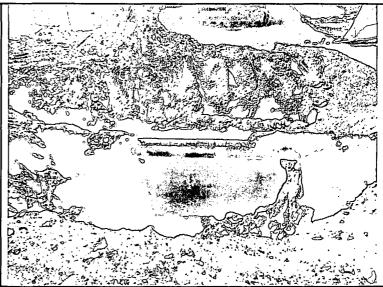
Photograph 1

Initial excavation activities prior to pipeline repair, facing east.



Photograph 2

General view of the final excavation extents facing southeast.



Photograph 3

General view of the final excavation extents facing south.





TABLE 1 Lateral 3A-Loop 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	10	00
				Stockpiles Rem	oved to Landfarm	<u> </u>			
SP-1	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.98	160
SP-4*	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
				Stockpiles Reused	or Excavation Backf	ill			
SP-2**	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	5.53	98.1
SP-2R	6/16/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
SP-3	6/12/2014	Stockpile	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
			Sa	amples from Soils F	Removed by Excavat	ion			
S-1	6/12/2014	8	<0.05	1.03	1.86	17.2	20.1	311	2,220
S-2	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	131
S-11	6/16/2014	14	<0.05	<0.05	<0.05	0.32	0.32	17.2	406
				Final Confir	nation Samples				
S-3	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<5.00	42.2
S-4	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	_ ND	<5.00	<29.9
S-5	6/12/2014	6	<0.05	< 0.05	<0.05	<0.05	ND	<4.99	<30.0
S-6	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.98	<30.0
S-7	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
S-8	6/12/2014	6	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-9	6/16/2014	6 to 9	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-10	6/16/2014	14	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
S-12	6/16/2014	11	<0.05	<0.05	<0.05	<0.05	ND	<5.00	39.4
S-13	6/25/2014	16	<0.031	<0.031	<0.031	<0.061	ND	<3.1	<10
S-14	6/25/2014	15	<0.041	<0.041	<0.041	<0.081	ND	<4.1	<10
S-15	6/25/2014	15	<0.035	<0.035	<0.035	<0.070	ND	<3.5	<9.9

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

NE = Not Established

^{*}Additional affected material was added to stockpile after sampling. Stockpile removed to landfarm based on field screening of final stockpile material.

^{**}Resampled as SP-2R.



Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17079

Samples Received: 6/12/2014 10:15:00AM

Job Number: 97057-0352 Work Order: P406048

Project Name/Location: 3A-Loop

Tim Cain, Laboratory Manager

Entire Report Reviewed By:

Date:

6/16/14

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

Page 1 of 15



Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P406048-01A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-2	P406048-02A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-3	P406048-03A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-4	P406048-04A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-5	P406048-05A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-6	P406048-06A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-7	P406048-07A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.
S-8	P406048-08A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-1 P406048-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	1.03	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	1.86	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	15.4	0.05	mg/kg	i	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	1.82	0.05	mg/kg	ì	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	17.2	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	20.1	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		98.3 %	80-	-120	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		107 %	80-	-120	1424033	06/12/14	06/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	311	4.98	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	2220	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-2

P406048-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	l	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		84.0 %	80-	120	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		83.4 %	80-	120	1424033	06/12/14	06/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	131	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager: Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-3

P406048-03 (Solid)

Result	Limit	Units	Dilution	Batch	Prepared	4		
					richated	Analyzed	Method	Notes
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	_
	91.5 %	80-	120	1424033	06/12/14	06/12/14	EPA 8021B	
	91.9%	80-	120	1424033	06/12/14	06/12/14	EPA 8021B	
ND	5.00	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
42.2	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	
	ND ND ND ND ND	ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 91.5 % 91.9 %	ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.95 mg/kg ND 0.05 mg/kg	ND 0.05 mg/kg 1 ND 0.05 mg/kg 1 ND 0.05 mg/kg 1 ND 0.05 mg/kg 1 ND 0.05 mg/kg 1 ND 0.05 mg/kg 1 91.5 % 80-120 91.9 % 80-120	ND 0.05 mg/kg 1 1424033 ND 0.05 mg/kg 1 1424033 ND 0.05 mg/kg 1 1424033 ND 0.05 mg/kg 1 1424033 ND 0.05 mg/kg 1 1424033 91.5 % 80-120 1424033 91.9 % 80-120 1424033 ND 5.00 mg/kg 1 1424033	ND 0.05 mg/kg 1 1424033 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 91.5 % 80-120 1424033 06/12/14 91.9 % 80-120 1424033 06/12/14 ND 5.00 mg/kg 1 1424033 06/12/14	ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 91.5 % 80-120 1424033 06/12/14 06/12/14 91.9 % 80-120 1424033 06/12/14 06/12/14 ND 5.00 mg/kg 1 1424033 06/12/14 06/12/14	ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B ND 0.05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B 91.5 % 80-120 1424033 06/12/14 06/12/14 EPA 8021B ND 5.00 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported:

16-Jun-14 13:47

S-4 P406048-04 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: Bromochlorobenzene		91.3 %	80-	-120	1424033	06/12/14	06/12/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		90.1 %	80-	-120	1424033	06/12/14	06/12/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1424032	06/12/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-5

P406048-05 (Solid)

mit Ut	nits	Dilution	Batch	Prepared	Analyzed	Method	Notes
			<u></u>				
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ng/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	
05 m	ıg/kg	1	1424033	06/12/14	06/12/14	EPA 8021B	_
%	80-1	20	1424033	06/12/14	06/12/14	EPA 8021B	
%	80-1	20	1424033	06/12/14	06/12/14	EPA 8021B	
99 m	ıg/kg	1	1424033	06/12/14	06/12/14	EPA 8015D	
).0 m							
(05 m 05 m % %	05 mg/kg 05 mg/kg % 80-1 % 80-1	05 mg/kg 1 05 mg/kg 1 % 80-120 % 80-120	05 mg/kg 1 1424033 05 mg/kg 1 1424033 % 80-120 1424033 % 80-120 1424033 99 mg/kg 1 1424033	05 mg/kg 1 1424033 06/12/14 05 mg/kg 1 1424033 06/12/14 % 80-120 1424033 06/12/14 % 80-120 1424033 06/12/14 99 mg/kg 1 1424033 06/12/14	05 mg/kg 1 1424033 06/12/14 06/12/14 05/12/14 05 mg/kg 1 1424033 06/12/14 06/12/14 06/12/14 % 80-120 1424033 06/12/14 06/12/14 % 80-120 1424033 06/12/14 06/12/14 99 mg/kg 1 1424033 06/12/14 06/12/14	05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B 05 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8021B % 80-120 1424033 06/12/14 06/12/14 EPA 8021B % 80-120 1424033 06/12/14 06/12/14 EPA 8021B 99 mg/kg 1 1424033 06/12/14 06/12/14 EPA 8015D

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Ph (970) 259-0615 Fr (800) 362-1879

laboratory@envirotech-inc.com



Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-6

P406048-06 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		90.0 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	_
Surrogate: Bromochlorobenzene		92.4 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

S-7 P406048-07 (Solid)

		Reporting							
Analyte Result	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	l	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: Bromochlorobenzene		96.1 %	80-	-120	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		92.8 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015	_ 								
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported:

16-Jun-14 13:47

S-8 P406048-08 (Solid)

		Reporting							
Analyte Result	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021	·				_				
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.0 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		96.0 %	80	120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1424033 - Purge and Trap EPA 5030A								<u> </u>		
Blank (1424033-BLK1)				Prepared &	Analyzed:	12-Jun-14				
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	11							
Ethylbenzene	ND	0.05	**							
p,m-Xylene	ND	0.05	н							
o-Xylene	ND	0.05								
Total Xylenes	ND	0.05	,,							
Total BTEX	ND	0.05	**							
Surrogate: 1,3-Dichlorobenzene	45.6		ug/l.	50.0		91.3	80-120			
Surrogate: Bromochlorobenzene	46.4		"	50.0		92.9	80-120			
Duplicate (1424033-DUP1)	Sou	rce: P406048-	01	Prepared &	Analyzed:	12-Jun-14				
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	0.64	0.05	н		1.03			47.5	30	DI
Ethylbenzene	1.42	0.05	"		1.86			26.9	30	
p,m-Xylene	12.3	0.05	н		15.4			22.1	30	
o-Xylene	1.38	0.05	*		1.82			27.1	30	
Surrogate: 1,3-Dichlorobenzene	54.1		ug/L	50.0		108	80-120			
Surrogate: Bromochlorobenzene	52.9		"	50.0		106	80-120			
Matrix Spike (1424033-MS1)	Sou	rce: P406048-	01	Prepared &	: Analyzed:	12-Jun-14				
Benzene	47.6		ug/L	50.0	ND	95.1	39-150			
Toluene	54.6		*	50.0	20.7	67.8	46-148			
Ethylbenzene	71.3			50.0	37.3	68.1	32-160			
p,m-Xylene	307			100	308	NR	46-148			SPK I
o-Xylene	79.8		**	50.0	36.3	86.9	46-148			
Surrogate: 1,3-Dichlorobenzene	53.2		n	50.0		106	80-120			
Surrogate: Bromochlorobenzene	52.8		"	50.0		106	80-120			

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1424032 - DRO Extraction EPA 3550C										
Blank (1424032-BLK1)			_	Prepared:	12-Jun-14 A	Analyzed: 1	13-Jun-14			
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1424032-DUP1)	Soui	rce: P406048-	01	Prepared:	12-Jun-14	Analyzed: 1	13-Jun-14			
Diesel Range Organics (C10-C28)	2030	30.0	mg/kg		2220			9.28	30	
Matrix Spike (1424032-MS1)	Sour	rce: P406048-	01	Prepared:	12-Jun-14	Analyzed: 1	13-Jun-14			
Diesel Range Organics (C10-C28)	2310	· ·	mg/L	250	2110	77.6	75-125			

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
				36761						
Batch 1424033 - Purge and Trap EPA 5030A				- -						
Blank (1424033-BLK1)				Prepared &	Analyzed:	12-Jun-14				
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Duplicate (1424033-DUP1)	Sou	rce: P406048-	01	Prepared &	Analyzed:	12-Jun-14				_
Gasoline Range Organics (C6-C10)	260	4.99	mg/kg		311			18.0	30	-
Matrix Spike (1424033-MS1)	Sou	rce: P406048-	01	Prepared &	Analyzed:	12-Jun-14				
Gasoline Range Organics (C6-C10)	5.28		mg/L	0.450	6.22	NR	75-125			SPK1

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Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401

Project Manager: Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:47

Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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CHAIN OF CUSTODY RECORD

Client: ENTERPRACE		a.	P	roject Name / Location		UP				16.00				A	NALY	/SIS .	/ PAF	RAMI	ETER	RS			
Email results to: Kyle Somm	GRS	•	S	ampler Name:	N B Kyli	RIAN	T	۔۔		3015)D		8260)	S				1						
Email results to: Kyle Somm Client Phone No.: 903	-82	1-3	C03 C	lient No.: 9705						TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	ļ	TCLP with H/P	CO Table 910-1	118.1)	RIDE			Sample Cool	Sample Intact
Sample No./ Identification	Sam Da		Sample Time	Lab No.		Volume ontainers	Pro HNO ₃	eservativ HCI	/e	тРН (BTEX	Voc (RCRA	Cation	E E	TCLP	со та	TPH (418.1)	CHLORIDE			Sampl	Sampl
	6/13	7/14	0830	P40604801	1/x	402				λ	7										,	Y	Y
5-3			0833	P406048-02						K	人											\prod	Ш
5-3			0840	P406048-03						X	<u>k</u>												
5-4			084	P406048-04						K	X												
5-5			085	> P406048-05						X	X												
5-6				P406048-06						X	K												Ш
S-7 S-8			0900	P401048-07						Ł	K												
2-8			69/2	P406048-08	-	<u> </u>				K	火												
					WF.	<u> </u>				_													
			<u> </u>	A.	B									4				1					
Relinquished by: (Signature)	3	f_{j}			Date	Time //0:/5	Recei	ved by	y: (Si	gnatı	Jre)				<u> </u>	•					Date)フ/ル	Tir	1
Relinquished by: (Signature)							Recei	ved by	y: (Si	gnáti	ure)							· ·			12/12	10	
Sample Matrix Soil Solid Sludge	Aqueo	ous 🗌	Other					R	\mathcal{B}	a	16	200	>										
Sample(s) dropped off after	1			off area.		PNV Anal						urane		3,2 0,813	•								



Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17080

Samples Received: 6/12/2014 10:16:00AM

Job Number: 97057-0352

Work Order: P406049

Project Name/Location: 3A-Loop Stockpiles

Tim Cain, Laboratory Manager

Entire Report Reviewed By:

Date:

6/16/14

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported:

16-Jun-14 13:50

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container	
SP-1	P406049-01A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.	
SP-2	P406049-02A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.	
SP-3	P406049-03A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.	
SP-4	P406049-04A	Soil	06/12/14	06/12/14	Glass Jar, 4 oz.	

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Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:50

SP-1 P406049-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.6 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		95.7 %	80-	120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	160	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:50

SP-2 P406049-02 (Solid)

	Reporting							
Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	i	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
	101 %	80	-120	1424033	06/13/14	06/13/14	EPA 8021B	
	93.8 %	80	-120	1424033	06/13/14	06/13/14	EPA 8021B	
5.53	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
98.1	29.9	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	
	ND ND ND ND ND ND ND	ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 ND 0.05 101 % 93.8 %	ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg ND 0.05 mg/kg 80 93.8 % 80 5.53 4.99 mg/kg	ND	Result Limit Units Dilution Batch ND 0.05 mg/kg 1 1424033 93.8 % 80-120 1424033 5.53 4.99 mg/kg 1 1424033	ND	ND	ND

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Page 4 of 11



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported:

16-Jun-14 13:50

SP-3 P406049-03 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.1 %	80-	-120	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		94.0 %	80-	-120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:50

SP-4

P406049-04 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: Bromochlorobenzene		97.6 %	80-1	120	1424033	06/13/14	06/13/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		91.4 %	80-1	120	1424033	06/13/14	06/13/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1424033	06/13/14	06/13/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1424032	06/13/14	06/13/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:50

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1424033 - Purge and Trap EPA 5030A										
Blank (1424033-BLK1)				Prepared &	Analyzed:	12-Jun-14				
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	**							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	"							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	II.							
Surrogate: 1,3-Dichlorobenzene	45.6		ug/L	50.0		91.3	80-120			
Surrogate: Bromochlorobenzene	46.4		"	50.0		92.9	80-120			
Duplicate (1424033-DUP1)	Sour	rce: P406048-	01	Prepared &	Analyzed:	12-Jun-14				
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	0.64	0.05	u		1.03			47.5	30	DI
Ethylbenzene	1.42	0.05	11		1.86			26.9	30	
p,m-Xylene	12.3	0.05	"		15.4			22.1	30	
o-Xylene	1.38	0.05	"		1.82			27.1	30	
Surrogate: 1,3-Dichlorobenzene	54.1		ug/L	50.0		108	80-120	_	-	-
Surrogate: Bromochlorobenzene	52.9		"	50.0		106	80-120			
Matrix Spike (1424033-MS1)	Sour	rce: P406048-	01	Prepared &	: Analyzed:	12-Jun-14				
Benzene	47.6		ug/L	50.0	ND	95.1	39-150			
Toluene	54.6		**	50.0	20.7	67.8	46-148			
Ethylbenzene	71.3		"	50.0	37.3	68.1	32-160			
p,m-Xylene	307			100	308	NR	46-148			SPK1
o-Xylene	79.8		"	50.0	36.3	86.9	46-148			
Surrogate: 1,3-Dichlorobenzene	53.2		"	50.0		106	80-120			
Surrogate: Bromochlorobenzene	52.8		"	50.0		106	80-120			

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Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Reported:

Farmington NM, 87401

Project Manager: Kyle Summers-Apex TITAN

16-Jun-14 13:50

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1424032 - DRO Extraction EPA 3550C										
Blank (1424032-BLK1)				Prepared: 1	12-Jun-14 A	Analyzed: 1	3-Jun-14			
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1424032-DUP1)	Sour	ce: P406048-	01	Prepared: 1	2-Jun-14	Analyzed: 1	3-Jun-14			
Diesel Range Organics (C10-C28)	2030	30.0	mg/kg		2220			9.28	30	
Matrix Spike (1424032-MS1)	Sour	ce: P406048-	01	Prepared: 1	2-Jun-14	Analyzed: 1	3-Jun-14			
Diesel Range Organics (C10-C28)	2310	· · · · · · · · · · · · · · · · · · ·	mg/L	250	2110	77.6	75-125			

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Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 16-Jun-14 13:50

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1424033 - Purge and Trap EPA 5030A										
Blank (1424033-BLK1)				Prepared &	Analyzed:	12-Jun-14				
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg					_		
Duplicate (1424033-DUP1)	Sour	rce: P406048-	01	Prepared &	: Analyzed:	12-Jun-14				
Gasoline Range Organics (C6-C10)	260	4.99	mg/kg		311			18.0	30	
Matrix Spike (1424033-MS1)	Sour	rce: P406048-	01_	Prepared &	Analyzed:	12-Jun-14				
Gasoline Range Organics (C6-C10)	5.28		mg/L	0.450	6.22	NR	75-125			SPK1



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager: Kyle Summers-Apex TITAN

Reported:

16-Jun-14 13:50

Notes and Definitions

SPK1 The spike recovery for this QC sample is outside of control limits.

D1 Duplicates or Matrix Spike Duplicates Relative Percent Difference exceeds control limits.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Client: Enterpi	VC		Project Name / Locat	ion: 5-	tock	10,	6	S).	88	1			Α	NAL	/SIS	/ PA	RAM	ETEF	RS	· · · · · ·		
Email resplits to:	- N	!	Project Name / Locat SA - Loo Gampler Name: Client No.: 9705 Lab No.	m m	15				30 (S) 05	18021)	8260)	s			_	-						
Client Phone No.: 2 152			Client No.: 9705	7-0	352				Method 8	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion		TCLP with H/P	CO Table 910-1	118.1)	3C)E			e Cool	e Intact
Sample No./ Identification	Sample Date	Sampl Time	Lab No.	No./ of Co	Volume Intainers	Pi HNO ₃	reservat HCI	ive	TPH (I	втех) 00 00	RCRA	Cation	RCI	TCLP	CO Tal	TPH (418.1)	CHLORIDE			Sample Cool	Sample Intact
5P-1	6/12/14	0920	P406049-01		402	-			X	X											Ÿ	γ
5/2		0931	12400044-11		}	ļ				\coprod											\coprod	
SP-3		0940	P406049-3																			
SP-4	\ <u>\</u>	02	P406049-04		<u>/</u>				4	V					_						<u> </u>	
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Relinquished by: (Signature)						Rece	ived b	y: (Si	ignat	ure)-		-			_/					71	1	> 1(-
Sample Matrix Soil Solid Sludge	Aqueous [☐ Other				6	2 R	??	1	2	0	ク				•						
Sample(s) dropped off after						nyiici	ai Lu	DOIL	3101	y												
5795 US Highway 6	4 • Farming	ton, NM 87	401 • 505-632-0615 •	Three Spr	ings • 65	Merca	do Stre	et, S	uite 1	15, D	urang	jo, C	O 813	01 •	labor	atory	⁄@en	virote	ch-inc	Page	11 (of 11



Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17087

Samples Received: 6/16/2014 12:30:00PM

Job Number: 97057-0352 Work Order: P406059

Project Name/Location: 3A-Loop

Entire Report Reviewed By:

Date:

7/15/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 6/18/14 11:55 am

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.

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laboratory@envirotech-inc.com

envirotech-inc.com



Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401 Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container	
S-9	P406059-01A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.	
S-10	P406059-02A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.	
S-11	P406059-03A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.	
S-12	P406059-04A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.	

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Ph (970) 259-0615 Fr (800) 362-1879



Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

S-9

P406059-01 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	I	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.4 %	80-	20	1425001	06/17/14	06/17/14	EPA 8021B	-
Surrogate: 1,3-Dichlorobenzene		98.2 %	80-1	20	1425001	06/17/14	06/17/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

S-10 P406059-02 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: Bromochlorobenzene		103 %	80-	120	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		100 %	80-1	120	1425001	06/17/14	06/17/14	EPA 8021B	
Nonhalogenated Organics by 8015		<u></u> _							
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

S-11 P406059-03 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021	· · · · · · · · · · · · · · · · · · ·							<u>.</u>	
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	ı	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	0.32	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: Bromochlorobenzene		107 %	80-	120	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		102 %	80-1	120	1425001	06/17/14	06/17/14	EPA 8021B	
Nonhalogenated Organics by 8015									_
Gasoline Range Organics (C6-C10)	17.2	5.00	mg/kg	ı	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	406	30.0	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	

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Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401 Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

S-12 P406059-04 (Solid)

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	ı	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	NĐ	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: Bromochlorobenzene		106 %	80-1	20	1425001	06/17/14	06/17/14	EPA 8021B	-
Surrogate: 1,3-Dichlorobenzene		102 %	80-1	20	1425001	06/17/14	06/17/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	39.4	29.9	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	



Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401

Project Manager: Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1425001 - Purge and Trap EPA 5030A										
Blank (1425001-BLK1)				Prepared &	Analyzed:	16-Jun-14				
Benzene	ND	0.05	mg/kg				-			
Toluene	ND	0.05	u							
Ethylbenzene	ND	0.05	"							
p,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	•							
Total Xylenes	ND	0.05								
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	44.8		ug/L	50.0		89.6	80-120			
Surrogate: Bromochlorobenzene	45.6		"	50.0		91.1	80-120			
Duplicate (1425001-DUP1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05	n		ND				30	
Ethylbenzene	ND	0.05	**		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene -	ND	0.05	н		ND				30	
Surrogate: 1,3-Dichlorobenzene	4 7.8		ug/L	50.0		95.6	80-120		-	
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			
Matrix Spike (1425001-MS1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Benzene	43.9		ug/L	50.0	ND	87.9	39-150			
Foluene	44.5		•	50.0	ND	89.0	46-148			
Ethylbenzene	46.2		*	50.0	ND	92.3	32-160			
p,in-Xylene	91.3			100	ND	91.3	46-148			
o-Xylene	45.9		**	50.0	ND	91.9	46-148			
Surrogate: 1,3-Dichlorobenzene	48.6		,,	50.0		97.1	80-120			
Surrogate: Bromochlorohenzene	50.5		,,	50.0		101	80-120			

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Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1425001 - Purge and Trap EPA 5030A										
Blank (1425001-BLK1)				Prepared &	Analyzed:	16-Jun-14				
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Duplicate (1425001-DUP1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14	_			
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1425001-MS1)	Sou	rce: P406053-	01	Prepared &	k Analyzed:	16-Jun-14				
Gasoline Range Organics (C6-C10)	0.47		mg/L	0.450	ND	105	75-125	=		



Farmington NM, 87401

Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1425002 - DRO Extraction EPA 3550C	_									
Blank (1425002-BLK1)				Prepared &	Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg		-					
Duplicate (1425002-DUP1)	Sou	rce: P406053-	01	Prepared &	k Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	80.6	29.9	mg/kg		75.4			6.71	30	
Matrix Spike (1425002-MS1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	307		mg/L	250	71.8	94.1	75-125			

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Page 9 of 11



Project Name:

3A-Loop

614 Reilly Ave

Project Number:

97057-0352

Farmington NM, 87401 Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:31

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

CHAIN OF CUSTODY RECORD

17087

Client: Enterpri-	10			ect Name / Location	on:				(25				A	NALY	/SIS	/ PAF	RAMI	ETER	RS	•		
Email results to: Kyle Stynn Client Phone No.: 82/ 6	mer	1	Sam	pler Name /	Sa	in u	18.	<u> </u>	S	8015)	1 8021)	8260)	. s				-1						
Client Phone No.: 82/	603		Clier	nt No.: 9705						TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion		TCLP with H/P	CO Table 910-1	118.1)	3DE			Cool	Sample Intact
Sample No./ Identification	Sample Date	Samp Time		Lab No.		/Volume ontainers	Pr HNO ₃	eservati HCI	ve	TPH (A	втех	noc (i	RCAA	Cation	RCI	TCLP	CO Tal	TPH (418.1)	CHLORIDE			Sample (Sample
5-9	Date /	103	0	P466059-01	1)	(402,				X	X											Y	Y
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5-11		105	-5	P406059-03						X	X												
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Sample Matrix Soil Solid Sludge	Aqueous [] Othe	er 🗆 _				<u>.</u>	,	96	35	4/=	20	Ð			_							
Sample(s) dropped off after					hree Sp	Pings • 65 A	ir (ytica	ot (a) Lai	et. Su	itory	y 15. D	11.	ł	0 813	3O1 •	labor	atory	r@en	virote	ch-ind			



Analytical Report

Report Summary

Client: Enterprise Products

Chain Of Custody Number: 17088

Samples Received: 6/16/2014 12:30:00PM

Job Number: 97057-0352

Work Order: P406060

Project Name/Location: 3A-Loop Stockpiles

Entire Report Reviewed By:

Date:

7/15/14

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 6/18/14 11:58 am

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:20

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SP-2R	P406060-01A	Soil	06/16/14	06/16/14	Glass Jar, 4 oz.



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:20

SP-2R P406060-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021				<u></u>					
Benzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %	80-	120	1425001	06/17/14	06/17/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.3 %	80-	120	1425001	06/17/14	06/17/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1425001	06/17/14	06/17/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1425002	06/17/14	06/17/14	EPA 8015D	



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:20

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1425001 - Purge and Trap EPA 5030A										
Blank (1425001-BLK1)				Prepared &	: Analyzed:	16-Jun-14				
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	**							
o,m-Xylene	ND	0.05	"							
o-Xylene	ND	0.05	u							
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	44.8		ug/L	50.0		89.6	80-120			
Surrogate: Bromochlorobenzene	45.6		n	50.0		91.1	80-120			
Duplicate (1425001-DUP1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05			ND				30	
Ethylbenzene	ND	0.05	n		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	n		ND				30	
Surrogate: 1,3-Dichlorobenzene	4 7.8		ug/L	50.0		95.6	80-120			
Surrogate: Bromochlorobenzene	49.2		"	50.0		98.5	80-120			
Matrix Spike (1425001-MS1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Benzene	43.9		ug/L	50.0	ND	87.9	39-150			
Toluene	44.5		**	50.0	ND	89.0	46-148			
Ethylbenzene	46.2		"	50.0	ND	92.3	32-160			
o,m-Xylene	91.3			100	ND	91.3	46-148			
o-Xylene	45.9		· ·	50.0	ND	91.9	46-148			
Surrogate: 1,3-Dichlorobenzene	48.6		"	50.0		97.1	80-120			
Surrogate: Bromochlorobenzene	50.5		"	50.0		101	80-120			

Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.

5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

laboratory@envirotech-inc.com

envirotech-inc.com



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported:

15-Jul-14 12:20

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1425001 - Purge and Trap EPA 5030A										
Blank (1425001-BLK1)				Prepared &	k Analyzed:	16-Jun-14				
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg							
Duplicate (1425001-DUP1)	Sou	rce: P406053-	01	Prepared &	Analyzed:	16-Jun-14	_			
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1425001-MS1)	Sou	rce: P406053-	01_	Prepared &	Analyzed:	16-Jun-14				
Gasoline Range Organics (C6-C10)	0.47		mg/L	0.450	ND	105	75-125			



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number:

97057-0352

Project Manager:

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:20

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1425002 - DRO Extraction EPA 3550C			_							
Blank (1425002-BLK1)				Prepared &	Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg							
Duplicate (1425002-DUP1)	Sour	ce: P406053-	01	Prepared &	Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	80.6	29.9	mg/kg		75.4			6.71	30	
Matrix Spike (1425002-MS1)	Sour	ce: P406053-	01	Prepared &	: Analyzed:	16-Jun-14				
Diesel Range Organics (C10-C28)	307		mg/L	250	71.8	94.1	75-125			

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laboratory@envirotech-inc.com

envirotech-inc.com



Farmington NM, 87401

Project Name:

3A-Loop Stockpiles

614 Reilly Ave

Project Number: Project Manager: 97057-0352

Kyle Summers-Apex TITAN

Reported: 15-Jul-14 12:20

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

CHAIN OF CUSTODY RECORD

17088

Client: Euterprise		Project Name / Lo	cation:	Stoc	.Kp	if	V 4	080				A	NAL	/SIS	/ PAF	RAM	ETER	s			
Email, results to: Summer. Client Phone No.: 1-5603	3	Project Name / ko SA ~ ko Sampler Name:	umn	iers				3015)	8021)	8260)	ຜ				-					T	
Client Phone No. 1-5603		Client No.: 97	57-03	52				TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion		TCLP with H/P	CO Table 910-1	TPH (418.1)	RIDE			Somple Cool	Sample Intact
Sample No Udentification Sample Date	e I Tim	e Lab No.	of C	.Volume containers	PI HNO ₃	eservat HCI	ive		втех	Voc (RCRA	Cation	RCI	TCLP	CO Ta	TPH (CHLORIDE			Compo	Sampl
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Sample Matrix	—					RI	92	15	204	1									1	\dashv	
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Sample(s) dropped off after hours	o secure dr	op off area.	3	env	ir (ol La	e (tor	1 4	1.0											
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Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuqueraue, NM 87109

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

June 30, 2014

Kyle Summers

Apex Titan, Inc.

606 S. Rio Grande Unit A

Aztec, NM 87410

TEL: (903) 821-5603 FAX (214) 350-2914

RE: Entreprise Lateral 3A-Loop

OrderNo.: 1406B93

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/26/2014 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 6/30/2014

CLIENT: Apex Titan, Inc.

Client Sample ID: S-13

Project: Entreprise Lateral 3A-Loop

Collection Date: 6/25/2014 8:43:00 AM

Lab ID: 1406B93-001

Matrix: MEOH (SOIL) Received Date: 6/26/2014 8:10:00 AM

Analyses	Result	RL Qual Units			Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/26/2014 11:01:58 AM	A 13911
Surr: DNOP	84.6	57.9-140	%REC	1	6/26/2014 11:01:58 AM	И 13911
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Surr: BFB	95.8	80-120	%REC	1	6/26/2014 9:30:45 AM	R19523
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.031	mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Toluene	ND	0.031	mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Ethylbenzene	ND	0.031	mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Xylenes, Total	ND	0.061	mg/Kg	1	6/26/2014 9:30:45 AM	R19523
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	6/26/2014 9:30:45 AM	R19523

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 1 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406B93

Date Reported: 6/30/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: S-14

Project: Entreprise Lateral 3A-Loop

Collection Date: 6/25/2014 9:07:00 AM

Lab ID: 1406B93-002

Matrix: MEOH (SOIL) Received Da

Received Date: 6/26/2014 8:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS			-	Analys	st: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	6/26/2014 11:31:59 Al	M 13911
Surr: DNOP	84.3	57.9-140	%REC	1	6/26/2014 11:31:59 A	M 13911
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Surr: BFB	95.2	80-120	%REC	1	6/26/2014 9:59:24 AM	R19523
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.041	mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Toluene	ND	0.041	mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Ethylbenzene	ND	0.041	mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Xylenes, Total	ND	0.081	mg/Kg	1	6/26/2014 9:59:24 AM	R19523
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	6/26/2014 9:59:24 AM	R19523

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 2 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report

Lab Order 1406B93

Date Reported: 6/30/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Apex Titan, Inc.

Client Sample ID: S-15

Project: Entreprise Lateral 3A-Loop

Collection Date: 6/25/2014 9:09:00 AM

Lab ID: 1406B93-003

Matrix: MEOH (SOIL) Received Date: 6/26/2014 8:10:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/26/2014 12:01:56 PI	vi 13911
Surr: DNOP	86.0	57.9-140	%REC	1	6/26/2014 12:01:56 PI	M 13911
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1	6/26/2014 10:28:00 AI	M R19523
Surr: BFB	94.6	80-120	%REC	1	6/26/2014 10:28:00 AI	M R19523
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.035	mg/Kg	1	6/26/2014 10:28:00 AI	M R19523
Toluene	ND	0.035	mg/Kg	1	6/26/2014 10:28:00 AI	M R19523
Ethylbenzene	ND	0.035	mg/Kg	1	6/26/2014 10:28:00 AI	И R19523
Xylenes, Total	ND	0.070	mg/Kg	1	6/26/2014 10:28:00 AI	M R19523
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	6/26/2014 10:28:00 AI	M R19523

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 3 of 6

- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406B93

30-Jun-14

Client:

Apex Titan, Inc.

Project: Entrepri	se Lateral 3A-Loop										
Sample ID MB-13911	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics									
Client ID: PBS	Batch ID: 13911	RunNo: 19522									
Prep Date: 6/26/2014	Analysis Date: 6/26/2014	SeqNo: 564983 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	7.1 10.00	70.6 57.9 140									
Sample ID LCS-13911	SampType: LCS	SampType: LCS TestCode: EPA Method 8015D: Diesel Range Organics									
Client ID: LCSS	Batch ID: 13911	RunNo: 19522									
Prep Date: 6/26/2014	Analysis Date: 6/26/2014	SeqNo: 564984 Units: mg/Kg									
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual									
Diesel Range Organics (DRO)	45 10 50.00	0 89.3 68.6 130									
Surr: DNOP	3.4 5.000	67.1 57.9 140									
Sample ID MB-13913	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics									
Client ID: PBS	Batch ID: 13913	RunNo: 19522									
Prep Date: 6/26/2014	Analysis Date: 6/26/2014	SeqNo: 565609 Units: %REC									
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual									
Surr: DNOP	6.6 10.00	66.4 57.9 140									
Sample ID LCS-13913	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics									
Client ID: LCSS	Batch ID: 13913	RunNo: 19522									
Prep Date: 6/26/2014	Analysis Date: 6/26/2014	SeqNo: 565610 Units: %REC									
Analyte		SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual									
Surr: DNOP	3.1 5.000	61.7 57.9 140									

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 4 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1406B93

30-Jun-14

Client:

Apex Titan, Inc.

Project:

Entreprise Lateral 3A-Loop

Sample ID MB-13887 MK	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	е				
Client ID: PBS	Batc	h ID: R1	9523	F	RunNo: 1	9523							
Prep Date:	Analysis [Date: 6/	26/2014	S	SeqNo: 5	65478	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	960		1000		95.6	80	120						
Sample ID LCS-13887 MK	Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e				
Client ID: LCSS	Batc	h ID: R1	9523	F	RunNo: 1	9523							
Prep Date:	Analysis [Date: 6/	26/2014	\$	SeqNo: 5	65479	Units: mg/k	(g					
				CDIC Det Vel	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Analyte	Result	PQL	SPK value	SPK Rei Vai	70KEC	COAACIIIII	riigiiciiiii	701 XI D	IN DEITH	Quai			
Analyte Gasoline Range Organics (GRO)	Result 29	PQL 5.0	SPK value 25.00		115	71.7	134	701111111	N DEIIII				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 5 of 6

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 14

1406B93 *30-Jun-14*

Client:

Apex Titan, Inc.

Project:

Entreprise Lateral 3A-Loop

Sample ID MB-13887 MK	Samp	Гуре: МЕ	BLK	Tes						
Client ID: PBS	Batc	h ID: R1	9523	F	RunNo: 1	9523				
Prep Date:	Analysis Date: 6/26/2014			S	SeqNo: 5	65515	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	1.1		1.000		108	80	120			

					TestCode: EPA Method 8021B: Volatiles										
Sample ID LCS-13887 MK	Samp	Type: LC	55	les	8021B: Vola	tiles									
Client ID: LCSS	Batc	atch ID: R19523 RunNo: 19523													
Prep Date:	Analysis [Date: 6/	26/2014	5	SeqNo: 5	65516	Units: mg/k	(g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Benzene	1.0	0.050	1.000	0	104	80	120								
Toluene	1.0	0.050	1.000	0	102	80	120								
Ethylbenzene	1.0	0.050	1.000	0	102	80	120								
Xylenes, Total	3.0	0.10	3.000	0	101	80	120								
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 6 of 6



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105 TEL: 505-345-3975 FAX: 505-345-4107

Sample Log-In Check List

Website: www.hallenvironmental.com Client Name: **APEX AZTEC** Work Order Number: 1406B93 RcptNo: 1 Received by/date: Lindsay Mangin Logged By: 6/26/2014 8:10:00 AM Completed By: Lindsay Mangin 6/26/2014 8:21:08 AM 06/26/14 Reviewed By: IO Chain of Custody Yes \square No 🗆 Not Present 1. Custody seals intact on sample bottles? Yes 🗹 No 🗆 2. Is Chain of Custody complete? Not Present 3. How was the sample delivered? Courier Log In 4. Was an attempt made to cool the samples? Yes 🗸 No 🗌 NA 🗌 NA 🗌 5. Were all samples received at a temperature of >0° C to 6.0°C No 🗔 No 🔲 Sample(s) in proper container(s)? Yes 🗹 No 📙 7. Sufficient sample volume for indicated test(s)? 8. Are samples (except VOA and ONG) properly preserved? No 🗌 Yes \square No 🔽 NA 🗌 9. Was preservative added to bottles? 10.VOA vials have zero headspace? Yes No 🗌 No VOA Vials Yes 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: Yes 🔽 No 🗌 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: eMail Phone Fax In Person By Whom: Via: Regarding: Client Instructions: 17. Additional remarks: 18. Cooler Information Cooler No Temp °C Condition Seal Intact Seal No Seal Date Signed By Good Yes

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Client:	Noar -	TITAN.	Inc	☐ Standard	⊠ Rush	Same Day	HALL ENVIRONMENTAL ANALYSIS LABORATORY														
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email o		-334-	2 200	Project Mana	uder:	\.		(Gas only)			7-8										·#T.
	Package:			K. Summers Sampler: H. Woods					(98)					SO,	S'S			ļ		1 1	
© Stan	_		☐ Level 4 (Full Validation)	K. Summers					W 01			SIMS)		PO ₄	2						
Accredi	tation	☐ Othe		Sampler: H. Woods On Ice: No Annual Control of the					<u> </u>	418.1)	4.1)	8270 S		,NO ₂ ,	8082						î
				Sample Temperature					(GRO	141	150		8	ON N	les /		δ				٦
Date	Time	Matrix	Sample Request ID		Preservative Type		BTEX + NEE	BTEX + MTBE	тРН 8015В (TPH (Method	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
0/25/14	0843	Soil	5-13	1-402	Cold	-00	X		χ												
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11	necessary	Samples SUDI	made to mail Environmental may be subc	omacieu io giner ac	medited (aboutione	s. This serves as notice of this	possit	olity. A	any su	p-cont	racted	data v	WIII DE	dearly	y notat	red on	the an	alytical	report.		