3R-1011

Release Report/ General Correspondence

Enterprise SJ

Date: Oct-Dec 2014

							OIL	CONS.	DIV DIS	ST. 3
811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505			Energ Oil C 1220	State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505		Vatural vision cis Dr.			Form C-141 Revised August 8, 2011 to appropriate District Office rdance with 19.15.29 NMAC.	
	Release Notification and Corrective Action									
Nome of C	ompony	Enterprise F	Field Son				R homas Long		Initial F	Report 🛛 Final Report
		ve, Farmin					No. 505-599-	-2286		
Facility Nar	me: Kathe	rine Pierce	#1/Katy	#1	F	acility Typ	e: Natural Ga	as Gath	ering Li	ne
Surface Ov	vner: Priv	ate		Mineral C	Owner: I	BLM			API No	•
		•			-	OF REL				
Unit Letter B	Section 26	Township 30N	Range 12W	Feet from the 799	Line	South	Feet from the 1499	East A Line	Vest	County San Juan
		Latitude_	36.788	<u>8510</u>		Longitud	le <u>-108.064</u>	4109		
r						OF RELE				
Type of Rele	ease: Natur	al Gas and N	latural Ga	s Liquids		Volume of MCF	Release: 90.78	85	Volume F	Recovered: None
Source of R	elease: Inte	ernal corrosio	n			Date and Hour of Occurrence:Date and Hour of Discovery:6/23/2014 @ 9:50 a.m.6/23/2014 @ 10:30 a.m.				
Was Immed	iate Notice									- Cory Smith - NMOCD
Required			_ Yes		IOT					
By Whom?							Hour 6/25/2014			· · · · · · · · · · · · · · · · · · ·
Was a Wate	icourse Re		Yes	🛛 No		IT YES, VC	olume Impacting	g the vva	tercourse	
If a Waterco	urse was Ir	npacted, Des	scribe Fully	v.*						
Describe Ca well tie, a Cl out. Repairs feet long by transported	use of Prot ass 1 Non- and remec eight (8) fe to an appro	olem and Rei jurisdictional liation were c et wide by ni wed NMOCD	medial Act pipeline. E completed ne (9) feet land farm	ion Taken: Er Enterprise per on July 2, 20 deep. Appro facility.	sonnel v 14. The ximately	rerified the I final excave fifty (50) cu	eak, the pipelin ation dimension ubic yards of hy	e was blo ns measu drocarbo	own dowr ired appro on impact	atherine Pierce # 1/Katy # 1 n and lock out and tagged oximately seventeen (17) ed soil was excavated and
tie, a Class Repairs and long by eigh	1 Non-juriso remediatio t (8) feet wi	dictional pipe n were comp de by nine (§	line. Enter pleted on J 9) feet dee	prise personr uly 2, 2014. p. Approxima	el verifie The final ately fifty	ed the leak, excavation (50) cubic	the pipeline wa dimensions me yards of hydroc	is blown easured : arbon im	down and approxim ipacted se	rine Pierce # 1/Katy # 1 well d lock out and tagged out. ately seventeen (17) feet oil was excavated and cluded with this "Final" C-
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.							ective actions for releases ed as "Final Report" does not nination that pose a threat to ort does not relieve the			
Signature: Jan Fulls							<u>OIL CON</u>	SERV		DIVISION
Printed Narr	le: Jon Fiel	ds			A	Approved by	/ Environmenta	I Speciali		Sh
Title: Directo	or, Environr	nental			A	Approval Da	ite: 12/29/1	14 E	xpiration	Date:
		@eprod.com			C	Conditions o	of Approval:		-	Attached
	-20-2			e: (713)381-6	684	(1.0		<u> </u>		
Attach Addi	tional She	ets If Neces	sary		7	4NCS	143 63	ওর	143	(47)

Enterprise Products Katherine Pierce #1 Well Tie Pipeline Release Latitude North 36.78854°, Longitude West -108.06425° Unit B Section 26 T30N R12W San Juan County, New Mexico July 16, 2014



OIL CONS. DIV DIST. 3

NOV 2 4 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 July 1 and 2, 2014, Souder, Miller & Associates (SMA) responded to a hydrocarbon release associated with the Katherine Pierce #1 well tie pipeline release. The table below summarizes information about the release and remediation activities.

TABLE 1: RELEASE INFORMATION					
Name	Katherine Pierce #1 Well Tie Pipeline Release				
	Latitude	/Longitude	Section, Township, Range		
Location	36.78854°	-108.06425°	Unit B (NW ¼ /NE ¼) Section 26	T30N, R12W	
Date Reported	June 23, 201	4			
Reported by	Tom Long				
Land Owner	Private				
Reported To	New Mexico	Oil Conservation	Division (NMOCD)		
Diameter of Pipeline	4 inch				
Source of Release	Internal Corro	osion			
Release Contents	Natural Gas/	Condensate			
Release Volume: Natural Gas	Unknown				
Release Volume: Liquids/Condensate	Unknown				
Nearest Waterway	Lower Anima	s Irrigation Ditch			
Depth to Groundwater	Between 50 a	and 99 feet			
Nearest Domestic Water Source	Less than 1,0	000 feet			
NMOCD Ranking	40				
SMA Response Dates	July 1-2, 201	4			
Subcontractors	West States	Energy (WSEC)			
Disposal Facility		system Inc. (IEI))		
Yd ³ Contaminated Soil Excavated and Disposed	50				

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 Katherine

Pierce #1 well tie pipeline release. The release was due to internal corrosion of the 4inch, underground well tie pipeline. An unknown amount of natural gas and liquids/condensate was released. The release was reported on June 23, 2014 and was located in (NW ¼ /NE ¼) Unit B, Section 26, Township 30 North, Range 12 West, 36.78854°, -108.06425°, 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 500 feet south of an irrigation ditch fed by the Lower Animas Irrigation Ditch system on privately owned land located approximately 5,650 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be between 50 and 99 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. Two recorded wells were located within 1,000 feet of the release site and more than twenty wells were located within a 1 mile radius of the site. The closest well to the site is located approximately 880 feet southwest of the site with a depth to water measurement of 80 feet bgs.

The physical location of this release is within the jurisdiction of NMOCD. This release location has been assigned a NMOCD ranking of 40, which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On July 1, 2014 SMA visited the release site to delineate the release area through field screening using a calibrated photoionization detector (PID). This site visit occurred during the excavation of subsurface pipeline for repair performed by West States Energy Contractors (WSEC). WSEC used a rubber tired backhoe to excavate and export hydrocarbon impacted soils. During the excavation event, soil samples were collected for field screening to determine the extent of the release and to further guide the excavation. On July 1, 2014, laboratory samples were collected from the base of the excavation at 7 feet bgs and submitted for rush (24 hour) analysis.

On July 2, 2014, SMA provided further oversight and guidance of excavation activities for remediation purposes. The excavation was advanced to a depth of 9 feet bgs and closure samples were collected for laboratory analysis from the base and four cardinal direction sidewalls. The final excavation measured approximately 17 feet long by 8 feet wide with

maximum excavation depth of approximately 9 feet below ground surface. Table 3 summarizes the field screening results. Field notes are included in Appendix A.

Field screening of the excavated material determined that a portion of the soils removed were not suitable for use as backfill material. Approximately 50 cubic yards of impacted soil were transported for disposal to Industrial Ecosystems Inc., located near Bloomfield, NM. A completed certificate of waste is included in Appendix C.

All laboratory soil samples were field screened with a calibrated PID. Samples exceeding 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 both Envirotech Laboratory located near Bloomfield, NM for rush analysis, and to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico for final analysis. 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 40: 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH. Laboratory analytical results were above the NMOCD Guidelines for benzene, total BTEX, and TPH (GRO/DRO) for the sample collected on July 1, 2014 from the western base of the excavation at approximately 7 feet bgs (115/76.8: GRO/DRO and 3.55: BTEX). Laboratory analytical results were also above the NMOCD Guidelines for DRO for the sample collected from the north wall of the excavation at 0-9 feet bgs on July 2, 2014 (DRO: 240). All other parameters and additional samples were below practical laboratory detection limits. 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 believes that there is no immediate threat to groundwater or surface water given the concentration of DRO in an isolated section of the excavation, the elevation of the site and lack of immediate proximity to surface water courses. Soil samples from the base of the excavation at a depth of nine feet bgs were below laboratory detection limits and two orders of magnitude less than the samples collected from seven feet bgs. Further, the longer chain DRO compounds are less likely to migrate in the subsurface than volatile organics, which are below laboratory detection levels. SMA recommends future delineation and sampling for the DRO contaminants.

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

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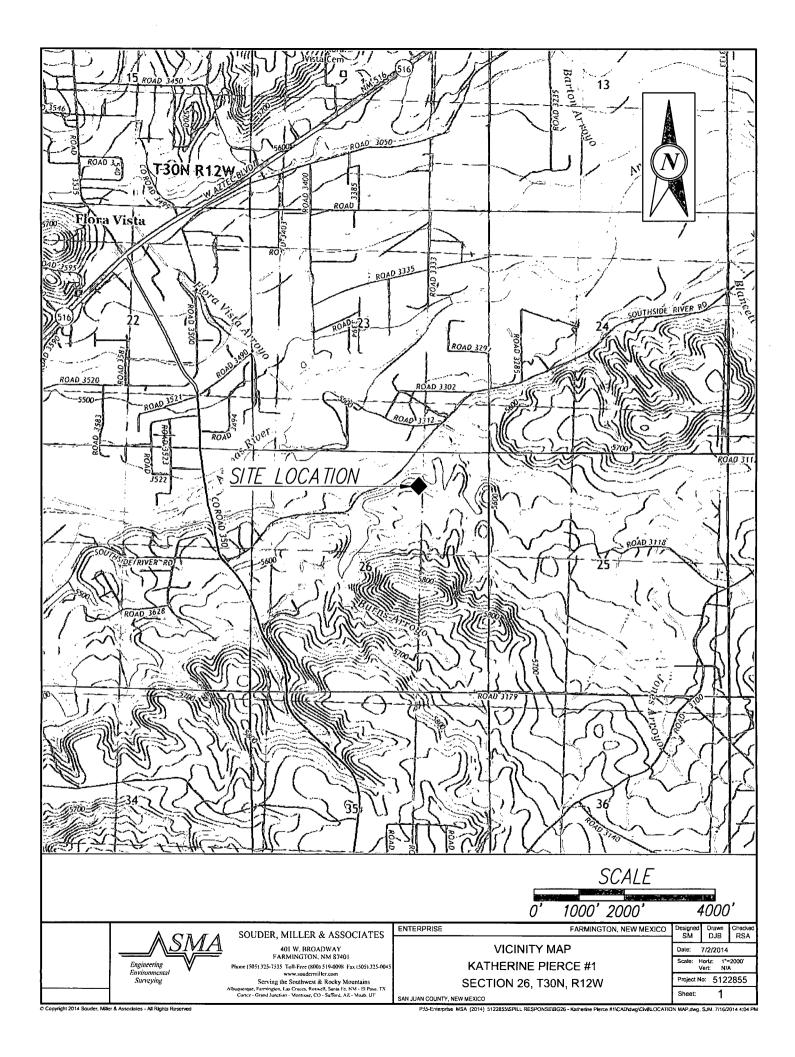
Steve Moskal Project Scientist

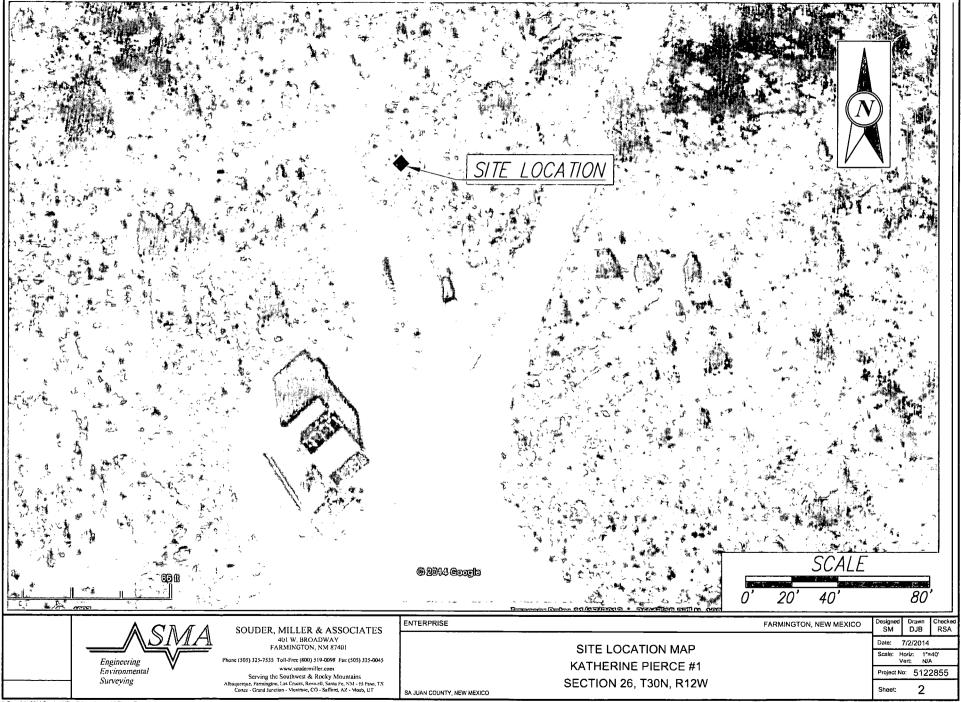
L. Alle

Reid S. Allan, PG Principal Scientist

FIGURES

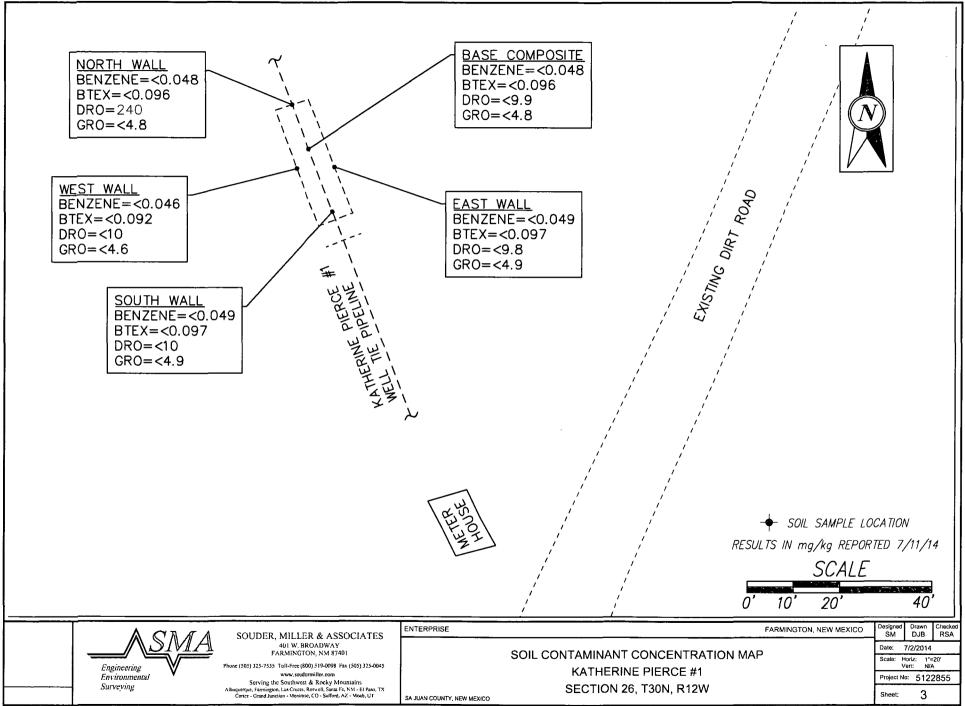
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O Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P:5-Enlerprise MSA (2014) 5122855/SPILL RESPONSE/BG26 - Katherine Pierce #1/CAD/awg/CivilLOCATION MAP.dwg, SJM, 7/16/2014 4:02 PM



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P:15-Enlarprise MSA (2014) 51228551SPILL RESPONSE/BG26 - Kalherine Pierca #1\CADidwg/CivilLOCATION MAP.dwg, SJM, 7/16/2014 3:58 PM

TABLES

Enterprise Products Table 2: Site Ranking

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 50 BGS = 20		Petroleum Recovery	It is anticipated that	
50' to 99' = 10	10	Research Center Maps; Field Verified	ground water is 80 feet below ground surface.	
>100' = 0			sunace.	
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 200' = 20		Petroleum Recovery		
200' - 1000' = 10	10	Research Center Maps; Field Verified	<500 Feet to nearby irrigation ditch	
>1000' = 0				
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	20	5005	According to the NMOSE database, 2	
a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0		<500 Feet to Nearby Irrigation Ditch	wells are located within 1000 of the release site.	
Total Site Ranking	40	L	······	
0				
Soil Remedation Standards	0 to 9	10 to 19	>19	
Benzene	10 PPM	10 PPM	10 PPM	
BTEX TPH	50 PPM 5000 PPM	50 PPM 1000 PPM	50 PPM 100 PPM	



Enterprise Products Table 3: Summary of Excavation Field Screening Results

FIELD SCREENING RESULTS SUMMARY								
Date Time Field Screening Reference		Sample Depth (Feet BGS)	PID Reading (ppm)	Lab Sample Collected Y/N				
7/1/2014	10:00	SC-1 Base	4.5	1.5	Y			
7/1/2014	10:01	SC-2 W. Wall	0-5	5.7	N			
7/1/2014	10:02	SC-3 N. Wall	0-5	5.4	N			
7/1/2014	10:03	SC-4 E. Wall	0-5	2.7	N			
7/1/2014	10:04	SC-5 S. Wall	0-5	7.2	N			
7/1/2014	10:30	SC-6 Base Below RP	4.5	242.7	N			
7/1/2014	10:37	SC-7 W. Base of S. Excavation	6	8.5	N			
7/1/2014	10:38	SC-8 E. Base of S. Excavation	6	1.3	N			
7/1/2014	11:22	SC-9 W Base @ RP	7	395.1	Y			
7/2/2014	9:00	SC-10 N. Wall, N. Excavation	7	1.2	N			
7/2/2014	9:05	SC-11 E. Wall of N. Excavation	7	1.3	N			
7/2/2014	9:10	SC-12 W. Wall of N. Excavation	7	3	N			
7/2/2014	9:25	SC-13 Base @ RP, E. of Pipeline	9	13.8	N			
7/2/2014	9:40	SC-14 E. Wall, N. Excavation	0-9	10.1	Y			
7/2/2014	10:00	SC-15 Base of N. Excavation	9	3.2	Y			
7/2/2014	10:15	SC-16 Wall of N. Excavation	0-9	8.9	Y			
7/2/2014	10:10	SC-17 N. Wall, N. Excavation	5-9	51.3	Y			
7/2/2014	10:15	SC-18 S. Wall	5-9	3.6	Y			



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

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines NMOCD Site Ranking: 30		anking: 30	100 ppm		10 ppm	50 ppm	
7/1/2014	10:00	SC-1 Base	4.5	<4.99	<29.9	<0.05	<0.05
7/1/2014	11:22	SC-9 W Base @ RP	7	115	76.8	<0.05	3.55
7/2/2014	9:40	E Wall	0-9	<4.9	<9.8	<0.049	<0.097
7/2/2014	10:05	W. Wall	0-9	<4.6	<10	<0.046	<0.092
7/2/2014	10:10	Base Composite	9	<4.8	<9.9	<0.048	<0.096
7/2/2014	10:10	North Wall	0-9	<4.8	240	<0.048	<0.096
7/2/2014	10:15	S Wall	5-9	<4.9	<10	<0.049	<0.097



APPENDIX A FIELD NOTES

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Release Information					
Name	Kathurine Pierce #1 Katy #1				
	Latitude/Longitude				
Location	36.78854°, -108.06425°				
	Section, Township, Range				
	NWINE SEC. 26, T30N, RIZW				
Reported To					
Area Supervisor	Tom Long Miles Moore				
Diameter of Pipeline	<i>Ч^{<i>n</i>}</i>				
Source of					
Release	Internal Convigion				
Release Contents	Juternal Convigion Nat. Gas/Condensate				
Release Volume	unthown				
Subcontractor					
Disposal Facility	USEC IEI				
Yd ³ Contam. Soil					
PO/WO/AFE					

Notes:

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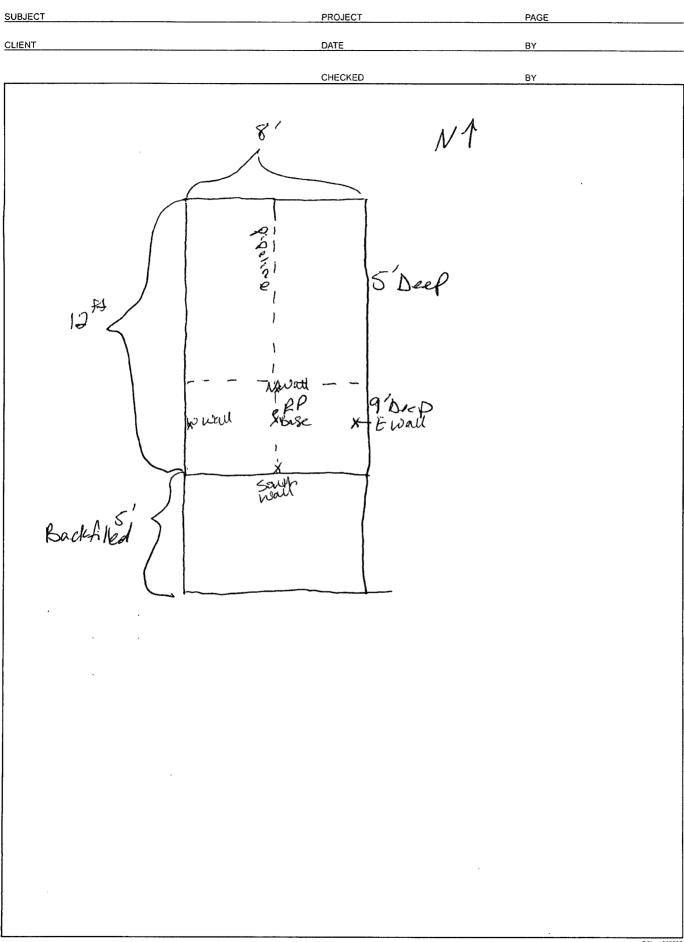
SUBJECT PROJECT PAGE DATE 7/1/14 RV CLIENT CHECKED BY onsite @ 9:40 Steve Moskal & Alicin Patterson #Tailgale Safety Meeting @ 9:45 Black Staining below Ref Calibrated PID w/ Isobutuleyere Saw Black Staining and thought it was location of RP. Dug an additional 12' and found RP Installed Clamp on pipeline @ RP @ 11:20 7/2 onsite @ 1;40 Check in w/ Simon of EPLO Field Scheen Walls + Base offsite @ 10:45

RCI + 1007805

	-	Field S	Screen	ing		
		Location Name			D	ate
	Kath	vive Pierce #1			7/1/1	4
	Location Name	Description	Denth (Feet		Time Screened	PID Reading (ppm)
	SC-1	Base (Below Adapte Poir	4.5 t)RP	1000	1011	1.5
	SC-2	(ual)	0-5'	1001	1012	5.7
	SC-3	Nual	0-5'	1002	1013	5.4
	Sc= 4	Eugh	0-5'	1003	1014	2.7
	SC-S	S. wall	0-5'	1004	1015	7.2
	Sec	Below R.p. (actual)	4.5'	1030	1040	242.7
	56-7	W Base of RP-1 S. ERC	6.0'	1037	1046	8.5
	SC-8	S. Exc.	6.0'	1038	1047	1.3
	5(-9	w Base & RP	7.01	1122	1128	395.1
12114	Sc-9 Sc-10	N-wall	7.0	0900	0902	1.2
	5(-)(East Wall	20	OROS	0904	1.3
	50-12	wost Wall	1.0	0910	0912	3.0
	SC-13.	Base all'E faipe	9,0	0925	0930	13.8

	Field	Screen	ing		
	Location Name				ate
Katherin	re Pierce		••••••••••••••••••••••••••••••••••••••	7/2/14	
Location Name	Description	Depth (Feet BGS)	Time Collected	Time Screened	PID Readi (ppm)
5x-14	E Wall	6-9	0940	950	10.1
5x-14 5c-15	W Base	9	1000	1021	3.7
SC-16	w wall	6-9	1015	1022	8.9
56-17	N Wall	5-9	1010	1023	SI,=
5c-17 5c-18	5 Wall	5-1	1015	1024	36
i 			* *		
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APPENDIX B

SITE PHOTOGRAPHY

Site Photographs Enterprise Products Katherine Pierce #1 Well Tie Release

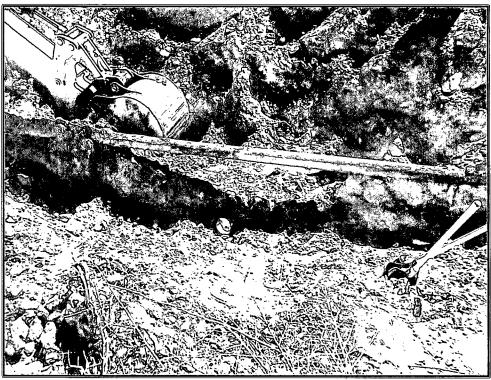


Photo 1: Excavation below the Katherine Pierce #1 well tie pipeline; note the staining of the soils.

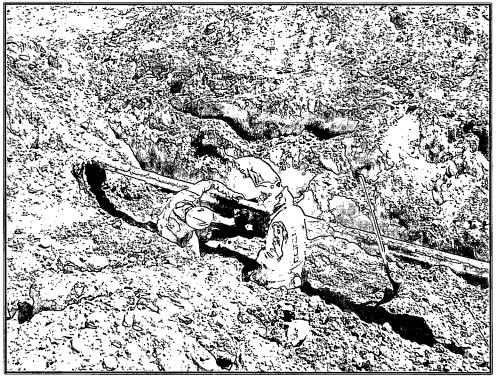


Photo 2: Inspection and repair activities of the Katherine Pierce #1 well tie pipeline.

Site Photographs Enterprise Products Katherine Pierce #1 Well Tie Release



Photo 3: The actual location of the release point being determined by the pipeline contractor.

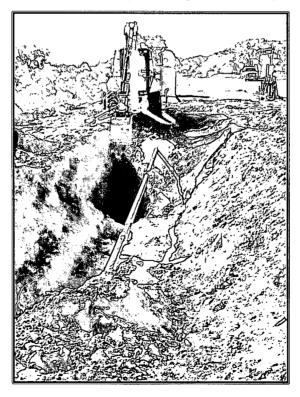


Photo 4: The final excavation of the well tie release after pipeline repair was complete.

APPENDIX C

SOIL DISPOSAL DOCUMENTATION

District I State of New Mexico Form C-138 1625 N. French Dr., Hobbs, NM 88240 Energy Mineral Revised August 1, 2011 811 S. First St., Artesia, NM 88210 Oil Cons District III 000 Rio Brazos Road, Aztec, NM 87410 Oil Cons District III 220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 Santa Fe, NM 87505
REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site: Katherine Pierce #1 and Katy #1 Well Tie
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter B, Section 26, T30N, R12W; 36.788510, -108.064109
 4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas well ties. 5. Estimated Volume10
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I. <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <u>COMPANY NAME</u> certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency [] Monthly [] Weekly [] Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
🗇 MSDS Information 🛛 RCRA Hazardous Waste Analysis 📋 Process Knowledge 📋 Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
1, <u>7-1-14</u> , representative for <u>Enterprise Field Services, LLC</u> authorize IEI, Inc. to Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.
I,, representative for IEI, Inc do hereby certify that
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Transporter: West States Energy Contractor
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * Permit #: NM 01-0010B Address of Facility: #49 CR 2150 Aztec, New Mexico Method of Treatment and/or Disposal: Treating Plant Landfarm Landfill Other
Waste Acceptance Status: DENIED (Must Be Maintained As Permanent Record)
RINT NAME: L. Machaelo TITLE: Hamin Aperial. Date: 1/2/14
SIGNATURE:

•

7-1-14

APPENDIX D

LABORATORY ANALYTICAL REPORTS



Analytical Report

Report Summary

Client: Souder Miller & Associates Chain Of Custody Number: 17182 Samples Received: 7/1/2014 12:21:00PM Job Number: 03117-0014 Work Order: P407012 Project Name/Location: Katherine Pierce #1

d By: 🛛 🖊

Date: 7/2/14

Entire Report Reviewed By:

Tim Cain, Laboratory 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.

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 antiotectivita anosal-distativae@yuotectel

Page 1 of 9



Souder Miller & Associates	Project Name:	Katherine Pierce #1	
2101 San Juan Blvd.	Project Number:	03117-0014	Reported:
Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jui-14 13:08

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SC-1S Base @4.5'	P407012-01A	Soil	07/01/14	07/01/14	Glass Jar, 4 oz.
SC-9N Base @ RP @ 7'	P407012-02A	Soil	07/01/14	07/01/14	Glass Jar, 4 oz.

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

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

envirotedi=inc.com kboretory@envirotedi=inc.com

Page 2 of 9



Souder Miller & Associates 2101 San Juan Blvd. Farmington NM, 87401	Projec		0311		#1			Reported: 02-Jul-14 13: 	08
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Surrogate: Bromochlorobenzene		95.4 %	80-	-120	1427009	07/01/14	07/02/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		94.9 %	80-	-120	1427009	07/01/14	07/02/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1427010	07/01/14	07/02/14	EPA 8015D	

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Souder Miller & Associates	Project Name:	Katherine Pierce #1	
2101 San Juan Blvd.	Project Number:	03117-0014	Reported:
Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jul-14 13:08

SC-9N Base @ RP @ 7' P407012-02 (Solid)									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Anałyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Toluene	0.99	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
p,m-Xylene	2.49	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
o-Xylene	0.07	0.05	mg/kg	t	1427009	07/01/14	07/02/14	EPA 8021B	
Total Xylenes	2.56	0.05	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8021B	
Total BTEX	3.55	0.05	mg/kg	t	1427009	07/01/14	07/02/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %	80-	120	1427009	07/01/14	07/02/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.8 %	80-	-120	1427009	07/01/14	07/02/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	115	4.98	mg/kg	1	1427009	07/01/14	07/02/14	EPA 8015D	
Diesel Range Organics (C10-C28)	76.8	30.0	mg/kg	١	1427010	07/01/14	07/02/14	EPA 8015D	

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Souder Miller & Associates	Project Name:	Katherine Pierce #1	
2101 San Juan Blvd.	Project Number:	03117-0014	Reported:
Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jul-14 13:08

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
Analyte	Result	Limit	Units	Level	Result	70rtEC	Linits	KPD	Linu	inoles
Batch 1427009 - Purge and Trap EPA 5030A										
Blank (1427009-BLK1)				Prepared: ()1-Jul-14 A	nalyzed: 02	2-Jul-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	"							
Surrogate: 1,3-Dichlorobenzene	-14.1		ug/L	50.0		88. I	80-120			
Surrogate: Bromochlorobenzene	46.0		"	50.0		92.0	80-120			
Duplicate (1427009-DUP1)	Sou	irce: P407012-	01	Prepared: ()1-Jul-14 A	nalyzed: 0	2-Jul-14			
Benzene	ND	0.05	mg/kg		ND				30	
Toluene	ND	0.05			ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
p,m-Xylene	ND	0.05	"		ND				30	
o-Xylene	ND	0.05	*		ND				30	
Surrogate: 1,3-Dichlorobenzene	42.8		ug/1,	50.0		85.6	80-120		ċ	
Surrogate: Bromochlorobenzene	44.9		"	50.0		89.8	80-120			
Matrix Spike (1427009-MS1)	Sou	irce: P407012-	01	Prepared: ()1-Jul-14 A	nalyzed: 0	2-Jul-14			
Benzene	38.2		ug/L	50.0	ND	76.3	39-150			
Toluene	39.2			50.0	ND	78.4	46-148			
Ethylbenzene	40.0		u	50.0	ND	80.1	32-160			
p,m-Xylene	78.6			100	ND	78.6	46-148			
o-Xylene	39.8		a	50.0	ND	79.6	46-148			
Surrogate: 1,3-Dichlorohenzene	42.0		"	50.0		84.1	80-120			
Surrogate: Bromochlorobenzene	43.9		"	50.0		87.7	80-120			

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	Souder Miller & Associates	Project Name:	Katherine Pierce #1	
l	2101 San Juan Bivd.	Project Number:	03117-0014	Reported:
	Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jul-14 13:08

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 1427009 - Purge and Trap EPA 5030A										
Blank (1427009-BLK1)				Prepared: ()1-Jul-14 A	nalyzed: 0	2-Jul-14			
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg							
Duplicate (1427009-DUP1)	Sou	rce: P407012-	01	Prepared: ()1-Jul-14 A	nalyzed: 0	2-Jul-14			
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg		ND				30	
Matrix Spike (1427009-MS1)	Sou	rce: P407012-	01	Prepared: ()1-Jul-14 A	nalyzed: 0	2-Jul-14			
Gasoline Range Organics (C6-C10)	0.42		mg/L	0.450	ND	92.7	75-125			

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Souder Miller & Associates	Project Name:	Katherine Pierce #1	
2101 San Juan Blvd.	Project Number:	03117-0014	Reported:
Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jul-14 13:08

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 1427010 - DRO Extraction EP	PA 3550C			£.0						
Blank (1427010-BLK1)				Prepared: ()1-Jul-14 A	Analyzed: 02	2-Jul-14			
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg							
Duplicate (1427010-DUP1)	Source	e: P407012-	01	Prepared: ()1-Jul-14 A	Analyzed: 02	2-Jul-14			
Diesel Range Organics (C10-C28)	58.3	29.9	mg/kg		ND				30	DI
Matrix Spike (1427010-MS1)	Source	e: P407012-	01	Prepared: ()1-Jul-14 A	Analyzed: 0	2-Jul-14			
Diesel Range Organics (C10-C28)	276	31.6	mg/kg	263	ND	105	75-125			

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Souder Miller & Associates	Project Name:	Katherine Pierce #1	
2101 San Juan Blvd.	Project Number:	03117-0014	Reported:
Farmington NM, 87401	Project Manager:	Steven Moskal	02-Jul-14 13:08

Notes and Definitions

- 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 17182

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	~ ~	Pr	oject Name / Locatio		1 1								A	NAL	/SIS	/ PAI	RAMI	ETEF	is			
Souder Mills CA	800		Katherine pi	erce t	±1						-		[]							T	<u> </u>	
Email results to: Steven, mosta	Resoudern	viller. Com	impler Name:	N					15)	021	260)											
alicia. patterson (Soucher	miller. (ov	n	Steve Musk						1 80	8 00	d 82	als	Ę		ď	5						<u>+</u>
Spuder Miller & Al Email results to: steven. moster a licia, petterson Souchern Client Phone No.: Ali Sos 215 9812 503-320	رزمر ۱-0626		ient No.: 5122855	0311	7-001	ł			dethoo	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	/ Anio		TCLP with H/P	CO Table 910-1	418.1)	RIDE			Sample Cool	e Intac
Sample No./ Identification	Sample Date	Sample Time	Lab No.	No./	Volume ntainers	Рг нNO ₃	eservat нсі	ive	TPH (Method 8015)	втех	VOC (RCRA	Cation / Anion	RCI	TCLP	со Та	TPH (418.1)	CHLORIDE			Sampl	المغسبا
SC-1/Base 04,5' SC-9 N Base ORP @1'	7/1/14	1000	P407012-01	1×	402.				X	X												\mathbb{V}
5C-9 N Base PRP @1'	V	1122	P407012-02	J	/				K	X											-	
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Sample Matrix		. <u></u>	<u></u>																			
Soil 💢 Solid 🗌 Sludge 🗌	Aqueous 🗌] Other []																			
Sample(s) dropped off after	hours to see		off area.	くの	env	ird	ot	e	: r													
RUSH		21.3	E		Anal	ytice	al La	bord	rote	y												
5795 US Highway 64	I • Farmingto	on, NM 874	01 • 505-632-0615 • 1	hree Spr	ings • 65 M	1erca	do Stre	eet, Si	uite 1	15, D	urang	30, C	0 813	301 •	laboi	ratory	/@en	virote	ch-inc	Pa	qe 9	of 9

520.00

HALL ENVIRONMENTAL ANALYSIS LABORATORY

July 10, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: (505) 325-5667 FAX (505) 327-1496

RE: Katherine Pierce #1

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

OrderNo.: 1407304

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/7/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1407304

Date Reported: 7/10/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: West Wall 0-9 Katherine Pierce #1 Project: Lab ID: 1407304-001 Matrix: SOIL

Collection Date: 7/2/2014 10:05:00 AM Received Date: 7/7/2014 12:42:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG					Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/9/2014 12:32:25 PM	14101
Surr: DNOP	58.3	57.9-140	%REC	1	7/9/2014 12:32:25 PM	14101
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	7/9/2014 12:33:23 PM	14109
Surr: BFB	89.2	80-120	%REC	1	7/9/2014 12:33:23 PM	14109
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.046	mg/Kg	1	7/9/2014 12:33:23 PM	14109
Toluene	ND	0.046	mg/Kg	1	7/9/2014 12:33:23 PM	14109
Ethylbenzene	ND	0.046	mg/Kg	1	7/9/2014 12:33:23 PM	14109
Xylenes, Total	ND	0.092	mg/Kg	1	7/9/2014 12:33:23 PM	14109
Surr: 4-Bromofluorobenzene	97.2	80-120	%REC	1	7/9/2014 12:33:23 PM	14109

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank			
	Е	Value above quantitation range	Н	H Holding times for preparation or analysis exceeded				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage roro			
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Analytical Report	
Lab Order 1407304	

Date Reported: 7/10/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Katherine Pierce #1

1407304-002

Lab ID:

Client Sample ID: Base Composite Collection Date: 7/2/2014 10:00:00 AM Received Date: 7/7/2014 12:42:00 PM

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	7/9/2014 1:03:48 PM	14101
Surr: DNOP	60.8	57.9-140	%REC	1	7/9/2014 1:03:48 PM	14101
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/9/2014 1:59:38 PM	14109
Surr: BFB	88.9	80-120	%REC	1	7/9/2014 1:59:38 PM	14109
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	1	7/9/2014 1:59:38 PM	14109
Toluene	ND	0.048	mg/Kg	1	7/9/2014 1:59:38 PM	14109
Ethylbenzene	ND	0.048	mg/Kg	1	7/9/2014 1:59:38 PM	14109
Xylenes, Total	ND	0.096	mg/Kg	1	7/9/2014 1:59:38 PM	14109
Surr: 4-Bromofluorobenzene	95.8	80-120	%REC	1	7/9/2014 1:59:38 PM	14109

Matrix: SOIL

Qualifiers:	* Value exceeds Maximum Contaminant Level.		В	od Blank			
	E	Value above quantitation range	e above quantitation range H Holding times for preparation or analy				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 2 01 8		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
	S	Spike Recovery outside accepted recovery limits					

Analytical Report						
Lab Order 1407304						
Date Reported: 7/10/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Katherine Pierce #1

1407304-003

Lab ID:

Client Sample ID: North Wall Collection Date: 7/2/2014 10:10:00 AM Received Date: 7/7/2014 12:42:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analysi	: BCN
Diesel Range Organics (DRO)	240	9.8	mg/Kg	1	7/9/2014 10:24:16 PM	14101
Surr: DNOP	89.6	57.9-140	%REC	1	7/9/2014 10:24:16 PM	14101
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	7/9/2014 3:25:47 PM	14109
Surr: BFB	98.8	80-120	%REC	1	7/9/2014 3:25:47 PM	14109
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.048	mg/Kg	1	7/9/2014 3:25:47 PM	14109
Toluene	ND	0.048	mg/Kg	1	7/9/2014 3:25:47 PM	14109
Ethylbenzene	ND	0.048	mg/Kg	1	7/9/2014 3:25:47 PM	14109
Xylenes, Total	ND	0.096	mg/Kg	1	7/9/2014 3:25:47 PM	14109
Surr: 4-Bromofluorobenzene	99.5	80-120	%REC	1	7/9/2014 3:25:47 PM	14109

Matrix: SOIL

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 8
- r uge 5
- .

Analytical Report Lab Order 1407304 Date Reported: 7/10/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Katherine Pierce #1

Lab ID: 1407304-004

Client Sample ID: South Wall 5-9 Collection Date: 7/2/2014 10:15:00 AM Received Date: 7/7/2014 12:42:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/9/2014 10:55:07 PM	14101
Surr: DNOP	75.2	57.9-140	%REC	1	7/9/2014 10:55:07 PM	14101
EPA METHOD 8015D: GASOLINE RAI	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/9/2014 3:54:27 PM	14109
Surr: BFB	90.8	80-120	%REC	1	7/9/2014 3:54:27 PM	14109
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.049	mg/Kg	1	7/9/2014 3:54:27 PM	14109
Toluene	ND	0.049	mg/Kg	1	7/9/2014 3:54:27 PM	14109
Ethylbenzene	ND	0.049	mg/Kg	1	7/9/2014 3:54:27 PM	14109
Xylenes, Total	ND	0.097	mg/Kg	1	7/9/2014 3:54:27 PM	14109
Surr: 4-Bromofluorobenzene	97.7	80-120	%REC	1	7/9/2014 3:54:27 PM	14109

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank					
	Ε	Value above quantitation range	Н	H Holding times for preparation or analysis exceeded					
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 8				
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age + 01 0				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit					
	S	Spike Recovery outside accepted recovery limits							

Analytical Report Lab Order 1407304

Date Reported: 7/10/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Katherine Pierce #1

1407304-005

Lab ID:

Client Sample ID: East Wall 0-9 Collection Date: 7/2/2014 9:40:00 AM Received Date: 7/7/2014 12:42:00 PM

Analyses	Result	RL Q	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	: BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	7/9/2014 11:25:54 PM	14101
Surr: DNOP	74.1	57.9-140	%REC	1	7/9/2014 11:25:54 PM	14101
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	t: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/9/2014 4:23:07 PM	14109
Surr: BFB	89.8	80-120	%REC	1	7/9/2014 4:23:07 PM	14109
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB
Benzene	ND	0.049	mg/Kg	1	7/9/2014 4:23:07 PM	14109
Toluene	ND	0.049	mg/Kg	1	7/9/2014 4:23:07 PM	14109
Ethylbenzene	ND	0.049	mg/Kg	1	7/9/2014 4:23:07 PM	14109
Xylenes, Total	ND	0.097	mg/Kg	1	7/9/2014 4:23:07 PM	14109
Surr: 4-Bromofluorobenzene	96.9	80-120	%REC	1	7/9/2014 4:23:07 PM	14109

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank				
	Ε	Value above quantitation range	Н	Holding times for preparation or analysis exceeded				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 8			
	0	RSD is greater than RSDlimit	SDlimit P Sample pH greater than 2.					
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1407304

10-Jul-14

	r, Miller and Arian Pierce #1		ites							
Sample ID LCS-14101	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Dies	el Range (Organics	
Client ID: LCSS	Batch	n ID: 14	101	RunNo: 19731						
Prep Date: 7/8/2014	Analysis D	ate: 7/	8/2014	5	eqNo: 5	73226	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.8	68.6	130			
Surr: DNOP	4.0		5.000		80.6	57.9	140			
Sample ID MB-14101	Samp⊺	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics	
Client ID: PBS	Batch	n ID: 14	101	F	RunNo: 1	9731				
Prep Date: 7/8/2014	Analysis D	ate: 7/	8/2014	S	SeqNo: 5	73302	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.3		10.00		83.2	57.9	140			

Qualifiers:

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

Page 6 of 8

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1407304

10-Jul-14

Client: Project:	· · · · · ·	Ailler and A Pierce #1	ssocia	tes							
Sample ID	MB-14109	SampTy	pe: ME	BLK	Test	Code: EF	PA Method	8015D: Gasc	oline Rang	e	
Client ID:	PBS	Batch	ID: 14	109	R	unNo: 19	9783				
Prep Date:	7/8/2014	Analysis Da	ate: 7/	9/2014	s	eqNo: 57	74661	Units: mg/M	٤g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 890	5.0	1000		89.1	80	120			
Sample ID	LCS-14109	SampTy	vpe: LC	s	Test	Code: EF	PA Method	8015D: Gaso	iine Rang	e	
Client ID:	LCSS	Batch	ID: 14	109	R	unNo: 1	9783				
Prep Date:	7/8/2014	Analysis Da	ate: 7/	9/2014	S	eqNo: 5	74662	Units: mg/M	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
0	e Organics (GRO)	25	5.0	25.00	0	101	71.7	134	-		
Surr: BFB		960		1000		95.6	80	120	**		
Sample ID	1407304-002AMS	SampTy	/pe: M\$	6	Tes	Code: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	Base Composite	Batch	ID: 14	109	ਜ	tunNo: 1	9783				
Prep Date:	7/8/2014	Analysis Da	ate: 7/	9/2014	S	eqNo: 5	74665	Units: mg/H	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	28	4.8	23.92	0	118	71.8	132			
Surr: BFB		950		956.9		99.6	80	120			
Sample ID	1407304-002AMSI	D SampTy	/pe: MS	SD	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	Base Composite	Batch	ID: 14	109	F	RunNo: 1	9783				
Prep Date:	7/8/2014	Analysis Da	ate: 7/	9/2014	5	eqNo: 5	74666	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	e Organics (GRO)	28	4.8	23.90	0	117	71.8	132	0.943	20	
Surr: BFB		960		956.0		100	80	120	0	0	

Qualifiers:

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

Page 7 of 8

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Katherine Pierce #1

Project:

Sample ID MB-14109	SampT	уре: МВ	LK	TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batcl	n ID: 14 1	09	F	RunNo: 19783						
Prep Date: 7/8/2014	Analysis E	Date: 7/9	9/2014	5	SeqNo: 574674			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	ND	0.050									
Toluene	ND	0.050									
Ethylbenzene	ND	0.050									
Xylenes, Total	ND	0.10									
Surr: 4-Bromofluorobenzene	0.97		1.000		97.4	80	120				
Sample ID LCS-14109	s	Tes	tCode: El	PA Method	8021B: Vola	tiles					
Client ID: LCSS Batch ID: 14109				F	RunNo: 1	9783					
Prep Date: 7/8/2014	Analysis E	Date: 7/	9/2014	5	SeqNo: 5	74675	Units: mg/k	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.0	0.050	1.000	0	101	80	120				
Toluene	0.97	0.050	1.000	0	97.0	80	120				
Ethylbenzene	0.98	0.050	1.000	0	98.5	80	120				
Xylenes, Total	3.0	0.10	3.000	0	98.6	80	120				
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120				
Sample ID 1407304-001AMS	SD Samp	Type: MS	D	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID: West Wall 0-9	Batc	h ID: 14 ′	109	F	RunNo: 1	9783					
Prep Date: 7/8/2014	Analysis [Date: 7/	9/2014	S	SeqNo: 5	74678	Units: mg/k	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.046	0.9225	0	124	77.4	142	2.59	20		
Toluene	1.1	0.046	0.9225	0	121	77	132	4.00	20		
Ethylbenzene	1.2	0.046	0.9225	0	127	77.6	134	1.87	20		
Xylenes, Total	3.5	0.092	2.768	0	128	77.4	132	2.39	20		
Surr: 4-Bromofluorobenzene	0.94		0.9225		101	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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 8 of 8

10-Jul-14

WO#:

1407304

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

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Sample Log-In Check List

Client Name: SMA-FARM	Work Order Number:	1407304		RcptNo: 1
Received by/date: AG-	07/07/14			
Logged By: Celina Sessa	7/7/2014 12:42:00 PM		Celin S	men
Completed By: Celina Sessa	7/8/2014 8:21:37 AM		Cilian S	
Reviewed By:	07/08/14			
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?		FedEx		
Log In				
4. Was an attempt made to cool the sample	s?	Yes 🗹	No 🗌	
5. Were all samples received at a temperatu	ne of ≻0°C to 6.0°C	Yes 🗌 Not reg	No 🗹	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated tes	st(s)?	Yes 🔽	No 🗌	
8. Are samples (except VOA and ONG) prop	erly preserved?	Yes 🗹	No 🗌	
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌
10.VOA vials have zero headspace?		Yes 🗹	No 🗌	No VOA Vials
11. Were any sample containers received br	oken?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🖌	No 🗌	for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain	of Custody?	Yes 🔽	No 🗌	Adjusted?
14. Is it clear what analyses were requested?		Yes 🗹	No 🗌	
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:
Special Handling (if applicable)				
16. Was client notified of all discrepancies wi	th this order?	Yes 🗌	No 🗌	NA 🔽
Person Notified:	Date			
By Whom:	Via:	📋 eMail 📋	Phone 🗌 Fax	In Person
Regarding:				
Client Instructions:				
17. Additional remarks:				

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	25.7	Good	Not Present			

C	onani-or-oustouy necora		Turn-Around	Time:	JE - 742,≣ - U]	.2					و میں			• •				B 8	
Client:	Soude	n. mil	ler + Associates	- I ≰ar Standard	□ Rush	h														
	<u></u>			Project Nam			ANALYSIS LABORATORY									F% . 8				
Mailing	Address	"401 I	N Broadway	- Mathe	rine fier	re #	4901 Hawkins NE - Albuquerque, NM 87109													
En	300300	100	Nm 87401	Project #:			Tel. 505-345-3975 Fax 505-345-4107													
Phone	#/50	41 2:	25-7535	5122855			Analysis Request													
email o	or Fax#: (licia	patterson@ Souder miller.com	Project Manager						5 201	. 5									
QA/QC	Package:		miller.com	Steve Moskal			021	IS OF				6		N, S	PCB's					
Star			□ Level 4 (Full Validation)				3) S.	(Ge	2			SIMS)		g	2 PC					
Accred				Sampler: A		an a	TMB's (8021)	TPH (Gas only)		.				2	808					Î
	NELAP Other EDD (Type)			On Ice:	X Xes décature 1=	<u>u no</u> 7-25-1	4	+	(B)	418	1504	9 8	श्व	ő	les /		(AO			≺ I
	[[Section 2010	MTBE	BTEX + MTBE	TPH 8015B(GRO / DROV MERC)	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)	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALNO	\Diamond	+ ×	801	₹,	Ň)	3) S	8 ₹) su	Ре	B	S)			qqn
				Type and #	i ype	1407304	€TEX}) E E	H	H		PAH	БЪ	Anio	808	826(827(Air E
7/2	1005	50il	West Wall 0-9	1 × 402	none	-001	X	/	$\overline{\lambda}$							_				
7/2	1000	Soil	Base Composite	1		-002	i		1		7									
7/5	1010	Soil				-003				7	N	1	Ŷ		1					
715	1015		Southwall 5-9			-004				Y	CV	9T		4	1	2				
7/2	0940		East Wall og		1	-005			T		7	X	2	7						
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Date: Time: Relinquished by:		Received by:	$\cap A$	Date Time 07 07 14	Remarks: Copy: Steven. moskal @soudermiller.com to Bill to Enterprise-Ottn. Thomas Long															
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

36.863670District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico Energy Minerals and Natural Resources

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

OIL CONS. DIV DIST. 3

NOV 17 2014

Form C-141 Revised August 8, 2011

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

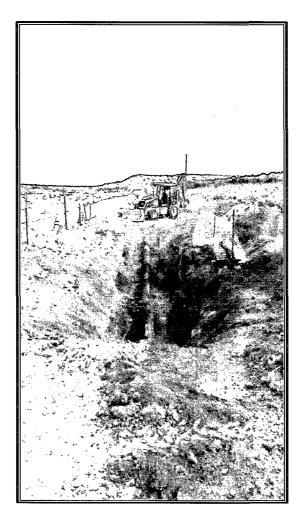
Release Notification and Corrective Action													
					OP	ERATOF	ł	[] Initial F	Report 🛛 Final Re	port		
Name of C	ompany:	Enterprise F	ield Serv	vices LLC	(Contact: Th	iomas Long			·			
		ve, Farmin				Telephone No. 505-599-2286							
		al O-17 Pip				Facility Type: Natural Gas Gathering Line							
Surface Ov	wner:BLM			Mineral O	wner:	her: BLM API No.							
				LOCA	ΓΙΟΝ	OF REL	EASE						
Unit Letter	Section	Township	Range	Feet from		/Couth	Feet from	Eas	West	County	—––]		
0	26	31N	8W	the	Line		the	Line		San Juan			
		L		760			1543						
		Latitude_	36.86	3539		Longitud	e <u>-107.64</u>	1100		_			
				NATU	JRE		EASE						
Type of Rele	ease: Natur	al Gas and N	latural Ga				Release 203	MCF	Volume F	Recovered: None			
Source of R	elease: Inte	ernal Corrosio	on				Hour of Occurre			Hour of Discovery:			
		0					4 @ 2:13 p.m.			14 3:00 p.m.			
Was Immed	liate Notice		s 🗆 No	🛛 Not Requ	uired		hum on Octob			MOCD – Cory Smith; BLM	1-		
By Whom?							Hour October 1						
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Enterprise to area of fluid completed of laboratory re the excavati Describe Ar Enterprise to area of fluid completed of	echnician in d staining c on October esults indica ion after the rea Affectec echnician in d staining c on October	itiated notific of approximal 24, 2014. S ated that hyce repairs were and Cleanu- itiated notific of approximal 24, 2014.	ation proc tely 25 fec Stockpiled Irocarbon complete p Action ation proc tely 25 fec Stockpiled	edures. The pi et long by 3 fe soils were phy contaminants v Taken On Octo edures. The pi et long by 3 fe soil was phys	peline et wid vsically were b ober 10 peline et wid sically	was isolate e was observed elow labora 0, 2014, a p was isolate e was observed separated a	d, blown down, erved on the g and soil samp tory detection f bipeline leak wa d, blown down, erved on the g and soil sample	depre round les for limits. as dise depre round es for	ssurized, lo surface. Re laboratory The stockp covered on ssurized, lo surface. Re laboratory	the Lateral O-17 ROW. T cked out and tagged out. epairs and remediation we analysis were collected. iled soil was used to back the Lateral O-17 ROW. T cked out and tagged out. epairs and remediation we analysis were collected.	An ere All kfill The An ere All		
										iled soil was used to bacl -141.	kfill		
rules and re which may a relieve the o ground wate	the excavation after the repairs were complete. A third party corrective action repot is included with this "Final" C-141. 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:	h	v trik	6				<u>OIL CON</u>	ISER	VATION	DIVISION			
Printed Nam	ne: Jon Fiel	ds				Approved by	Environmenta	I Spec	ialist:	the the			
Title: Directo	or, Environr	mental			/	Approval Da	te:12/29/14	1	Expiration	Date:			
E-mail Addr	ess:jefields	@eprod.com				Conditions o	of Approval:			Attached			
Date:	11/14/	ton	Phon	e: (713)381-66	84								

* Attach Additional Sheets If Necessary

#1005 143 634 1744

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Enterprise Products Lateral O-17 Pipeline Release Latitude North 36.863539°, Longitude West -107.641100° SW/SE (Unit O) Section 26, T31N R8W San Juan County, New Mexico November 4, 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

www.soudermiller.com



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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: Laboratory Analytical Reports

1.0 Executive Summary

On October 21, 22 and 24, 2014, Souder, Miller & Associates (SMA) responded to oversee the excavation of the hydrocarbon release associated with the Lateral O-17 pipeline. The release was initially reported on October 9, 2014 and is a result of internal and external corrosion of the six inch natural gas pipeline. The table below summarizes information about the pipeline remediation activities.

TABLE 1: RELEASE INFORMATION									
Name		Lateral O-17	Pipeline F	Release					
	Latitude	e/Longitude	Section, Township, Range						
Location	36.863539	-107.641100°	Unit 0	Section 26	T 31N, R 8W				
Date Reported	Date Reported October 9, 2014								
Reported to	Tom Long								
Land Owner	Bureau of Land	d Management (BL	M)						
Reported To	NM Oil Conser	vation Division (NM	10CD) an	d BLM					
Diameter of Pipeline	6 inches								
Source of Release	Internal/Extern	al Corrosion							
Release Contents	Natural Gas Li	quids/Condensate							
Release Volume	Unknown								
Nearest Waterway	Located about	650 feet to the N o	f a tributa	ry to Simo	n Canyon				
Depth to Groundwater	Estimated to b	e greater than 100	feet						
Nearest Domestic Water Source	Greater than 1	,000 feet							
NMOCD Ranking	10								
SMA Response Dates	10/21, 10/22, 1	0/24/2014							
Subcontractors	Energy Mainte	nance Services (EN	AS)						
Disposal Facility	No disposed soil								
Yd ³ Contaminated									
Soil Excavated and Disposed	No offsite soil disposal								

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 O-17 pipeline release site. The site is located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ (Unit O) Section 26, T31N, R8W, 36.863539°, -107.641100°, San Juan County, New Mexico, on land owned by the Bureau of Land Management (BLM). Figure 1 illustrates the location of the site.

3.0 Site Ranking and Land Jurisdiction

The release site is located about 650 feet to the north of a tributary to Simon Canyon, in an area owned by the BLM with an elevation of approximately 6,334 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is

estimated to be greater than 100 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 database for water wells in the vicinity of the release. No wells were located within 1,000 feet or 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 10 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 1000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On October 21, 22 and 24, 2014, SMA responded to a hydrocarbon release associated with the Lateral O-17 pipeline. Under the supervision and direction of SMA, EMS excavated soil for repair activities. SMA guided the excavation activities by collecting soil samples for field screening with a calibrated photo-ionization detector (PID). SMA field-screened the excavated soil, stockpiles, and the walls and base of the excavation to determine the extent of the release using a calibrated photoionization detector (PID). Field screening indicated that the extent of the hydrocarbon release had been removed. On October 24, Enterprise Products scheduled closure sample collection with the BLM and the NMOCD. Neither party was on site to witness sample collection. SMA collected 15 samples from the excavation and stockpiled soils (SC-6 through SC-20). Laboratory results confirmed contamination concentrations below NMOCD guidelines in the base and walls. Samples collected from the stockpiled soils also determined contamination below NMOCD guidelines and the stockpiles were used to backfill the excavation.

The pipeline trends generally east-west in the area of the release and the excavation was elongated in that direction. EMS excavated enough material to replace an entire 44 foot length of 6-inch pipeline. The final excavation measured approximately 71 feet long by 11 feet wide by 6 feet deep, covering an area of approximately 781 square feet. The entire excavation was left open until the lab results confirmed the final extents of the excavation were below NMOCD standards. Laboratory analysis confirmed the stockpiles were below NMOCD standards and therefore no soil was transported off site for disposal.

Samples were submitted for confirmation laboratory analysis per United States Environmental Protection Agency Methods: 8021 for benzene, toluene, ethylbenzene, and xylenes (BTEX) and 8015 for diesel and gasoline range organics (DRO/GRO). All samples were analyzed by Hall Environmental Analytical Laboratory in Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation, composite soil sample locations, and laboratory results.

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 10: 10 ppm (mg/kg) benzene, 50 ppm total BTEX, and 1,000 ppm TPH.

Laboratory analytical results for all samples collected were below NMOCD Guidelines for benzene (10 ppm), BTEX (50 ppm) and combined GRO/DRO (1,000 ppm). Small amounts of

TPH were detected in two of the wall samples (11 ppm GRO in SC-9 N East Wall and 12 ppm in SC-13 W Wall), but remained below standards. All other analytes in all other samples were below laboratory detection limits.

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 action at the Lateral O-17 pipeline release location.

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 Allen at 505-325-7535.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES

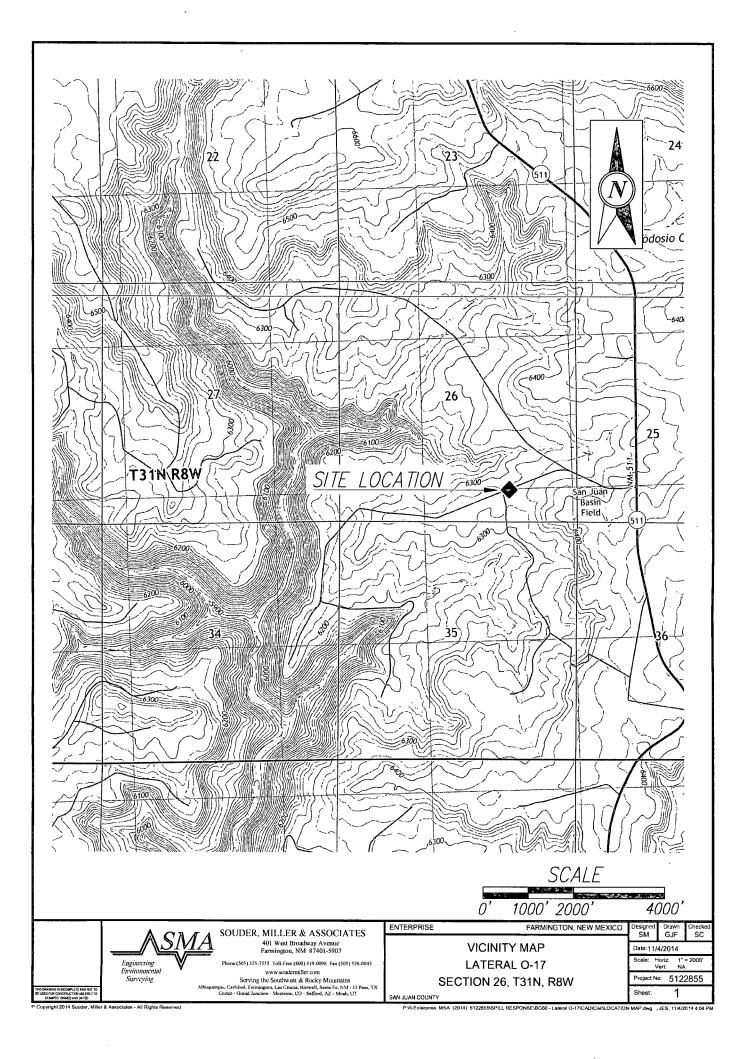
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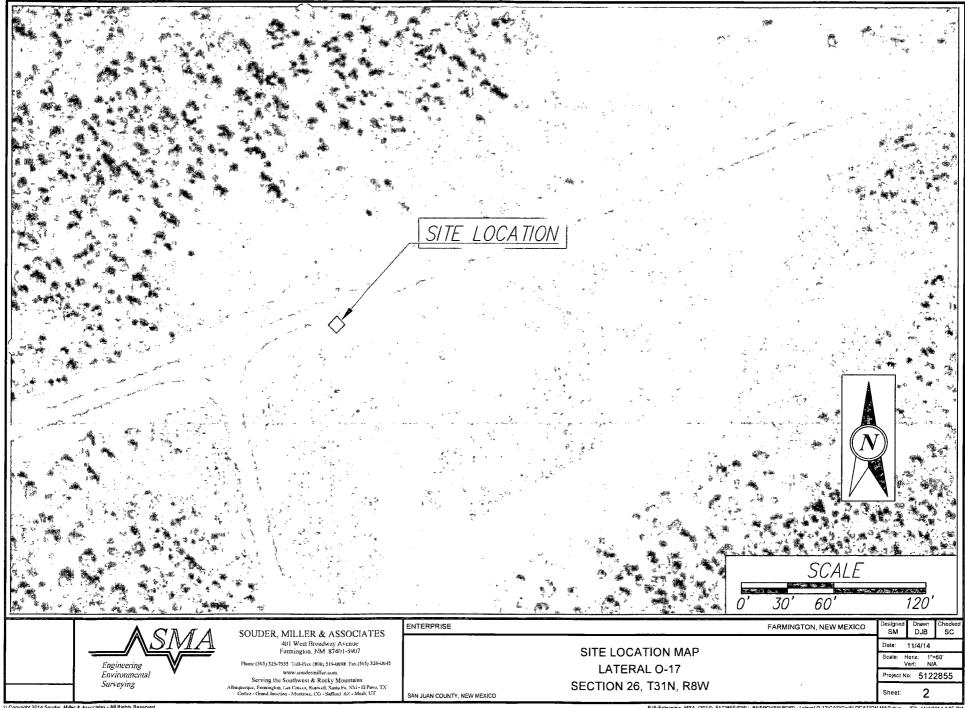
Staff Scientist

Teren Make

Steve Moskal Project Scientist

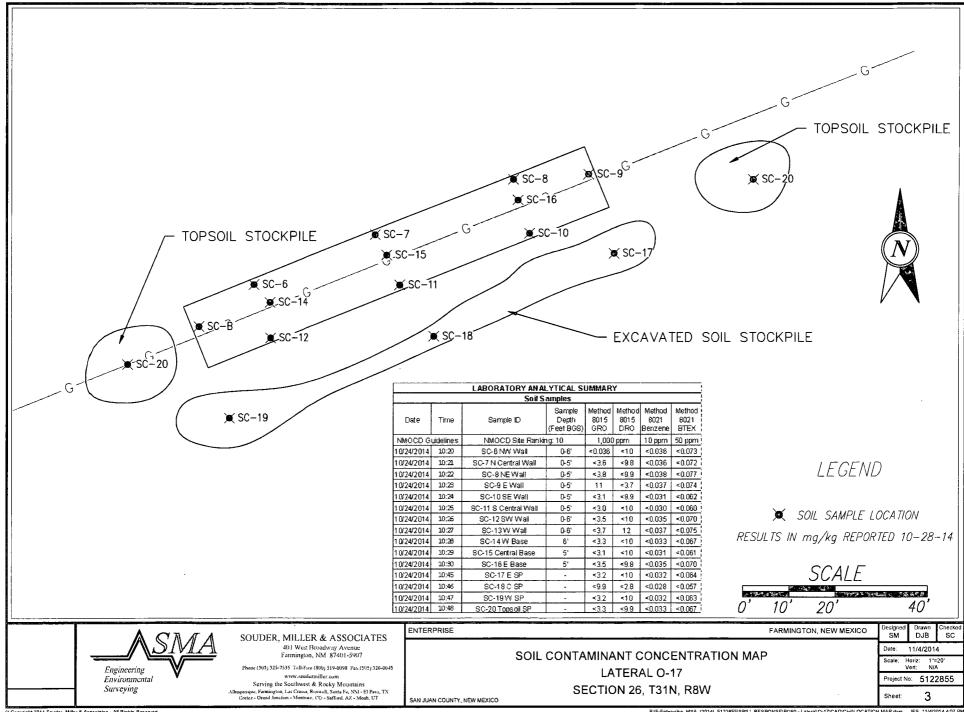
Figures





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P:5-Enterprise MSA (2014) 5122855/SPILL RESPONSE/BG60 - Lateral O-17/CAD/CivihLOCATION MAP.dwg , JES, 11/4/2014 4:05 PM



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P35-Enterprise MSA (2014) 5122855/SPILL RESPONSE/BG80 - Lateral O-17/CAD/Civil/LOCATION MAP.dwg . JES, 11/4/2014 4/07 PM

Tables

Enterprise Products Table 2: Site Ranking Criteria

Lateral O-17 Pipeline Release 11/4/2014 .

			11/4/2014		
Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 50 BGS = 20			Groundwater estimated		
50' to 99' = 10		Topographic Maps and Field Verification	to be greater than 100 feet below the Lateral O-		
>100' = 0	0		17 site.		
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 200' = 20					
200'-1000' = 10	10	Topographic Maps and Field Verification	650 feet to the north of tributary to Simon		
>1000'			Canyon		
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	·····	NM State Engineer Water Well Database	No recorded water wells located within 1,000 feet and six well within a 1 mile radius.		
Total Site Panking		10	·		
Total Site Ranking Soil Remedation Standards	0 to 9	10 10 to 19	>19		
Son Remediation Standards		10 (0 13	~13		
Benzene	10 PPM	10 PPM	10 PPM		
BTEX	50 PPM	50 PPM	50 PPM		



Enterprise Products Table 3: Laboratory Results Summary

Lateral O-17 Pipeline Release

Table 5. Eaboratory Results Summary											
		(mį	g/kg)				11/4/2014				
		LABORATORY ANA	YTICAL SU	MMARY							
Soil Samples											
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX				
NMOCD G	uidelines	NMOCD Site Rankin	g: 10	1,000	ppm	10 ppm	50 ppm				
10/24/2014	10:20	SC-6 NW Wall	0-6'	<0.036	<10	<0.036	<0.073				
10/24/2014	10:21	SC-7 N Central Wall	0-5'	<3.6	<9.8	<0.036	<0.072				
10/24/2014	10:22	SC-8 NE Wall	0-5'	<3.8	<9.9	<0.038	<0.077				
10/24/2014	10:23	SC-9 E Wall	0-5'	11	<3.7	<0.037	<0.074				
10/24/2014	10:24	SC-10 SE Wall	0-5'	<3.1	<9.9	<0.031	<0.062				
10/24/2014	10:25	SC-11 S Central Wall	0-5'	<3.0	<10	<0.030	<0.060				
10/24/2014	10:26	SC-12 SW Wall	0-6'	<3.5	<10	<0.035	<0.070				
10/24/2014	10:27	SC-13 W Wall	0-6'	<3.7	12	<0.037	<0.075				
10/24/2014	10:28	SC-14 W Base	6'	<3.3	<10	<0.033	<0.067				
10/24/2014	10:29	SC-15 Central Base	5'	<3.1	<10	<0.031	<0.061				
10/24/2014	10:30	SC-16 E Base	5'	<3.5	<9.8	<0.035	<0.070				
10/24/2014	10:45	SC-17 E SP	-	<3.2	<10	<0.032	<0.064				
10/24/2014	10:46	SC-18 C SP	-	<9.9	<2.8	<0.028	<0.057				
10/24/2014	10:47	SC-19 W SP	-	<3.2	<10	<0.032	<0.063				
10/24/2014	10:48	SC-20 Topsoil SP	-	<3.3	<9.9	<0.033	<0.067				



Appendix A Photographic Documentation

Site Photographs Enterprise Products Lateral O-17 Pipeline Release

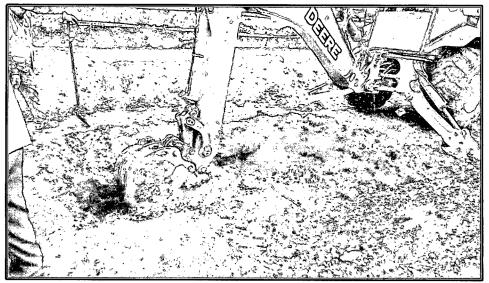


Photo 1: Beginning of excavation at the Lateral O-17 pipeline release.

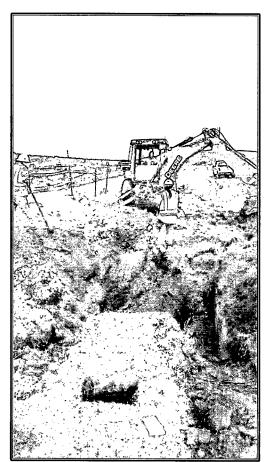


Photo 2: Exposing pipe nearing the release point at the Lateral O-17 release. Pothole visible in forground.

Site Photographs Enterprise Products Lateral O-17 Pipeline Release

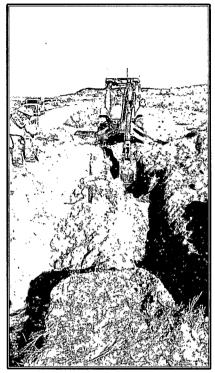


Photo 3: View of rubber tired backhoe equipped with rock teeth used during the excavation.

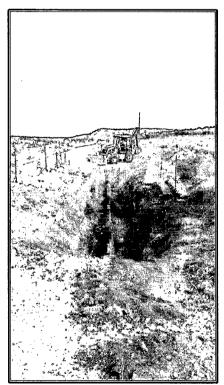


Photo 4: View of Lateral O-17 pipeline excavation at its fullest extent.

Site Photographs Enterprise Products Lateral O-17 Pipeline Release

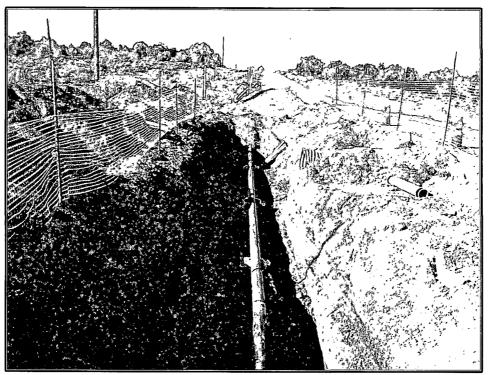


Photo 5: View of repairs completed, new segment in place.

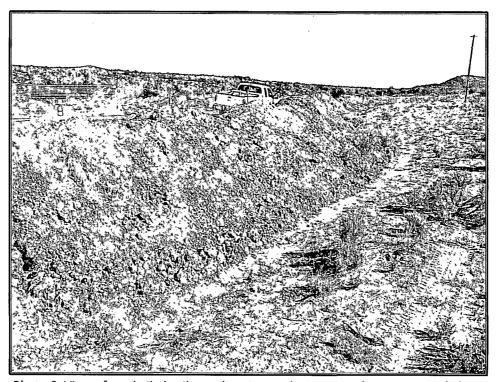


Photo 6: View of stockpiled soil, purple paint marks segments between sample locations.

Appendix B Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 28, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: (505) 325-5667 FAX (505) 327-1496

RE: Lateral 0-17

OrderNo.: 1410B91

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 15 sample(s) on 10/25/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report						
Lab Order 1410B91						
Date Reported: 10/28/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

 Project:
 Lateral 0-17

 Lab ID:
 1410B91-001

Client Sample ID: SC-6 NW Wall @0-6' Collection Date: 10/24/2014 10:20:00 AM

Matrix: MEOH (SOIL)

OIL) Received Date: 10/25/2014 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analy	/st: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/27/2014 10:33:43	AM 16092
Surr: DNOP	79.6	63.5-128	%REC	1	10/27/2014 10:33:43	AM 16092
EPA METHOD 8015D: GASOLINE R	ANGE				Analy	vst: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	10/25/2014 2:44:24 F	PM R22140
Surr: BFB	91.5	80-120	%REC	1	10/25/2014 2:44:24 F	PM R22140
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.036	mg/Kg	1	10/25/2014 2:44:24 F	PM R22140
Toluene	ND	0.036	mg/Kg	1	10/25/2014 2:44:24	PM R22140
Ethylbenzene	ND	0.036	mg/Kg	1	10/25/2014 2:44:24 F	PM R22140
Xylenes, Total	ND	0.073	mg/Kg	1	10/25/2014 2:44:24 F	PM R22140
Surr: 4-Bromofluorobenzene	96.5	80-120	%REC	1	10/25/2014 2:44:24 F	PM R22140

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank	
	E Value above quantitation range		Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Hall Environmental Analysis		Lab Order 1410B91 Date Reported: 10/28	3/2014			
CLIENT: Souder, Miller and Associates			Client Sampl	e ID: SC	-7 N Central Wall @	i) 0-5'
Project: Lateral 0-17			Collection I	Date: 10	/24/2014 10:21:00 A	M
Lab ID: 1410B91-002	Matrix:	MEOH (SOI	L) Received I	Date: 10,	/25/2014 9:45:00 AN	M
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE (ORGANICS				Analy	/st: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	10/27/2014 11:04:04	AM 16092
Surr: DNOP	66.9	63.5-128	%REC	1	10/27/2014 11:04:04	AM 16092
EPA METHOD 8015D: GASOLINE RANG	θE				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	10/25/2014 4:10:16	PM R22140
Surr: BFB	93.4	80-120	%REC	1	10/25/2014 4:10:16	PM R22140
EPA METHOD 8021B: VOLATILES					Analy	yst: NSB
Benzene	ND	0.036	mg/Kg	1	10/25/2014 4:10:16 I	PM R22140
Toluene	ND	0.036	mg/Kg	1	10/25/2014 4:10:16 I	PM R22140
Ethylbenzene	ND	0.036	mg/Kg	1	10/25/2014 4:10:16	PM R22140
Xylenes, Total	ND	0.072	mg/Kg	1	10/25/2014 4:10:16	PM R22140

80-120

%REC

1

98.2

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysi	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 18
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 2 01 10
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

10/25/2014 4:10:16 PM R22140

Surr: 4-Bromofluorobenzene

ي. مريد المريد ا		····· , , ,			Date Reported. 10/20	2014
CLIENT: Souder, Miller and Associate	s		Client Sampl	e ID: SC	-8 NE Wall @ 0-5'	
Project: Lateral 0-17			Collection I	Date: 10/	/24/2014 10:22:00 A	M
Lab ID: 1410B91-003	Matrix:	MEOH (SOIL)	Received l	Date: 10/	25/2014 9:45:00 AN	/
Analyses	Result	RL Qua	l Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analy	st: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	10/27/2014 12:36:13	PM 16092
Surr: DNOP	71.3	63.5-128	%REC	1	10/27/2014 12:36:13	PM 16092
EPA METHOD 8015D: GASOLINE RAI	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	10/25/2014 5:36:10 F	M R22140
Surr: BFB	93.5	80-120	%REC	1	10/25/2014 5:36:10 F	PM R22140
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.038	mg/Kg	1	10/25/2014 5:36:10 F	PM R22140
Toluene	ND	0.038	mg/Kg	1	10/25/2014 5:36:10 F	M R22140
Ethylbenzene	ND	0.038	mg/Kg	1	10/25/2014 5:36:10 F	M R22140
Xylenes, Total	ND	0.077	mg/Kg	1	10/25/2014 5:36:10 F	PM R22140

80-120

%REC

1

97.9

Hall Environmental Analysis Laboratory, Inc.

1

Surr: 4-Bromofluorobenzene

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

.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank	
	E	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
J Analyte detected be		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report Lab Order 1410B91 Date Reported: 10/28/2014

10/25/2014 5:36:10 PM R22140

Analytical Report					
Lab Order 1410B91					
Date Reported: 10/28/2014					

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Souder, Miller and Associates
 Client Sample ID: SC-9 E Wall @ 0-5'

 Project:
 Lateral 0-17
 Collection Date: 10/24/2014 10:23:00 AM

 Lab ID:
 1410B91-004
 Matrix: MEOH (SOIL)
 Received Date: 10/25/2014 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE					Analys	t: JME
Diesel Range Organics (DRO)	11	10	mg/Kg	1	10/27/2014 1:10:32 PM	A 16092
Surr: DNOP	75.0	63.5-128	%REC	1	10/27/2014 1:10:32 PM	A 16092
EPA METHOD 8015D: GASOLINE RAN	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	10/25/2014 6:04:46 PM	A R22140
Surr: BFB	94.5	80-120	%REC	1	10/25/2014 6:04:46 PM	A R22140
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.037	mg/Kg	1	10/25/2014 6:04:46 PI	M R22140
Toluene	ND	0.037	mg/Kg	1	10/25/2014 6:04:46 PM	M R22140
Ethylbenzene	ND	0.037	mg/Kg	1	10/25/2014 6:04:46 PM	A R22140
Xylenes, Total	ND	0.074	mg/Kg	1	10/25/2014 6:04:46 PM	A R22140
Surr: 4-Bromofluorobenzene	98.0	80-120	%REC	1	10/25/2014 6:04:46 PM	A R22140

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	E Value above quantitation range		Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Hall Environmental Analysis Laboratory, Inc. Date Reported: 10/28/201							014
Project: Lateral 0-17 Collection						2-10 SE Wall @ 0-5' /24/2014 10:24:00 AM /25/2014 9:45:00 AM	[
Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	RGANICS					Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	10/27/2014 1:29:25 PM	16092
Surr: DNOP	85.2	63.5-128		%REC	1	10/27/2014 1:29:25 PM	16092
EPA METHOD 8015D: GASOLINE RANG	E					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.1		mg/Kg	1	10/25/2014 6:33:21 PM	R22140
Surr: BFB	95.3	80-120		%REC	1	10/25/2014 6:33:21 PM	R22140
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.031		mg/Kg	1	10/25/2014 6:33:21 PM	R22140
Toluene	ND	0.031		mg/Kg	1	10/25/2014 6:33:21 PM	R22140
Ethylbenzene	ND	0.031		mg/Kg	1	10/25/2014 6:33:21 PM	R22140
Xylenes, Total	ND	0.062		mg/Kg	1	10/25/2014 6:33:21 PM	R22140

80-120

%REC

1

97.4

Surr: 4-Bromofluorobenzene

•

Analytical Report Lab Order 1410B91

10/25/2014 6:33:21 PM R22140

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysi	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 18
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 5 01 18
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis	Date Reported: 10/28/20)14					
CLIENT: Souder, Miller and AssociatesProject:Lateral 0-17Lab ID:1410B91-006	Matrix:	MEOH (S		Collection 1	Date: 10/	2-11 S Central Wall @ (/24/2014 10:25:00 AM /25/2014 9:45:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE (ORGANICS					Analyst:	BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/27/2014 1:51:14 PM	16092
Surr: DNOP	87.7	63.5-128		%REC	1	10/27/2014 1:51:14 PM	16092
EPA METHOD 8015D: GASOLINE RANG	ε					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	3.0	1	mg/Kg	1	10/25/2014 7:01:57 PM	R22140
Surr: BFB	93.8	80-120)	%REC	1	10/25/2014 7:01:57 PM	R22140
EPA METHOD 8021B: VOLATILES						Analyst:	NSB
Benzene	ND	0.030)	mg/Kg	1	10/25/2014 7:01:57 PM	R22140
Toluene	ND	0.030)	mg/Kg	1	10/25/2014 7:01:57 PM	R22140
Ethylbenzene	ND	0.030)	mg/Kg	1	10/25/2014 7:01:57 PM	R22140
Xylenes, Total	ND	0.060)	mg/Kg	1	10/25/2014 7:01:57 PM	R22140

80-120

%REC

97.0

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	ND Not Detected at the Reporting Limit		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	Page 6 of 18	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report Lab Order 1410B91

1 10/25/2014 7:01:57 PM R22140

Surr: 4-Bromofluorobenzene

Hall Environmental Analysis Laboratory, Inc.						Lab Order 1410B91 Date Reported: 10/28/	2014
CLIENT: Souder, Miller and Associates			C	lient Samp	e ID: SC	-12 SW Wall @0-6'	
Project: Lateral 0-17				Collection	Date: 10/	/24/2014 10:26:00 AM	M
Lab ID: 1410B91-007	Matrix:	MEOH (S	OIL)	Received	Date: 10/	/25/2014 9:45:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	ORGANICS					Analys	st: JME
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/27/2014 1:41:23 Pl	M 16092
Surr: DNOP	73.8	63.5-128		%REC	1	10/27/2014 1:41:23 Pl	M 16092
EPA METHOD 8015D: GASOLINE RANG	ε					Analys	st: NSB
Gasoline Range Organics (GRO)	ND	3.5		mg/Kg	1	10/25/2014 7:30:34 PI	M R22140
Surr: BFB	95.3	80-120		%REC	1	10/25/2014 7:30:34 PI	M R22140
EPA METHOD 8021B: VOLATILES						Analys	st: NSB
Benzene	ND	0.035		mg/Kg	1	10/25/2014 7:30:34 PI	W R22140
Toluene	ND	0.035		mg/Kg	1	10/25/2014 7:30:34 PI	M R22140
Ethylbenzene	ND	0.035		mg/Kg	1	10/25/2014 7:30:34 PI	M R22140
Xylenes, Total	ND	0.070		mg/Kg	1	10/25/2014 7:30:34 PI	M R22140
Surr: 4-Bromofluorobenzene	98.2	80-120	I.	%REC	1	10/25/2014 7:30:34 PI	M R22140

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Ε	Value above quantitation range	Н	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 7 of 18
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	ruge / or re
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.						Date Reported: 10/28/2014			
CLIENT: Project: Lab ID:	Souder, Miller and Associates Lateral 0-17 1410B91-008	Matrix:	MEOH (SC		Collection I)ate: 10/	2-13 W Wall @ 0-6' /24/2014 10:27:00 AM /25/2014 9:45:00 AM	1	
Analyses		Result	·····		Units	DF	Date Analyzed	Batch	
EPA MET	THOD 8015D: DIESEL RANGE (ORGANICS					Analys	t: JME	
Diesel R	ange Organics (DRO)	12	9.9		mg/Kg	1	10/27/2014 2:12:15 PM	1 16092	
Surr: I	DNOP	71.4	63.5-128		%REC	1	10/27/2014 2:12:15 PM	1 16092	
	THOD 8015D: GASOLINE RANG	θE					Analys	t: NSB	
Gasoline	e Range Organics (GRO)	ND	3.7		mg/Kg	1	10/25/2014 7:59:10 PM	1 R22140	
Surr:	BFB	95.5	80-120		%REC	1	10/25/2014 7:59:10 PM	1 R22140	
EPA MET	THOD 8021B: VOLATILES						Analys	t: NSB	
Benzene	e	ND	0.037		mg/Kg	1	10/25/2014 7:59:10 PM	1 R22140	
Toluene		ND	0.037		mg/Kg	1	10/25/2014 7:59:10 PM	1 R22140	
Ethylben	zene	ND	0.037		mg/Kg	1	10/25/2014 7:59:10 PM	1 R22140	
Xylenes,	, Total	ND	0.075		mg/Kg	1	10/25/2014 7:59:10 PM	1 R22140	
Surr: 4	4-Bromofluorobenzene	98.1	80-120		%REC	1	10/25/2014 7:59:10 PM	R22140	

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

•		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
		Value above quantitation range	н	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 8 of 18
O RSD is greater than RSDlin		RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1410B91

Analytical Report
Lab Order 1410B91
Date Reported: 10/28/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

1410B91-009

Project: Lateral 0-17

Lab ID:

Client Sample ID: SC-14 W Base @ 6' Collection Date: 10/24/2014 10:28:00 AM Matrix: MEOH (SOIL) Received Date: 10/25/2014 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI	E ORGANICS				Analy	yst: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/27/2014 10:50:47	AM 16092
Surr: DNOP	94.7	63.5-128	%REC	1	10/27/2014 10:50:47	AM 16092
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	yst: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	10/25/2014 8:27:49 I	PM R22140
Surr: BFB	95.9	80-120	%REC	1	10/25/2014 8:27:49	PM R22140
EPA METHOD 8021B: VOLATILES					Analy	yst: NSB
Benzene	ND	0.033	mg/Kg	1	10/25/2014 8:27:49	PM R22140
Toluene	ND	0.033	mg/Kg	1	10/25/2014 8:27:49	PM R22140
Ethylbenzene	ND	0.033	mg/Kg	1	10/25/2014 8:27:49	PM R22140
Xylenes, Total	ND	0.067	mg/Kg	1	10/25/2014 8:27:49	PM R22140
Surr: 4-Bromofluorobenzene	98.3	80-120	%REC	1	10/25/2014 8:27:49	PM R22140

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth
	Е	Value above quantitation range	Н	Holding times for preparation or analysi
	ł	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

- S Spike Recovery outside accepted recovery limits
- hod Blank
- sis exceeded
- RL Reporting Detection Limit
- Page 9 of 18

Hall Environmental Analysis	•		Lab Order 1410B91 Date Reported: 10/28	/2014		
CLIENT: Souder, Miller and AssociatesProject:Lateral 0-17Lab ID:1410B91-010	Matrix:	MEOH (SOI	Collection I	Date: 10	C-15 Central Base @ /24/2014 10:29:00 A /25/2014 9:45:00 AN	Μ
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE C	RGANICS				Analy	/st: BCN
Diesel Range Organics (DRO)	11	10	mg/Kg	1	10/27/2014 11:12:24	AM 16092
Surr: DNOP	100	63.5-128	%REC	1	10/27/2014 11:12:24	AM 16092
EPA METHOD 8015D: GASOLINE RANG	iΕ				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	3.1	mg/Kg	1	10/25/2014 8:56:32 F	PM R22140
Surr: BFB	95.9	80-120	%REC	1	10/25/2014 8:56:32 F	PM R22140
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.031	mg/Kg	1	10/25/2014 8:56:32 F	PM R22140
Toluene	ND	0.031	mg/Kg	1	10/25/2014 8:56:32 F	PM R22140
Ethylbenzene	ND	0.031	mg/Kg	1	10/25/2014 8:56:32 F	PM R22140
Xylenes, Total	ND	0.061	mg/Kg	1	10/25/2014 8:56:32	PM R22140
	07.5					

80-120

%REC

1

97.5

Surr: 4-Bromofluorobenzene

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	hod Blank	
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
•	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report

10/25/2014 8:56:32 PM R22140

Analytical Report	
Lab Order 1410B91	

Date Reported: 10/28/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

 Project:
 Lateral 0-17

 Lab ID:
 1410B91-011

Client Sample ID: SC-16 E. Base @ 5' Collection Date: 10/24/2014 10:30:00 AM Matrix: MEOH (SOIL) Received Date: 10/25/2014 9:45:00 AM

Analyses	Result	RL Qu	al Units	DF Date Analyzed E	Batch
EPA METHOD 8015D: DIESEL RANGE				Analyst: E	BCN
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1 10/27/2014 11:34:17 AM 1	16092
Surr: DNOP	79.3	63.5-128	%REC	1 10/27/2014 11:34:17 AM 1	16092
EPA METHOD 8015D: GASOLINE RAI	NGE			Analyst: N	NSB
Gasoline Range Organics (GRO)	ND	3.5	mg/Kg	1 10/26/2014 1:11:11 AM	R22140
Surr: BFB	97.3	80-120	%REC	1 10/26/2014 1:11:11 AM	R22140
EPA METHOD 8021B: VOLATILES				Analyst: I	NSB
Benzene	ND	0.035	mg/Kg	1 10/26/2014 1:11:11 AM	R22140
Toluene	ND	0.035	mg/Kg	1 10/26/2014 1:11:11 AM	R22140
Ethylbenzene	ND	0.035	mg/Kg	1 10/26/2014 1:11:11 AM	R22140
Xylenes, Total	ND	0.070	mg/Kg	1 10/26/2014 1:11:11 AM F	R22140
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1 10/26/2014 1:11:11 AM F	R22140

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	hod Blank	
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ow quantitation limits ND Not Detected at th		Page 11 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage 11 01 10	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

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Hall Environmental Analysis CLIENT: Souder, Miller and Associates	e ID: SC	Lab Order 1410B91 Date Reported: 10/28/	2014				
Project: Lateral 0-17						/24/2014 10:45:00 A	
Lab ID: 1410B91-012	Matrix:	MEOH (S	OIL)	Received I	Date: 10/	/25/2014 9:45:00 AM	[
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	RGANICS					Analys	st: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/27/2014 11:56:00 /	AM 16092
Surr: DNOP	92.1	63.5-128		%REC	1	10/27/2014 11:56:00	AM 16092
EPA METHOD 8015D: GASOLINE RANG	ε					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/26/2014 1:39:49 A	M R22140
Surr: BFB	97.8	80-120		%REC	1	10/26/2014 1:39:49 A	M R22140
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.032		mg/Kg	1	10/26/2014 1:39:49 A	M R22140
Toluene	ND	0.032		mg/Kg	1	10/26/2014 1:39:49 A	M R22140
Ethylbenzene	ND	0.032		mg/Kg	1	10/26/2014 1:39:49 A	M R22140
Xylenes, Total	ND	0.064		mg/Kg	1	10/26/2014 1:39:49 A	M R22140
Surr: 4-Bromofluorobenzene	101	80-120		%REC	1	10/26/2014 1:39:49 A	M R22140

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	Aethod Blank	
	Ē	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J Analyte detected below quantitation		ND	Not Detected at the Reporting Limit	Page 12 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report					
Lab Order 1410B91					
Date Reported: 10/28/2014					

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Souder, Miller and Associates
 Client Sample ID: SC-18 C Stock Pile

 Project:
 Lateral 0-17
 Collection Date: 10/24/2014 10:46:00 AM

 Lab ID:
 1410B91-013
 Matrix: MEOH (SOIL)
 Received Date: 10/25/2014 9:45:00 AM

 Analyses
 Result
 RL
 Qual
 Units
 DF
 Date Analyzed
 Batch

Allalyses	Kesun			Dr	Date Allalyzeu	Daten
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analy	rst: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	10/27/2014 12:17:42	PM 16092
Surr: DNOP	90.8	63.5-128	%REC	1	10/27/2014 12:17:42	PM 16092
EPA METHOD 8015D: GASOLINE R	ANGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	2.8	mg/Kg	1	10/26/2014 2:08:25 A	M R22140
Surr: BFB	97.9	80-120	%REC	1	10/26/2014 2:08:25 A	M R22140
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.028	mg/Kg	1	10/26/2014 2:08:25 A	M R22140
Toluene	ND	0.028	mg/Kg	1	10/26/2014 2:08:25 A	M R22140
Ethylbenzene	ND	0.028	mg/Kg	1	10/26/2014 2:08:25 A	M R22140
Xylenes, Total	ND	0.057	mg/Kg	1	10/26/2014 2:08:25 A	M R22140
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	10/26/2014 2:08:25 A	M R22140

		D		1 101 1
 * Value exceeds Maximum Contaminant Level. 		в	hod Blank	
Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded	
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 13 of 18
0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
S	Spike Recovery outside accepted recovery limits			
	0 J	 J Analyte detected below quantitation limits O RSD is greater than RSDlimit R RPD outside accepted recovery limits 	EValue above quantitation rangeHJAnalyte detected below quantitation limitsNDORSD is greater than RSDlimitPRRPD outside accepted recovery limitsRL	EValue above quantitation rangeHHolding times for preparation or analyJAnalyte detected below quantitation limitsNDNot Detected at the Reporting LimitORSD is greater than RSDlimitPSample pH greater than 2.RRPD outside accepted recovery limitsRLReporting Detection Limit

Hall Environmental Analysis	s Labora	atory, In	ic.	50 I I		Lab Order 1410B91 Date Reported: 10/28	/2014
CLIENT: Souder, Miller and Associates			С	lient Sampl	e ID: SC	2-19 W Stock Pile	
Project: Lateral 0-17			1	Collection	Date: 10/	/24/2014 10:47:00 A	Μ
Lab ID: 1410B91-014	Matrix:	MEOH (Se	OIL)	Received	Date: 10/	/25/2014 9:45:00 AN	1
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE (ORGANICS					Analy	rst: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/27/2014 12:45:51	PM 16092
Surr: DNOP	101	63.5-128		%REC	1	10/27/2014 12:45:51	PM 16092
EPA METHOD 8015D: GASOLINE RANG	θE					Analy	rst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	10/26/2014 2:37:01 A	M R22140
Surr: BFB	98.0	80-120		%REC	1	10/26/2014 2:37:01 A	M R22140
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.032		mg/Kg	1	10/26/2014 2:37:01 A	M R22140
Toluene	ND	0.032		mg/Kg	1	10/26/2014 2:37:01 #	M R22140
Ethylbenzene	ND	0.032		mg/Kg	1	10/26/2014 2:37:01 A	M R22140
Xylenes, Total	ND	0.063		mg/Kg	1	10/26/2014 2:37:01 A	M R22140
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/26/2014 2:37:01 /	M R22140

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Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	Aethod Blank	
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 14 of 18	
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 14 01 18	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report						
Lab Order 1410B91						
Date Reported: 10/28/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Lateral 0-17 1410B91-015

Lab ID:

Client Sample ID: SC-20 Top Soil Stock Pile Collection Date: 10/24/2014 10:48:00 AM Matrix: MEOH (SOIL) Received Date: 10/25/2014 9:45:00 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	9.9	mg/Kg	1	10/27/2014 1:07:41 PM	16092
Surr: DNOP	82.2	63.5-128	%REC	1	10/27/2014 1:07:41 PM	16092
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.3	mg/Kg	1	10/26/2014 3:05:37 AM	R22140
Surr: BFB	97.5	80-120	%REC	1	10/26/2014 3:05:37 AM	R22140
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.033	mg/Kg	1	10/26/2014 3:05:37 AM	R22140
Toluene	ND	0.033	mg/Kg	1	10/26/2014 3:05:37 AM	R22140
Ethylbenzene	ND	0.033	mg/Kg	1	10/26/2014 3:05:37 AM	R22140
Xylenes, Total	ND	0.067	mg/Kg	1	10/26/2014 3:05:37 AM	R22140
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	10/26/2014 3:05:37 AM	R22140

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND Not Detected at the Reporting Limit		Page 15 of 18	
	0	RSD is greater than RSDlimit	Р	P Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL.	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: Lateral 0-17

Sample ID MB-16092	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range C	Organics	
Client ID: PBS	Batch	n ID: 16	092	F	RunNo: 2	2156				
Prep Date: 10/27/2014	Analysis D	ate: 10	0/27/2014	S	SeqNo: 6	52397	Units: mg/#	٤g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10	40.00		00.0	60 F	108			
Sun: DNOP	9.2		10.00		92.2	63.5	128			
Sample ID LCS-16092		ype: LC		Tes			8015D: Diese	el Range C	Organics	
	SampT	ype: LC	:S			PA Method	·····	el Range C	Drganics	
Sample ID LCS-16092	SampT	n ID: 16	:S 092	F	tCode: El	PA Method 2156	·····	Ū	Organics	
Sample ID LCS-16092 Client ID: LCSS	SampT Batch	n ID: 16	:S 092 D/27/2014	F	tCode: El RunNo: 2	PA Method 2156	8015D: Dies	Ū	Drganics RPDLimit	Qual
Sample ID LCS-16092 Client ID: LCSS Prep Date: 10/27/2014	SampT Batch Analysis D	n ID: 16 Date: 1(:S 092 D/27/2014	F	tCode: El RunNo: 2 SeqNo: 6	PA Method 2156 52398	8015D: Dies Units: mg/F	(g	•	Qual

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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1410B91 28-Oct-14

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

28-Oct-14

Client:	Souder, N	Ailler and A	Associa	tes							
Project:	Lateral 0-	-17									
Sample ID	5ML RB	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	PBS	Batch	ID: R2	2140	F	RunNo: 22	2140				
Prep Date:		Analysis D	ate: 10)/25/2014	S	SeqNo: 6	51557	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	ND	5.0								
Surr: BFB		920		1000		92.1	80	120			
Sample ID	2.5UG GRO LCS	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	LCSS	Batch	iD: R2	2140	F	RunNo: 2	2140				
Prep Date:		Analysis D	ate: 10)/25/2014	S	SeqNo: 6	51558	Units: mg/k	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	26	5.0	25.00	0	105	65.8	139			
Surr: BFB		1000		1000		100	80	120			
Sample ID	1410B91-001AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SC-6 NW Wall @0)-6' Batch	1D: R2	2140	F	RunNo: 2 :	2140				
Prep Date:		Analysis D	ate: 10)/25/2014	5	SeqNo: 6	51576	Units: mg/ł	٢g		•
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	18	3.6	18.20	0	98.1	71.8	132			
Surr: BFB		730		727.8		99.7	80	120			
Sample ID	1410B91-001AMS	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SC-6 NW Wall @0)-6' Batch	n ID: R2	2140	F	RunNo: 2	2140				
Prep Date:		Analysis D	ate: 10	0/25/2014	5	SeqNo: 6	51577	Units: mg/l	Kg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	18	3.6	18.20	0	100	71.8	132	2.18	20	
Surr: BFB		740		727.8		101	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 17 of 18

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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: Lateral 0-17

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Sample ID SML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651586 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quadratic Benzene ND 0.050 Image: Close Clo
Prep Date: Analysis Date: 10/25/2014 SeqNo: 651586 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quadratic set of the s
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quadratic Benzene ND 0.050 Toluene ND 0.050 Ethylbenzene ND 0.050
Benzene ND 0.050 Toluene ND 0.050 Ethylbenzene ND 0.050
Toluene ND 0.050 Ethylbenzene ND 0.050
Ethylbenzene ND 0.050
Xylenes, Total ND 0.10
Surr: 4-Bromofluorobenzene 0.95 1.000 95.5 80 120
Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles
Client ID: LCSS Batch ID: R22140 RunNo: 22140
Prep Date: Analysis Date: 10/25/2014 SeqNo: 651587 Units: mg/Kg
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu
Benzene 1.0 0.050 1.000 0 101 80 120
Toluene 1.0 0.050 1.000 0 102 80 120
Ethylbenzene 1.0 0.050 1.000 0 104 80 120
Xylenes, Total 3.1 0.10 3.000 0 102 80 120
Surr: 4-Bromofluorobenzene 1.0 1.000 103 80 120
Surr: 4-Bromofluorobenzene 1.0 1.000 103 80 120 Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Quint
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu Benzene 0.47 0.036 0.7231 0 64.8 77.4 142 S Toluene 0.48 0.036 0.7231 0.009234 64.4 77.6 134 S
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu Benzene 0.47 0.036 0.7231 0 64.8 77.4 142 S Toluene 0.48 0.036 0.7231 0.009234 64.4 77.6 134 S Xylenes, Total 1.4 0.072 2.169 0.03082 64.6 77.4 132 S
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu Benzene 0.47 0.036 0.7231 0 64.8 77.4 142 S Toluene 0.48 0.036 0.7231 0.01760 63.4 77 132 S Ethylbenzene 0.47 0.036 0.7231 0.009234 64.4 77.6 134 S
Sample ID 1410B91-002AMS SampType: MS TestCode: EPA Method 8021B: Volatiles Client ID: SC-7 N Central Wall Batch ID: R22140 RunNo: 22140 Prep Date: Analysis Date: 10/25/2014 SeqNo: 651590 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qu Benzene 0.47 0.036 0.7231 0 64.8 77.4 142 S Toluene 0.48 0.036 0.7231 0.01760 63.4 77 132 S Ethylbenzene 0.47 0.036 0.7231 0.009234 64.4 77.6 134 S Xylenes, Total 1.4 0.072 2.169 0.03082 64.6 77.4 132 S
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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 18 of 18

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

WO#: 1410B91

28-Oct-14

	HALL Environmental Analysis Laboratory	• TEL: 505-345	nental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 i-3975 FAX: 505-345-4107 ww.hallenvironmental.com	Samp	ole Log-In Ch	eck List
Clien	It Name: SMA-FARM	Work Order Nu	mber: 1410B91		RcptNo: 1	
Rece	ived by/date	2 10/25	5/14	A>		
Logge	ed By: Ashley Gall	egos 10/25/2014 9:45:	00 AM 9	FF		
Comp	oleted By: Ashley Gall	egos 10/25/2014 10:08	9:47 AM 54	ŧŦ		
Revie	wed By:	$\geq 10/25$	514			
Chai	n of Custody		ť		,	
1. C	ustody seals intact on sar	nple bottles?	Yes	No 🗌	Not Present	
2. ls	Chain of Custody comple	ete?	Yes 🗹	No 🗌	Not Present	
З. Н	ow was the sample delive	red?	Courier			
Log	In					
4. v	Vas an attempt made to c	ool the samples?	Yes 🗹	No 🗌		
5. V	Vere all samples received	at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌		
6. s	Sample(s) in proper contai	ner(s)?	Yes 🗹	No 🗌		
7. S	ufficient sample volume for	or indicated test(s)?	Yes 🔽	No 🗌		
8. A	re samples (except VOA	and ONG) properly preserved?	Yes 🔽	No 🗌		
9. v	Vas preservative added to	bottles?	Yes 🗌	No 🗹	NA 🗌	
10.v	OA vials have zero heads	pace?	Yes 🗌	No 🗌	No VOA Vials 🗹	
11.V	Vere any sample containe	rs received broken?	Yes 🗀	No 🗹	A . 6	
	oes paperwork match bo		Yes 🗹	No 🗌	# of preserved bottles checked for pH:	>12 unless noted)
	Note discrepancies on cha	ain of custody) tified on Chain of Custody?	Yes 🔽	No 🗌	Adjusted?	
	s it clear what analyses w		Yes 🗹			<u></u>
	Vere all holding times able	•	Yes 🗹	No 🗌	Checked by:	
(1	If no, notify customer for a	uthorization.)			L	
	ial Handling (if app				·	
16.⊻ ⊤	Vas client notified of all di	screpancies with this order?	Yes 🗌		NA 🗹	
	Person Notified:		Date	.tt.		
	By Whom:		/ia: 🔲 eMail 🔲 Pho	ne 🗌 Fax	In Person	
	Regarding: Client Instructions:					

17. Additional remarks:

18. Cooler Information

	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Yes			

Page 1 of 1

C	hain [.]	of-Cu	istody Record	Turn-Around	Time:					1				813/	/T E	20		ME	81 7	- • •	
Client:	Smr	<u>`````</u>		□ Standard	M R	ush Same day_												RA			
		<u> </u>		Project Name);	0	1.													/12	. 🗳
Mailing	Address					0-17	www.hallenvironmental.com														
		401	W. Broadway	Project #:			-	4901 Hawkins NE - Albuquerque, NM 87109													
	Fa	ming	ton, NM 87401	-	2285	=_		Tel. 505-345-3975 Fax 505-345-4107 Analysis Request					3	9 U.	a si						
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email o	r Fax#: <	Herrer	. Mosxal@ Szidemille				=	, ying	PG 1					O4)	ഗ						
	C Package:			Ste	ue W	loskal	(8021)	(Gas only)	4			ŝ		04,S	PCB'				Ì		
💢 Stan	dard Level 4 (Full Validation)					· · · · · · · · · · · · · · · · · · ·	-1 -1	Ü	R			SIMS)		۲ ۵	Ъ И						
Accredi				Sampler:			TMB's	+ TPH ((GRO/DRO	1	÷	8270		Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082						F
	AP	Othe	۲	On Ice: 🚬 🖄 Yes 🗆 🛛 No			4	+	<u>6</u>	418.	504.1)	r 82	Ś	0 ^{3,1}	s / S		(A)				or 2
	(Type)	r		Sample Tem	perature:	5.1	i H	BE	Ñ		po	00	etal	CI,N	cide	(A	>-				کر ا
				Cantainan			BTEX)+ MTBE	BTEX + MTBE	TPH 8015B	TPH (Method	EDB (Method	PAH's (8310 or	RCRA 8 Metals	(F,(esti	8260B (VOA)	(Semi-VOA)				Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Container Type and #	Preserva		k	×	180	N)	3 (IV	T's (SA.	suc	Ъ.	B	<u>s</u>)				ang Bub
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	1027		SC-B NE WALLCO-S'			-003															
	1023	1 1	52-9EW2110.0-5'			- 004															
	1024		50-1005 wall 00-5'			-005															
	1025		SC-11S Contral waller	5'		-006															
	1026		5C-12 Aurell CO.10'			-007															
	1027		5-13 1. 1. 1. Sall @ 0.6			-608															
	1028		c-14 Lo. Base P Lo'			-009							· ·								
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	1030		SCILLE. Base 251			-011							•								
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124/14	18/6 Mustin Wallen 10/25/2014 0945																				
	f necessary	samples sub	mitted to Hall Environmental may be subco	ontracted to other ad			s possi	bility.	Any sı	ub-con	tracted	i data	will be	e clear	ly nota	ited on	the ar	nalytica	il report	t.	

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		f necessary	samples sub	mitted to Hall Environmental may be subc	ontracted to other ad	credited	laboratori		h	bility.	Any sı	ub-con	tracted	d data	wiil be	clear	y nota	ated on	the ar	nalytica	al repor	 t.	

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District I 1625 N. Frencl District II 811 S. First St. District III 1000 Rio Braze District IV 1220 S. St. Fre	, Artesia, Ni os Road, Azi	M 88210 tec, NM 87410		Energy Oil Co	Mine Res	New Mex rals and ources vation Di St. Fran	xico Natural vision	NOV	1720 nit 1 Cop					
						Fe, NM 87505								
	··	F	Releas	e Notifica	atior	on and Corrective Action								
					OP	ERATO	R		Initial	Report 🛛 Final Report				
		Enterprise					homas Long	2206						
Address: 614 Reilly Ave, Farmington, NM 87401 Facility Name: Lateral 2A-2							No. 505-599 be: Natural G		nering L	ine				
Surface Owner: BLM Mineral Owner: BLM API No.							0.							
1							FASE		1, 1, 1, 1, 1					
Unit Letter	Section 25	Township 27N	Range 10W	Feet from the 1420			Feet from the 120	East Line	Vest	County San Juan				
	I	Latitude	36.55	1	I	Longitu		2262						
		Lauluue			IDE		de <u>-107.89</u> 5 4 9 5	2303						
Type of Rele	ease: Natu	ral Gas and N	latural Ga		JRE	OF REL	FASE	2 MCF	Volume	Recovered: None				
		ernal Corrosi					Hour of Occuri 4 @ 8:30 a.m.	rence:		d Hour of Discovery: 14 @ 9:30 a.m.				
Was Immed	iate Notice	Given?	s 🗌 No) 🛛 Not Req	uired		o Whom? Cou	rtesy not		o NMOCD – Cory Smith; BLM				
By Whom?				•			Hour Septemb							
Was a Wate	ercourse Re	eached?	🗌 Yes	🛛 No		If YES, V	olume Impactin	ig the Wa	atercours	e				
		mpacted, De			+ 00 0	D14 a nineli	na laak waa die		while no	rforming a pipeline patrol on				
the Lateral 2 depressurize dimensions	2A-2 pipelir ed, locked measured	e ROW. The out and tagged approximatel	Enterpris ed out. Re y thirty (30	e technician ini emediation and 0) feet long by e	tiated i repair eleven	notification s were com (11) feet ra	procedures. Th	e pipelin ember 5, nt (8) to r	e was isc 2014. T nine (9) fe	plated, blown down, he final excavation set deep. Approximately 110				
the Lateral 2 depressuriz dimensions cubic yards	2A-2 pipelir ed, locked measured of hydroca	ne ROW. The out and tagged approximated	Enterpris ed out. Re y thirty (30 d soil was	e technician ini emediation and 0) feet long by o excavated and	tiated i repair eleven	notification s were com (11) feet ra	procedures. Th pleted on Sept nging from eigl	e pipelin ember 5, nt (8) to r	e was isc 2014. T nine (9) fe	erforming a pipeline patrol on plated, blown down, he final excavation eet deep. Approximately 110 lity. A third party corrective				
rules and re which may e relieve the c ground wate	gulations a endanger p operator of er, surface	ll operators a ublic health o liability shoul water, humai	are require or the envi d their ope n health or	ed to report and ronment. The serations have farther the environme	/or file accept ailed to nt. In	certain rele ance of a C adequately addition, N	ase notification -141 report by / investigate an MOCD accepta aws and/or reg	s and pe the NMO d remedi nce of a ulations.	rform co CD mark ate conta C-141 re	and that pursuant to NMOCD rrective actions for releases red as "Final Report" does not amination that pose a threat to port does not relieve the				
Signature:	In	Ful	* 100				<u>OIL CON</u>	<u>ISER</u> V	<u>ATION/</u>	<u>I DIVISION</u>				
Printed Nam	ne: Jon Fie	lds				Approved b	y Environmenta	al Specia	llist: C	my hill				
Title: Directe	or, Environ	mental				Approval D	ate: 12/29/1	<u> </u>	Expiration	Date:				
E-mail Addr	ess:jefields	@eprod.com	1			Conditions	of Approval:			Attached				
Date: //	14/201	ų į		ne: (713)381-66	684	-								
* Attach Addi	tional She	ets If Nece	ssary		-	HPCS	143 63	422	23	\sim				



CORRECTIVE ACTION REPORT

Property:

Lateral 2A-2 Pipeline Release SE 1/4, S21 T27N R10W San Juan County, New Mexico

November 3, 2014 Apex Project No. 7030414G032

Prepared for:

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

Prepared by:

other M. Wards

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

Elizabeth Scaggs, P.G. Senior Program Manager

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

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CORRECTIVE ACTION REPORT

Lateral 2A-2 Pipeline Release SE 1/4, S21 T27N R10W San Juan County, New Mexico

Apex Project No. 7030414G032

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 2A-2 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 27 North and Range 10 West in rural San Juan County, New Mexico (36.55734N, 107.89231W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to an unpaved road, 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 production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately southwest to northeast.

On September 3, 2014, Enterprise shut in the Lateral 2A-2 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface.

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	0
	>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		20	

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "20". This ranking is based on the following:

- Depth to groundwater is estimated to be greater than 100 feet below ground surface based on a cathodic protection deepwell groundbed report for the Johnson #2 well site located approximately 990 feet to the west of the Site. The cathodic report indicates that groundwater was observed in the borehole at a depth of approximately 120 feet below ground surface (bgs). The elevation of the Johnson #2 well site is approximately 20 feet lower in elevation than the Site, resulting in an approximate depth to groundwater at the Site of 140 feet bgs. No nearby water wells were 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. No private domestic water sources were identified within 200 feet of the Site.
- The Site is approximately 75 feet west of an ephemeral wash which ultimately drains to the East Fork of Kutz Canyon. Based on this proximity, a ranking for distance to surface water was assigned at "20".

3.0 **RESPONSE ACTIONS**

3.1 Soil Excavation Activities

On September 3, 2014, Enterprise shut in the Lateral 2A-2 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface. During the corrective action activities, Oil Field Trash (OFT) Construction provided heavy equipment and labor support, and Heather Woods, an Apex environmental professional, 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 21.5 feet long by 11 feet wide, with a total depth ranging from approximately 8 to 9 feet bgs. Confirmation samples C-1 through C-5 were collected from the floor and sidewalls of the excavation to evaluate soils remaining in place. Analytical results indicated that the southwest wall (C-3) exhibited evidence of hydrocarbon impact. The site was over-excavated on September 9, 2014, to remove material from the southwest wall, increasing the total length of the final excavation to approximately 30 feet. Confirmation sample C-6 subsequently indicated that the southwest wall no longer exhibited evidence of hydrocarbon impact.



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

A total of approximately 110 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The executed C-138 form, which includes soils from a neighboring release concurrently transported from the area, is provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

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

3.2 Soil Sampling Program

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

Apex's soil sampling program included the collection of six (6) final confirmation samples (C-1 through C-6), from the resulting excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated area and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The 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 Albuquerque, 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-ofcustody form and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines* for Remediation of Leaks, Spills and Releases as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 Remediation Plan. 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 (C-1 through C-6) collected from the excavated area to the OCD



Remediation Action Levels (RALs) for sites having a total ranking score of "20". Soils associated with sample C-3 were removed by excavation and are not included in the following discussion.

- 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 indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.063 mg/kg, which are below the OCD *Remediation Action Levels*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate combined TPH GRO/DRO concentrations above the laboratory reporting limits, which are below the OCD *Remediation Action Levels* for a Site ranking of "20".

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 2A-2 Pipeline Release Site is located within the Enterprise pipeline ROW in the SE ¼ of Section 21 in Township 27 North and Range 10 West in rural San Juan County, New Mexico (36.55734N, 107.89231W). The Site is located adjacent to an unpaved road, on public land managed by the BLM. 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 September 3, 2014, Enterprise shut in the Lateral 2A-2 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, underlain by sandstone.
- The surface expression of the final excavation measured approximately 30 feet long by 11 feet wide, with a total depth of ranging from approximately 8 to 9 feet bgs.
- 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 COC concentrations above the OCD *Remediation Action Levels* for a Site ranking of "20".
- A total of approximately 110 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and contoured to surrounding grade.



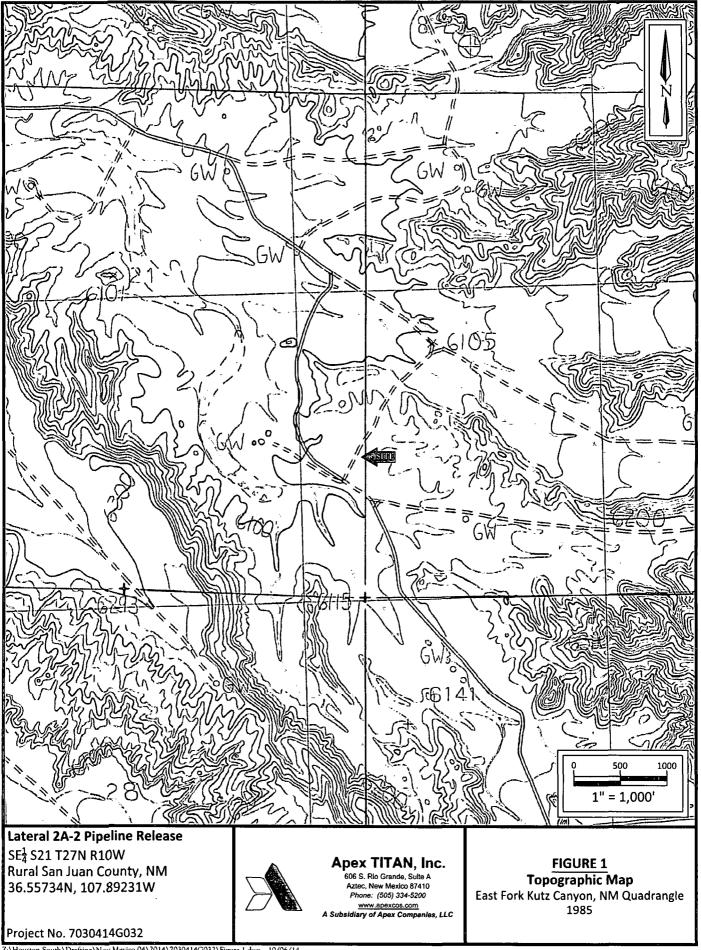
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

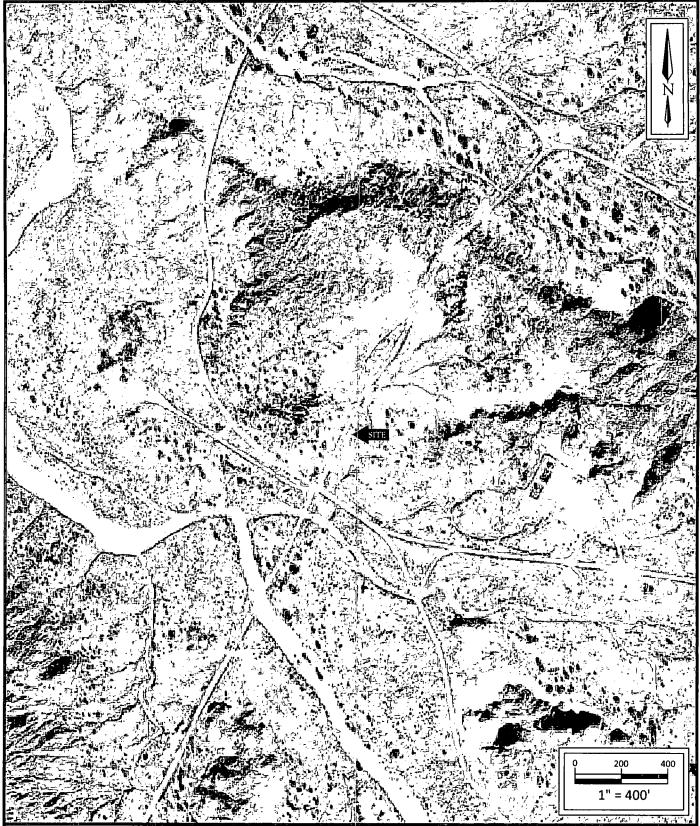
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work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



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G032\Figure 1.dwg 10/06/14



Lateral 2A-2 Pipeline Release SE¹/₄ S21 T27N R10W Rural San Juan County, NM 36.55734N, 107.89231W

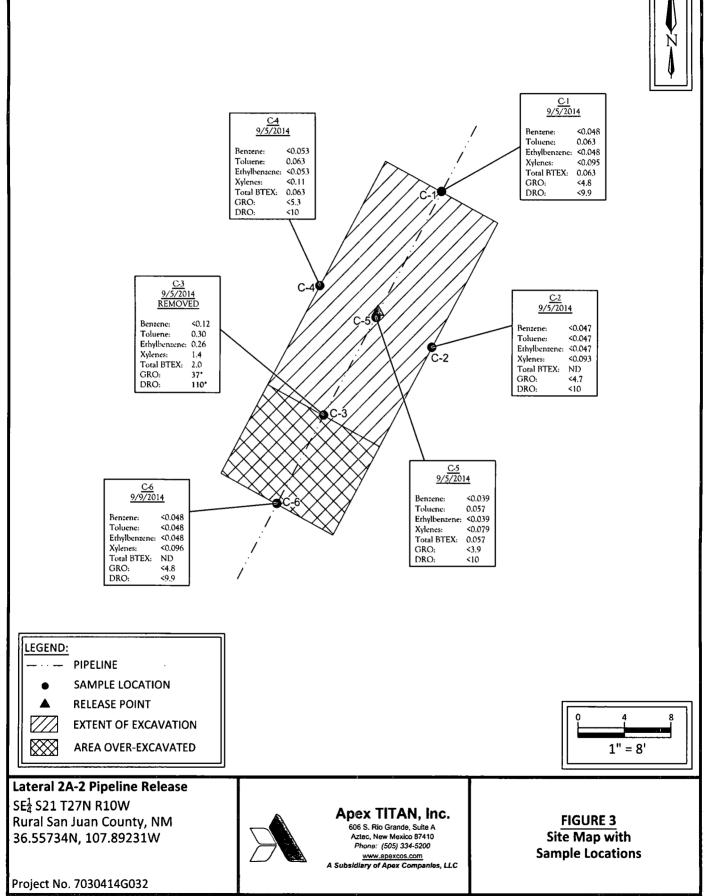
Project No. 7030414G032



Apex TITAN, Inc. 606 S. Rio Grande, Sulte A Aztec, New Mexico 87410 Phone: (505) 334-5200 www.apexcos.com A Subsidiery of Apex Companies, LLC

FIGURE 2 Site Vicinity Map 2013 Aerial Photograph

Z:\Houston South\Drafting\New Mexico 04\2014\7030414G032\Figure 2.dwg 10/06/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G032\Figure 3.dwg 10/06/14

<u>District 1</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

Form C-138 97057-0656 Revised August 1, 2011 ----

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

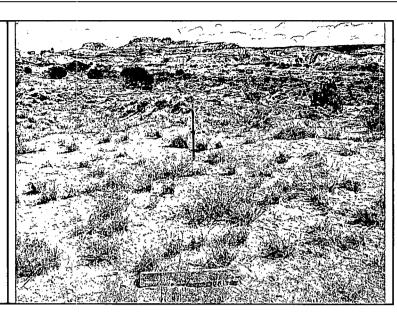
REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site:
Lateral 2A-2 Pipeline Sep. 2014
3. Location of Material (Street Address, City, State or ULSTR): Unit I Letter D, Section 22, T27N, R10W; 36.557404, -107.892363
 4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline 5. Estimated Volume
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
Than Lay
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby PRINT & SIGN NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency: Monthly: Weekly: Per Load
RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)
□ MSDS Information □ RCRA Hazardous Waste Analysis □ Process Knowledge □ Other (Provide description in Box 4)
GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS
1, <u>9-3-14</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification.
I, <u>Envirotech. Inc.</u> do hereby certify that representative samples of the offield waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Transporter: West States Energy Contractors (WSEC) La Plath, Rosenbaun
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 Z Landfarm Landfill Other
Waste Acceptance Status:
PRINT NAME: Kercira Running TITLE: Waste Corclinator DATE: 9/5/14
SIGNATURE: Surface Waste Management Facility Authorized Agent TELEPHONE NO.: 505-632-0615



Lateral 2A-2 Pipeline Release

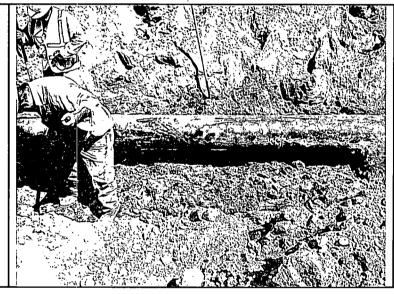
Photograph 1

View of site prior to excavation activities, facing southeast.



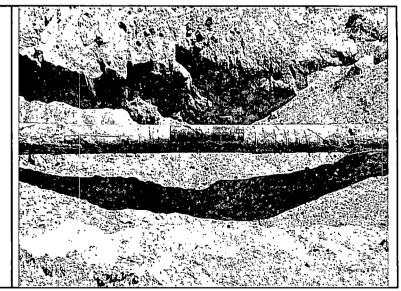
Photograph 2

View of the repair excavation during corrective action activities, facing southeast.



Photograph 3

View of the release point and initial excavation during corrective action activities, facing southeast.





Lateral 2A-2 Pipeline Release

Photograph 4

View of over-excavation activities at the southwest wall subsequent to backfilling of initial excavation, facing northwest.

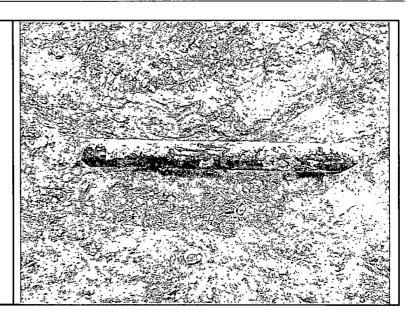




TABLE 1 Laterel 2A-2 Pipeline Release Soil ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН
		(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO	DRO
		i						(mg/kg)	(mg/kg)
		Natural Resources vision, Remediation	10	NE	NE	NE	50	10	00
	Sample Removed by Excavation								
C-3	9/5/2014	6 to 8	<0.12	0.30	0.26	1.4	2.0	37	110
				Final Confirm	nation Samples				
C-1	9/5/2014	6 to 8	<0.048	0.063	<0.048	<0.095	0.063	<4.8	<9.9
C-2	9/5/2014	6 to 8	<0.047	<0.047	<0.047	< 0.093	ND	<4.7	<10
C-4	9/5/2014	6 to 8	<0.053	0.063	<0.053	<0.11	0.063	<5.3	<10
C-5	9/5/2014	8 to 9	<0.039	0.057	<0.039	<0.079	0.057	<3.9	<10
C-6	9/9/2014	6 to 8	<0.048	<0.048	<0.048	<0.096	ND	<4.8	<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

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

September 08, 2014

Heather Woods Enterprise Field Services 614 Reilly Ave. Farmington, NM 87401 TEL: (505) 599-2141 FAX

RE: Lateral 2A-2

OrderNo.: 1409277

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/6/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

Only

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1409277

Date Reported: 9/8/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services		Client Sample ID: C-1							
Project: Lateral 2A-2	Collection Date: 9/5/2014 12:25:00 PM								
Lab ID: 1409277-001	Matrix:	MEOH (SOIL)) Received l	Date: 9/6					
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANGE	E ORGANICS				Analyst	BCN			
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/7/2014 1:45:35 AM	15157			
Surr: DNOP	89.3	57.9-140	%REC	1	9/7/2014 1:45:35 AM	15157			
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/7/2014 10:55:48 PM	R21046			
Surr: BFB	90.6	80-120	%REC	1	9/7/2014 10:55:48 PM	R21046			
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB			
Benzene	ND	0.048	mg/Kg	1	9/7/2014 10:55:48 PM	R21046			
Toluene	0.063	0.048	mg/Kg	1	9/7/2014 10:55:48 PM	R21046			
Ethylbenzene	ND	0.048	mg/Kg	1	9/7/2014 10:55:48 PM	R21046			
Xylenes, Total	ND	0.095	mg/Kg	1	9/7/2014 10:55:48 PM	R21046			
Surr: 4-Bromofluorobenzene	98.2	80-120	%REC	1	9/7/2014 10:55:48 PM	R21046			

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
E Value abov		Value above quantitation range	Н	Holding times for preparation or analysis	exceeded
	J Analyte detected below quantitation limitsO RSD is greater than RSDlimit		ND	Not Detected at the Reporting Limit Page	
			Р	Sample pH greater than 2.	Page 1 of 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Lab Order 1409277

Date Reported: 9/8/2014

9/7/2014 11:24:25 PM

9/7/2014 11:24:25 PM

1

1

R21046

R21046

Hall Environmental Analysis Laboratory, Inc.

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: Enterprise Field Services Client Sample ID: C-2 Lateral 2A-2 Collection Date: 9/5/2014 12:30:00 PM **Project:** 1409277-002 Matrix: MEOH (SOIL) Received Date: 9/6/2014 6:45:00 AM Lab ID: Result **RL** Qual Units **DF** Date Analyzed Batch Analyses **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: BCN Diesel Range Organics (DRO) ND 10 mg/Kg 9/7/2014 2:07:01 AM 15157 1 Surr: DNOP %REC 89.8 57.9-140 1 9/7/2014 2:07:01 AM 15157 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 9/7/2014 11:24:25 PM 4.7 mg/Kg 1 R21046 Surr: BFB 91.3 80-120 %REC 1 9/7/2014 11:24:25 PM R21046 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.047 mg/Kg 9/7/2014 11:24:25 PM R21046 1 Toluene ND 0.047 9/7/2014 11:24:25 PM mg/Kg 1 R21046 Ethylbenzene ND 0.047 mg/Kg 1 9/7/2014 11:24:25 PM R21046

0.093

80-120

mg/Kg

%REC

ND

97.6

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	3 Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded	
		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 9	
		RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 2 01 9	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Lab Order 1409277

Date Reported: 9/8/2014

Batch

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Enterprise Field Services
 Client Sample ID: C-3

 Project:
 Lateral 2A-2
 Collection Date: 9/5/2014 12:35:00 PM

 Lab ID:
 1409277-003
 Matrix:
 MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL Qual
 Units
 DF Date Analyzed

EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	110	10	mg/Kg	1	9/7/2014 2:28:17 AM	15157
Surr: DNOP	94.5	57.9-140	%REC	1	9/7/2014 2:28:17 AM	15157
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	37	24	mg/Kg	5	9/7/2014 6:24:46 PM	R2104
Surr: BFB	109	80-120	%REC	5	9/7/2014 6:24:46 PM	R2104
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.12	mg/Kg	5	9/7/2014 6:24:46 PM	R2104
Toluene	0.30	0.24	mg/Kg	5	9/7/2014 6:24:46 PM	R2104
Ethylbenzene	0.26	0.24	mg/Kg	5	9/7/2014 6:24:46 PM	R2104
Xylenes, Total	1.4	0.47	mg/Kg	5	9/7/2014 6:24:46 PM	R2104
Surr: 4-Bromofluorobenzene	94.4	80-120	%REC	5	9/7/2014 6:24:46 PM	R2104

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 9
(RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 5 01 5
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Lab Order 1409277

Date Reported: 9/8/2014

Batch

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Enterprise Field Services
 Client Sample ID: C-4

 Project:
 Lateral 2A-2
 Collection Date: 9/5/2014 12:40:00 PM

 Lab ID:
 1409277-004
 Matrix:
 MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL
 Qual
 Units
 DF
 Date Analyzed

EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/8/2014 10:11:28 AM	15157
Surr: DNOP	88.2	57.9-140	%REC	1	9/8/2014 10:11:28 AM	15157
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.3	mg/Kg	1	9/7/2014 6:54:59 PM	R21049
Surr: BFB	92.8	80-120	%REC	1	9/7/2014 6:54:59 PM	R21049
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.053	mg/Kg	1	9/7/2014 6:54:59 PM	R21049
Toluene	0.063	0.053	mg/Kg	1	9/7/2014 6:54:59 PM	R21049
Ethylbenzene	ND	0.053	mg/Kg	1	9/7/2014 6:54:59 PM	R21049
Xylenes, Total	ND	0.11	mg/Kg	1	9/7/2014 6:54:59 PM	R21049
Surr: 4-Bromofluorobenzene	109	80-120	%REC	1	9/7/2014 6:54:59 PM	R21049

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 4 01 2
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1409277 Date Reported: 9/8/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services Client Sample ID: C-5 Lateral 2A-2 **Project:** Collection Date: 9/5/2014 12:45:00 PM Lab ID: 1409277-005 Matrix: MEOH (SOIL) Received Date: 9/6/2014 6:45:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: BCN **Diesel Range Organics (DRO)** ND 10 mg/Kg 1 9/7/2014 3:10:59 AM 15157 Surr: DNOP 92.6 %REC 57.9-140 1 9/7/2014 3:10:59 AM 15157 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB

Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	9/7/2014 7:25:10 PM	R21049
Surr: BFB	99.6	80-120	%REC	1	9/7/2014 7:25:10 PM	R21049
EPA METHOD 8021B: VOLATILES					Analyst	t: NSB
Benzene	ND	0.039	mg/Kg	1	9/7/2014 7:25:10 PM	R21049
Toluene	0.057	0.039	mg/Kg	1	9/7/2014 7:25:10 PM	R21049
Ethylbenzene	ND	0.039	mg/Kg	1	9/7/2014 7:25:10 PM	R21049
Xylenes, Total	ND	0.078	mg/Kg	1	9/7/2014 7:25:10 PM	R21049
Surr: 4-Bromofluorobenzene	118	80-120	%REC	1	9/7/2014 7:25:10 PM	R21049

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Ε	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	Tage 5 01 5
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT

WO#:	1409277
	08-Sep-14

Client: Enterp Project: Latera	rise Field Services I 2A-2						-		
Sample ID MB-15139	SampType: MBL	к	Test	Code: El	PA Method	8015D: Diese	I Range C	Organics	
Client ID: PBS	Batch ID: 1513	9	R	unNo: 2	1040				
Prep Date: 9/5/2014	Analysis Date: 9/6/2	2014	S	eqNo: 6	12324	Units: %RE(;		
Analyte Surr: DNOP	Result PQL S	PK value 10.00	SPK Ref Val	%REC 81.1	LowLimit 57.9	HighLimit 140	%RPD	RPDLimit	Qual
Sample ID LCS-15139	SampType: LCS		Test	Code: El		8015D: Diese	l Range (Organics	
Client ID: LCSS	Batch ID: 1513	9	R	unNo: 2	1040				
Prep Date: 9/5/2014	Analysis Date: 9/6/2	2014	s	eqNo: 6	12325	Units: %RE(:		
Analyte Surr: DNOP	Result PQL S	PK value 5.000	SPK Ref Val	%REC 81.1	LowLimit 57.9	HighLimit 140	%RPD	RPDLimit	Qual
	4.1	5.000		01.1	57.9	140			
Sample ID MB-15157	SampType: MBL	к	Test	Code: El	PA Method	8015D: Diese	I Range C	Organics	
Client ID: PBS	Batch ID: 1515	7	R	unNo: 2	1040				
Prep Date: 9/6/2014	Analysis Date: 9/6/2	2014	S	eqNo: 6	12637	Units: mg/K	g		
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 10 8.8	10.00		88.3	57.9	140			
Sample ID LCS-15157	SampType: LCS		Test	Code: El	PA Method	8015D: Diese	l Range C	Drganics	
Client ID: LCSS	Batch ID: 1515	7	R	unNo: 2	1040				
Prep Date: 9/6/2014	Analysis Date: 9/6/2	2014	s	eqNo: 6	12639	Units: mg/K	g		
Analyte	Result PQL S	PK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49 10	50.00	0	98.3	68.6	130			
Surr: DNOP	4.1	5.000		81.7	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 6 of 9

Ũ

SampType: MBLK

Analysis Date: 9/7/2014

PQL

Result

1100

Enterprise Field Services

Lateral 2A-2

Client: Project:

Sample ID MB-15146 MK

Client ID:	PBS	Batch I	D: R2 1	1046	F	lunNo: 2	1046				
Prep Date:		Analysis Dat	e: 9/7	7/2014	S	eqNo: 6	12473	Units: mg/K	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	(
Gasoline Rang	e Organics (GRO)	ND	5.0								
Surr: BFB		900		1000		90.4	80	120			
Sample ID	LCS-15146 MK	SampTy	be: LC	S	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	je	
Client ID:	LCSS	Batch I	D: R2 1	1046	Я	RunNo: 2	1046				
Prep Date:		Analysis Dat	te: 9/7	7/2014	S	eqNo: 6	12477	Units: mg/H	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	(
Gasoline Rang	e Organics (GRO)	24	5.0	25.00	0	94.8	65.8	139			
Surr: BFB		990		1000		98.7	80	120			
Sample ID	MB-15128 MK	SampTy	be: MB	LK	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	le	
Client ID:	PBS	Batch I	D: R2	1049	F	RunNo: 2	1049				
Prep Date:		Analysis Da	te: 9/7	7/2014	S	eqNo: 6	12585	Units: mg/#	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	(
Gasoline Rang	e Organics (GRO)	ND	5.0								
Surr: BFB		1000		1000		101	80	120			
Sample ID	LCS-15128 MK	SampTy	be: LC	s	Tes	tCode: E	PA Method	8015D: Gaso	oline Rang	je	
Client ID:	LCSS	Batch I	D: R2	1049	F	RunNo: 2	1049				
Prep Date:		Analysis Da	te: 9/7	7/2014	5	eqNo: 6	612587	Units: mg/H	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	(
-	e Organics (GRO)	25	5.0	25.00	0	99.7	65.8	139			
Surr: BFB		950		1000		95.1	80	120			
Sample ID	LCSD-15128 MK	SampTy	be: LC	SD	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	le	
Client ID:	LCSS02	Batch I	D: R2	1049	F	RunNo: 2	1049				

TestCode: EPA Method 8015D: Gasoline Range

Qualifiers:

Prep Date:

Surr: BFB

Analyte

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

SeqNo: 612589

SPK value SPK Ref Val %REC LowLimit

Units: %REC

%RPD

0

RPDLimit

0

HighLimit

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

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08-Sep-14

WO#: 1409277

Qual

Qual

Qual

Qual

Qual

Enterprise Field Services

Client:

Client ID: PBS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 9/77/2014 SeqNo: 612505 Units: mg/Kg Analysis Date: 9/77/2014 SeqNo: 612505 Units: mg/Kg Analysis Date: 9/77/2014 SeqNo: 612505 Units: mg/Kg Analysis Date: ND 0.050 SeqNo: 612505 Units: mg/Kg Mighers. Total ND 0.050 Into 100 80 120 Into: mg/Kg Sample ID LCS-15146 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Into: mg/Kg Analysis Date: 9/7/2014 ScqNo: 612506 Units: mg/Kg <	Project: Lateral	2A-2									
Prep Date:Analysis Date:9/1/2014SeqNo:61250Units:mg/kgAnalysicResultPQLPXK valueSPK valueSPK valueKREf ValKREf ValKREf ValMaleMaleMaleMaleMaleMaleKREf ValKREf ValKREf ValKREf ValKREf ValMale<	Sample ID MB-15146 MK	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene ND 0.050	Client ID: PBS	Batc	h ID: R2	1046	F	RunNo: 21046					
enzerie ND 0.050 obleme ND 0.050 ytenes, Total ND 0.050 Samp-ElD LCS-15146 ND 0.10 Samp-ElD LCS-15146 KK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612506 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit %RPD RPDLimit Qual enzere 0.93 0.050 1.000 0 93.2 80 120 vibinenzen 0.96 0.050 1.000 0 93.8 0 120 Sur: 4-Bromoluorobenzene 1.1 1.000 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 RunNo: 1004 REC LowLimi	Prep Date:	Analysis [Date: 9/	7/2014	S	SeqNo: 6	12505	Units: mg/k	٩		
nb 0.050 thyteers, Total ND 0.050 surr. 48romofluorobenzene 1.0 1.00 100 80 120 Surr. 48romofluorobenzene 1.0 1.00 100 80 120 Surr. 48romofluorobenzene 1.0 1.00 100 80 120 Surr. 48romofluorobenzene 1.0 1.000 100 80 120 Surr. 48romofluorobenzene 1.0 1.000 100 80 120 Analyte Analysis Date: 9/1/2014 SeqNo: 612506 Units: mg/Kg Analyte Result POL SPK Value SPK Ref Val %REC LowLimit HighLimit %RPD Imit Qual enzene 0.93 0.050 1.000 93.2 80 120 Units: mg/Kg Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Sample ID MB-15128 MK SampType: MBLK SeqNo: 61204	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
http://pres.r.tai ND 0.050 yienes, Total ND 0.10 100 80 120 Sample ID LCS-15146 MK SampTyre: LCS TestCode: EPA Method 802/18: Volatiles Client ID: LCSS Batch ID: R21046 RunNo: 2104 Units: mg/Kg Analyte Result POL SPK Value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enterne 0.93 0.650 1.000 0 93.2 80 120 100 120 100 120 100 120 100 120 100 120 100 120 120 120 110 100 120 <td>Benzene</td> <td>ND</td> <td>0.050</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td>	Benzene	ND	0.050								_
yienes, Total ND 0.10 1.00 100 80 120 Sam: 4-Bromofuorobenzene 1.0 1.000 100 80 120 Sample ID LCS-15146 MK SampType: LCS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612506 Units: mg/Kg Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual outene 0.93 0.050 1.000 0 93.0 80 120 Intic: mg/Kg Surit-ABromofuorobenzene 0.96 0.050 1.000 0 95.8 80 120 Intic: Intic: </td <td>oluene</td> <td>ND</td> <td>0.050</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	oluene	ND	0.050								
Sur: 4-Bromofluorobenzene 1.0 1.00 100 80 120 Sample ID LCS-15146 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21046 RunNo: 21046 Analysis Date: 9/7/2014 SeqNo: 612506 Units: mg/kg Analysis Date: 9/7/2014 SeqNo: 6120 120 120 Vignes, Total 2.9 0.10 3.000 0 95.8 120 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles 120 Sample ID MB-15128 MK SampType: MBLK SeqNo: 612641 Units: mg/kg	Ethylbenzene	ND	0.050								
Sample ID LCS-15146 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 977/2014 SeqNo: 612506 Units: mg/Kg Analysis Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.93 0.050 1.000 0 93.2 80 120 oluene 0.93 0.050 1.000 0 95.8 80 120 sum: 48:monfluorobenzene 1.1 1.000 0 96.3 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Sample ID MB-15128 MK SampType: MID SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene ND 0.050 Inders	Xylenes, Total	ND	0.10			·					
Client ID: LCSS Batth ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 97/2014 SeqNo: 612506 Units: mg/g Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.93 0.050 1.000 0 93.2 80 120 100 100 100 96.3 80 120 100 100 96.3 80 120 100 100 96.3 80 120 100	Surr: 4-Bromofluorobenzene	1.0		1.000		100	80	120			
Prep Date:Analysis Date: $97/2014$ Seq No: 612506 Units: mg/Kg AnalyteResultPQLSPK valueSPK Ref Val $%REC$ LowLimitHighLimit $%RPD$ RPDLimitQualenzene0.930.0501.000093.280120duene0.930.0501.000095.880120 </td <td>Sample ID LCS-15146 MK</td> <td>Samp</td> <td>Type: LC</td> <td>s</td> <td>Tes</td> <td>tCode: El</td> <td>PA Method</td> <td>8021B: Vola</td> <td>tiles</td> <td></td> <td></td>	Sample ID LCS-15146 MK	Samp	Type: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.93 0.050 1.000 0 93.0 80 120 oluene 0.93 0.050 1.000 0 93.2 80 120 oluene 0.96 0.050 1.000 0 95.8 80 120 ylenes, Total 2.9 0.10 3.000 0 96.3 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Instreate ND 0.050	Client ID: LCSS	Batc	h ID: R2	1046	F	RunNo: 2	1046				
enzene 0.93 0.050 1.000 0 93.0 80 120 oluene 0.93 0.050 1.000 0 93.2 80 120 thylbenzene 0.96 0.050 1.000 0 95.8 80 120 ylenes, Total 2.9 0.10 3.000 0 96.3 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual lenzene ND 0.050 systems, Total ND 0.10 Surr 4-Bromofluorobenzene 1.2 1.000	Prep Date:	Analysis I	Date: 9/	7/2014	5	SeqNo: 6	12506	Units: mg/l	٢g		
oduene 0.93 0.050 1.000 0 93.2 80 120 thylbenzene 0.96 0.050 1.000 0 95.8 80 120 ylenes, Total 2.9 0.10 3.000 0 96.3 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual lenzene ND 0.050 seq No: 612641 Units: mg/Kg Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
thylbenzene 0.96 0.050 1.000 0 95.8 80 120 ylenes, Total 2.9 0.10 3.000 0 96.3 80 120 Surr, 4-Bromoflucrobenzene 1.1 1.000 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Provide Result Volatiles Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene ND 0.050 90 120 80 120	Benzene	0.93	0.050	1.000	0	93.0	80	120			
yienes, Total 2.9 0.10 3.000 0 96.3 80 120 Surr: 4-Bromofluorobenzene 1.1 1.000 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Vision Response Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene ND 0.050 1000 120 80 120 </td <td>Toluene</td> <td>0.93</td> <td>0.050</td> <td>1.000</td> <td>0</td> <td>93.2</td> <td>80</td> <td>120</td> <td></td> <td></td> <td></td>	Toluene	0.93	0.050	1.000	0	93.2	80	120			
Sur: 4-Bromofluorobenzene 1.1 1.00 106 80 120 Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene ND 0.050 Qual <t< td=""><td>Ethylbenzene</td><td>0.96</td><td>0.050</td><td>1.000</td><td>0</td><td>95.8</td><td>80</td><td>120</td><td></td><td></td><td></td></t<>	Ethylbenzene	0.96	0.050	1.000	0	95.8	80	120			
Sample ID MB-15128 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Ienzene ND 0.050	Xylenes, Total	2.9	0.10	3.000	0	96.3	80	120			
Client ID: PBS Batch ID: R21049 RunNo: 21049 Units: mg/Kg Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Ienzene ND 0.050 Qual Ithybenzene ND 0.050 Qual Qual Qual Qual <	Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			
Prep Date: Analysis Date: 9/7/2014 SeqNo: 612641 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Ienzene ND 0.050 Qual Ienzene ND 0.050 Qual Iduene ND 0.050	Sample ID MB-15128 MK	Samp	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Ienzene ND 0.050 1.000 0 89.9 80 120 0.050 1.000 0 90.4 80 120 0.050 1.000 0 90.4 80 120 0.050 1.000	Client ID: PBS	Bato	h ID: R2	104 9	F	RunNo: 2	1049				
Instrume ND 0.050 oluene ND 0.050 thylbenzene ND 0.050 sur: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 thylbenzene 0.93 0.050 1.000 0 93.2 80 120 ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Prep Date:	Analysis I	Date: 9/	7/2014	5	SeqNo: 6	12641	Units: mg/l	(g		
ND 0.050 thylbenzene ND 0.050 ylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Sample ID LCSS Batch ID: R21049 RunNo: 21049 Units: mg/Kg Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 120 thylbenzene 0.93 0.050 1.000 0 89.9 80 120 120 uppersent 2.9 0.10 3.000 0 93.2 80 120 120 uppersent 2.9 0.10 3.000 0 93.0 80 120 120 120 <td>Analyte</td> <td>Result</td> <td>PQL</td> <td>SPK value</td> <td>SPK Ref Val</td> <td>%REC</td> <td>LowLimit</td> <td>HighLimit</td> <td>%RPD</td> <td>RPDLimit</td> <td>Qual</td>	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND 0.050 Vienes, Total ND 0.10 Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21049 RunNo: 21049 Units: mg/Kg Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 vithylbenzene 0.93 0.050 1.000 99.9 80 120 ylenes, Total 2.9 0.10 3.000 0 93.0 80 120	Benzene	ND	0.050	•							
ND 0.10 Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 uthylbenzene 0.93 0.050 1.000 0 90.4 80 120 ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Toluene	ND	0.050								
Surr: 4-Bromofluorobenzene 1.2 1.000 120 80 120 Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 vithylbenzene 0.93 0.050 1.000 0 90.4 80 120 viglenes, Total 2.9 0.10 3.000 0 98.0 80 120	Ethylbenzene	ND	0.050								
Sample ID LCS-15128 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 oluene 0.90 0.050 1.000 0 93.2 80 120 thylbenzene 0.93 0.050 1.000 0 98.0 80 120	Xylenes, Total	ND	0.10								
Client ID: LCSS Batch ID: R21049 RunNo: 21049 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Intervence 0.90 0.050 1.000 0 89.9 80 120	Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120			
Prep Date: Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120	Sample ID LCS-15128 MK	Samp	Type: LC	s	 Tes	tCode: El	PA Method	8021B: Vola	tiles		
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual enzene 0.90 0.050 1.000 0 89.9 80 120 oluene 0.90 0.050 1.000 0 90.4 80 120 thylbenzene 0.93 0.050 1.000 0 93.2 80 120 ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Client ID: LCSS	Bato	h ID: R2	1049	F	RunNo: 2	1049				
enzene 0.90 0.050 1.000 0 89.9 80 120 oluene 0.90 0.050 1.000 0 90.4 80 120 ithylbenzene 0.93 0.050 1.000 0 93.2 80 120 ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Prep Date:	Analysis I	Analysis Date: 9/7/2014 SeqNo: 612642 Units: mg/Kg								
oluene0.900.0501.000090.480120thylbenzene0.930.0501.000093.280120ylenes, Total2.90.103.000098.080120	Analyte	· · · ·							%RPD	RPDLimit	Qual
thylbenzene 0.93 0.050 1.000 0 93.2 80 120 ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Benzene										
ylenes, Total 2.9 0.10 3.000 0 98.0 80 120	Toluene				0			120			
	Ethylbenzene	0.93			0	93.2	80	120			
Surr: 4-Bromofluorobenzene 0.90 1.000 89.6 80 120	Xylenes, Total	2.9	0.10		0	98.0	80	120			
	Surr: 4-Bromofluorobenzene	0.90		1.000		89.6	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

WO#: 1409277

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Client: Enterprise Field Services

Project: Lateral 2A-2

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Sample ID LCSD-15128 MK	Samp	Гуре: LC	SD	Tes	PA Method	8021B: Vola	tiles			
Client ID: LCSS02	Batc	h ID: R2	1049	F	RunNo: 2	1049				
Prep Date:	Analysis [Date: 9/	7/2014	5	SeqNo: 6	12643	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	89.9	80	120	0.0223	20	
Toluene	0.90	0.050	1.000	0	90.0	80	120	0.543	20	
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120	0.460	20	
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120	0.0204	20	
Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120	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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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WO#: 1409277

08-Sep-14

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: Enterprise	Work Order Number: 1	409277	· .	RcptNo:	1
Received by/date:	alochu				•
Logged By: Lindsay Mangin 9	9/6/2014 6:45:00 AM		July Mago		
Completed By: Lindsay Mangin 9	9/6/2014 7:16:30 AM		turky Albergo		
Reviewed By:					
Chain of Custody				······································	
1. Custody seals intact on sample bottles?	. ,	Yes 🗌	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🚺	Not Present	
3. How was the sample delivered?	<u>(</u>	Courier			
Log In					
4. Was an attempt made to cool the samples?		Yes 🔽	No 🗌	na 🗆	
5. Were all samples received at a temperature of	of >0° C to 6.0°C	Yes 🗹	No 🗋	na 🗋	
6. Sample(s) In proper container(s)?		Yes 🗹	No 🗍		
7. Sufficient sample volume for indicated test(s)	?	Yes 🖌	No 🗌		
8. Are samples (except VOA and ONG) properly	preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	na 🗋	
10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹	
11. Were any sample containers received broker	۲	Yes 🗆	No 🗹	# of preserved	
10 -		🗔		bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗍	for pH: (<2 o	r >12 unless noted
13. Are matrices correctly identified on Chain of C	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 th	nis order?	Yes 🗌	No 🗆	NA 🗹	
Person Notified:	Date:				
By Whom:	Via:	eMail [Phone Fax	In Person	
Regarding:					
Client Instructions:					
17. Additional remarks:	· · · · · · · · · · · · · · · · · · ·			·	

i / / addonar forhamo,

18. Cooler Information

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

C	hain	ot-Cu	istody Record	Full-Alound	нне.		Ι.				A I		FIR:	/1 E	2	ri r	a e i	NT/	a 1	
Client:	Enterp	rise f	field Services LLC	□ Standard	🗴 Rush	Same Daig												TO		F
				Project Name):		www.hallenvironmental.com													
Mailing	Address	614	Reilly Avenue	Lateral	2A-2			4901 Hawkins NE - Albuquerque, NM 87109												
Farm	ninato	1 NM	1 87401	Project #:						5-345			Fax						_	
Phone	#: (50	5)716	- 2787		· · · ·		47.04 					Ana	lysis	Req	uest					5
email o				Project Mana	ger:		,	(yln	କ୍ଷି				∂	6					Î	1
	Package:			4.11	- Woods		(802	èas o	/ DRO (CORDO)		CINACY		04,S	CB!						
Accredi			Level 4 (Full Validation)				a	н (G	DRO	-		5	ړ. ۲	82 F						
		🗆 Othe	er	Sampler: H	. Woods	⊡=No:	₽	Ē	10	8.1)	04.1)		N.S.	/ 80		7				Î
	(Type)			Samplestern	ecature: 1-1	Press		Ш	(GR	d 41		tals	NN.	des	2	Ő				Σ
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	TEAL NO 16	BTEX + 302800 + 10080 (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO	TPH (Method 418.1)	EDB (Method 504.1) DAH's (8310 at 8270	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB	8260B (VOA)	8270 (Semi-V@A)				Air Bubbles (Y or N)
9/5/14	1225	Seil	C-1	Megh Kit 1-4 02 Glass	MCOH	-001	X		X								1			\square
7/5/14			C-2	MeOH Kit 1-402 Glass	MOH /	-002	X		X		-						\uparrow	-	+	†
215/14			C-3	Me OH Kit 1-4 02 Glass	MEDH	-002	X		X			1					+	+		+-
		Soil		Megh Kit 1-4 Dz Glass	MeOH/	-004	¥		X			1	1	· ·				+		+
		Soil	· · · · · · · · · · · · · · · · · · ·	Meou Kit 1-402 Glass	MLOH/_	-005	X		X								-	+		F
																	_			
	Time:	Relinquish Relinquish	the M. Woods	Received by:	hbete	Date Time			A-	irect Hn: 129	Ton	10	En ng	terp	r)54	L Fi	eld -	Serv!	1025	
1/5/14	1830	Sm	stu Watters		K 09	lad 14 dats		Paz	gKe	8 R	821	200								
h	f necessary,	ampies subi	mitted to Hall Environmental may be subc	ontracted to other ac	ntrearrea laboratorie	es. This serves as notice of this	s possil	olity. /	ълу su	D-Contra	cted da	ta wili t	ie clear	ty nota	ted on	the an	alytical	report		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 11, 2014

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

RE: Enterprise Lateral 2A-2

OrderNo.: 1409425

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/10/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1409425 Date Reported: 9/11/2014

CLIENT: APEX TITAN			Client Sampl	e ID: C-	6						
Project: Enterprise Lateral 2A-2	Collection Date: 9/9/2014 1:00:00 PM										
Lab ID: 1409425-001	Matrix:	SOIL	Received I								
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	9/10/2014 10:13:53 AM	15213					
Surr: DNOP	81.9	57.9-140	%REC	1	9/10/2014 10:13:53 AM	15213					
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB					
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/10/2014 10:38:34 AM	R21126					
Surr: BFB	90.4	80-120	%REC	1	9/10/2014 10:38:34 AM	R21126					
EPA METHOD 8021B: VOLATILES					Analyst	: NSB					
Benzene	ND	0.048	mg/Kg	1	9/10/2014 10:38:34 AM	R21126					
Toluene	ND	0.048	mg/Kg	1	9/10/2014 10:38:34 AM	R21126					
Ethylbenzene	ND	0.048	mg/Kg	1	9/10/2014 10:38:34 AM	R21126					
Xylenes, Total	ND	0.096	mg/Kg	1	9/10/2014 10:38:34 AM	R21126					
Surr: 4-Bromofluorobenzene	97.3	80-120	%REC	1	9/10/2014 10:38:34 AM	R21126					

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 4
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

APEX TITAN

Sample ID LCS-15213	SampT	ype: LC	LCS TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: LCSS	Batch	ID: 15	213	F	RunNo: 2	nNo: 21109					
Prep Date: 9/10/2014	Prep Date: 9/10/2014 Analysis Date:			S	eqNo: 6	14748	Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	49	10	50.00	0	97.4	68.6	130				
Surr: DNOP	3.9		5.000		78.0	57.9	140				

Qualifiers:

Client:

- * 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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11-Sep-14

1409425

WO#:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Project:	APEX T Enterpris	ITAN e Lateral 2	A-2										
Sample ID M	B-15192 MK	SampT	ype: ME	BLK	TestCode: EPA Method 8015D: Gasoline Range								
Client ID: PE	BS	Batch	ID: R2	1126	F	lunNo: 2 '	1126						
Prep Date:		Analysis D	ate: 9/	10/2014	S	eqNo: 6	15283	Units: mg/K	g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range C	Organics (GRO)	ND	5.0		•								
Surr: BFB		890		1000		89.2	80	120					
Sample ID LO	CS-15192 MK	Samp⊤	ype: LC	S	Tes	tCode: Ef	PA Method	8015D: Gaso	line Rang	e			
Client ID: LO	css	Batch	ID: R2	1126	F	RunNo: 2 ′	1126						
Prep Date:		Analysis D	ate: 9/	10/2014	S	eqNo: 6	15284	Units: mg/K	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range C	Organics (GRO)	28	5.0	25.00	0	113	65.8	139					
Surr: BFB		970		1000		97.3	80	120					
Sample ID M	B-15192	SampT	ype: MI	3LK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e			
Client ID: PI	BS	Batch	ID: 15	192	F	RunNo: 2	1126						
Prep Date:	9/9/2014	Analysis D	ate: 9/	10/2014	S	eqNo: 6	15294	Units: %RE	с				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: BFB		890		1000		89.2	80	120					
Sample ID LO	CS-15192	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e			
Client ID: LO	css	Batch	1D: 15	192	F	RunNo: 2	1126						
Prep Date:	9/9/2014	Analysis D	ate: 9	10/2014	S	SeqNo: 6	15295	Units: %RE	С				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: BFB		970		1000		97.3	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

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1409425

WO#:

11-Sep-14

	·
Client:	APEX TITAN

Project: Enterprise Lateral 2A-2

Sample ID MB-15192 MK	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batcl	h ID: R2	1126	F	RunNo: 21126							
Prep Date:	Analysis [Date: 9/	10/2014	S	BeqNo: 6	15338	Units: mg/k	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	ND	0.050										
Foluene	ND	0.050										
Ethylbenzene	ND	0.050										
Kylenes, Total	ND	0.10										
Surr: 4-Bromofluorobenzene	0.97		1.000		97.1	80	120					
Sample ID LCS-15192 MK	Sampl	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles				
Client ID: LCSS	Batc	h ID: R2	1126	F	RunNo: 2	1126						
Prep Date:	Analysis E	Date: 9/	10/2014	S	SeqNo: 6	15339	Units: mg/H	(g				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Benzene	0.95	0.050	1.000	0	94.8	80	120					
Toluene	0.96	0.050	1.000	0	96.1	80	120					
Ethylbenzene	0.99	0.050	1.000	0	99.0	80	120					
Xylenes, Total	2.9	0.10	3.000	0	98.2	80	120					
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120					
Sample ID MB-15192	Samp	Гуре: МЕ	3LK	Tes	tCode: E	PA Method	8021B: Vola	tiles				
Client ID: PBS	Batc	h ID: 15	192	F	RunNo: 2	1126						
Prep Date: 9/9/2014	Analysis [Date: 9/	10/2014	5	SeqNo: 6	15349	Units: %RE	С				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene	0.97		1.000		97.1	80	120					
Sample ID LCS-15192	Samp	Гуре: LC	s	Tes	tCode: E	PA Method	8021B: Vola	tiles				
Client ID: LCSS	Batc	h ID: 15	192	F	RunNo: 2	1126						
Prep Date: 9/9/2014	Analysis [Date: 9 /	10/2014	5	GeqNo: 6	15350	Units: %RE	С				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120					

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range E
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL **Reporting Detection Limit**

Page 4 of 4

1409425 11-Sep-14

WO#:

ENVIRONMENTAL ANALYSIS LABORATORY		Hawkins NE e, NM 87109 05-34 5-4 107	Sam	ple Log-In Cl	neck List
Client Name: APEX AZTEC Work Orc	der Number: 1409	425	<u></u>	RcptNo:	1
Received by/date: LM 09/10/14		_	_	· · · · · · · · · · · · · · · · · · ·	
Logged By: Anne Thome 9/10/2014 6	6:30:00 AM	6	Jone Som	-	
Completed By: Anne Thome 9/10/2014		6	Jone Arm	-	
Reviewed By: A 09/1014			. <u></u>		
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?	Cou	ier			
Log In					•
4. Was an attempt made to cool the samples?	Yes	∠ .	No 🗌	NA 🗌	
5. Were all samples received at a temperature of >0° C to	6.0°C Yes		No 🗌		
6. Sample(s) in proper container(s)?	Yes		No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes		No 🗌		
8. Are samples (except VOA and ONG) properly preserved	l? Yes		No 🗆		• •
9. Was preservative added to bottles?	Yes		No 🗹	NA 🗆	
10.VOA vials have zero headspace?	Yes		No 🗌	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes		No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels?	Yes		No 🗌	for pH:	
(Note discrepancies on chain of custody)			「	(<2 o Adjusted?	r >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes		No 🗌 No 🔲		
 14. Is it clear what analyses were requested? 15. Were all holding times able to be met? (if no, notify customer for authorization.) 	Yes Yes	-		Checked by:	
Special Handling (If applicable)					
16. Was client notified of all discrepancies with this order?	Yes		No 🗌	. NA 🗹	
Person Notified:	Date		·		
By Whom:	Via: 🗌 eM	ail 🗌 Phor	ne 🗌 Fax	In Person	
Regarding:	- State Consider Administration of the		المراجعة، بريارة المراجعة. وي بالمراجعة المراجعة		
Client Instructions:					J
17. Additional remarks:					
18 Cooler Information					

Page 1 of 1

																		CHAIN OF CUSTODY RECOF
-						Laboratory:								Anal Requ			7	Lab use only Due Date:
	PEX	-				Address:	Albuquerque, NM						.	ł				Temp. of coolers when received (C°): Z ?
Offic	e Locatio	n Azła	<u>ec</u> ,	NI	<u>M</u>	Contact: N	Contact: Andy Freeman									/		when received (C'):
						Phone: (54		8							/	(alozofa)		
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	ler's Name	<u>.</u>				Sampler's Sign	-								/ .	$\frac{1}{2}$	/	
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703 Matrix	Date	032 Time	Com	erpa G a b		anks of Sample(s)	Start Depth	End Deptin	VOA	A/G 1 L	al 250	Glass Jar	P/O	8021 BT.	8015			Lab Sample ID (Lab Use Only)
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Relind	uished by ((Signature)			Date:	Time: Receiv	rèd by:	(Signa	ture)			Date	:	Time	:			
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2

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



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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised August 8, 2011

Form C-141

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

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		F	Releas	e Notifica	ation	and C	orrective	Acti	on			
					OP	ERATO	ર] Initial	Report	\boxtimes	Final Report
Name of C	ompany:	Enterprise F	Field Serv	vices LLC	(Contact: TI	nomas Long			•		
		ve, Farmin	gton, NM	87401			No. 505-599-2					
Facility Na	me: Latera	al 3B-3				Facility Typ	e: Natural Ga	is Gat	hering L	ine		
Surface Ov	vner BLM			Mineral O	wner:l	BLM			API No	D.		
				LOCA	TION	OF REL	EASE					
Unit Letter	Section	Township	Range	Feet from		South	Feet from	East	West	County		
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		Latitude_	<u>36.77</u>	<u>2307</u>		_ Longitud	le <u>-107.967</u>	<u>'842</u>				
				ΝΑΤΙ	JRE	OF RELI	EASE			DEC	082	2014
		al Gas and N		s Liquids			f Release 39.87			Recovered		
Source of R	elease: Inte	ernal Corrosio	on				Hour of Occurre @ 12:30 p.m.	ence:		d Hour of [4 @ 2:00		ery:
Was Immed	iate Notice	Given?					Whom? Courte	esy noti				Smith and
		🗌 Ye	s 🗌 No	🛛 🛛 Not Req	uired	BLM- Sha	ri Ketchum					
By Whom?	·						Hour 8/21/2014					
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Date: 1/	-5-2	10/4	Phon	ie: (713)381-66	684		<u> </u>				·	

* Attach Additional Sheets If Necessary

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OIL CONS. DIV DIST. 3

DEC 08 2014

CORRECTIVE ACTION REPORT

Property:

Lateral 3B-3 Pipeline Release NW 1/4, S35 T30N R11W San Juan County, New Mexico

October 21, 2014 Apex Project No. 7030414G030

Prepared for:

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

Prepared by:

then M. Woods

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

Elizabeth Scaggs, P.G. Senior Program Manager

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

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Appendix B:	Executed C-138 Solid Waste Acceptance Forms
Appendix C:	Photographic Documentation
Appendix D:	Tables
Appendix E:	Laboratory Analytical Reports & Chain of Custody Documentation

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CORRECTIVE ACTION REPORT

Lateral 3B-3 Pipeline Release NW 1/4, S35 T30N R11W San Juan County, New Mexico

Apex Project No. 7030414G030

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 3B-3 Pipeline Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the northwest (NW) ¼ of Section 35 in Township 30 North and Range 11 West in rural San Juan County, New Mexico (36.77231N, 107.96784W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to an unpaved road, 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 production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately northwest to southeast.

On August 26, 2014, Enterprise shut in the Lateral 3B-3 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and minor liquids at the ground surface.

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	Ranking Criteria									
	<50 feet	20								
Depth to Groundwater	50 to 99 feet	10	0							
	>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	v							
	<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 Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "10". This ranking is based on the following:

- Depth to groundwater is anticipated to be greater than 240 feet below ground surface based on a cathodic protection deepwell groundbed report for the Murphy D #100 located approximately 3,300 feet to the northwest of the Site. The cathodic report indicates that no groundwater was observed in the borehole with a total depth of 300 feet bgs. The elevation of the Murphy D #100 location is approximately 60 feet lower in elevation than the Site. No nearby water wells were 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. No private domestic water sources were identified within 200 feet of the Site.
- The Site is approximately 400 feet southwest of an ephemeral tributary to Bloomfield Canyon and approximately 550 feet east of an ephemeral tributary to the West Fork of Bloomfield Canyon. 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 August 26, 2014, Enterprise shut in the Lateral 3B-3 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and minor liquids at the ground surface. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Heather Woods and Kyle Summers, Apex environmental professionals, provided environmental support.

The surface expression of the excavation measured approximately 105 feet long by 14 feet wide, with a total depth ranging from approximately 5 to 6 feet bgs.

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

A total of approximately 330 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill and contoured to surrounding grade.



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

3.2 Soil Sampling Program

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

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

The 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-ofcustody form and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines* for *Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Remediation Plan.* 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-15) collected from the excavated area to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "10".

- 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 below the laboratory reporting limits, which are below the OCD *Remediation Action Level* for a Site ranking of "10".

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 3B-3 Pipeline Release Site is located within the Enterprise pipeline ROW in the NW ¼ of Section 35 in Township 30 North and Range 11 West in rural San Juan County, New Mexico, (36.75912N, 107.77916W). The Site is located adjacent to an unpaved road, on public land managed by the BLM. 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 northwest to southeast.

On August 26, 2014, Enterprise shut in the Lateral 3B-3 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 pipeline liquids were released from the pipeline as a result of internal corrosion. The leak was identified by a release of natural gas and minor liquids at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, underlain by sandstone.
- The surface expression of the excavation measured approximately 105 feet long by 14 feet wide, with a total depth of ranging from approximately 5 to 6 feet bgs.
- Prior to backfilling, fifteen (15) 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 "10".
- A total of approximately 330 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm in Hilltop, New Mexico for disposal/remediation. The excavation was backfilled with clean imported fill and contoured to surrounding grade.

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

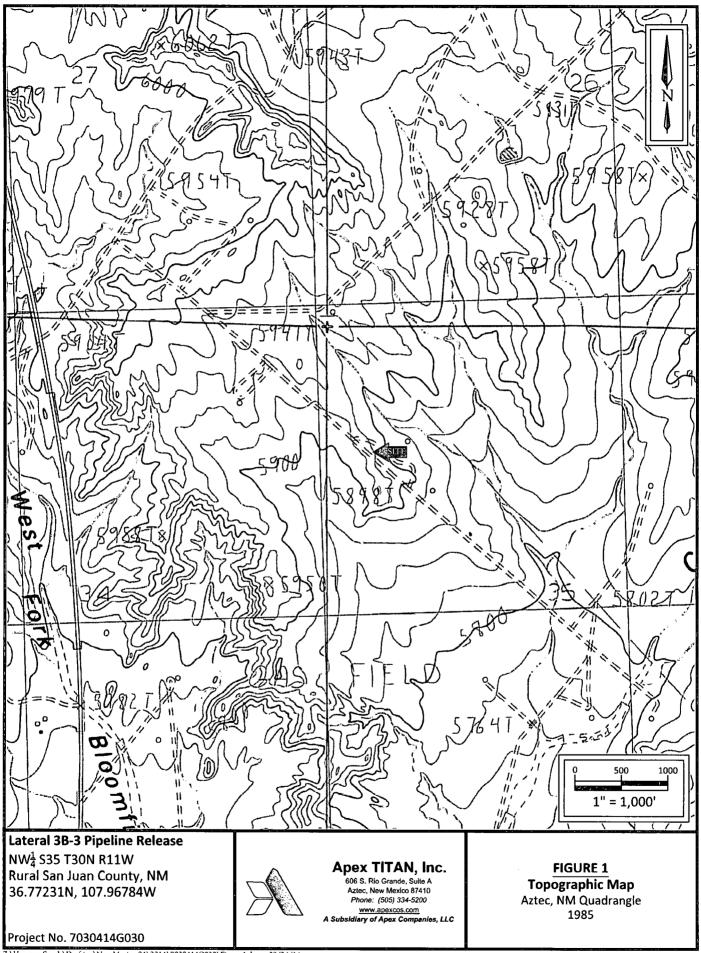
6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

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.

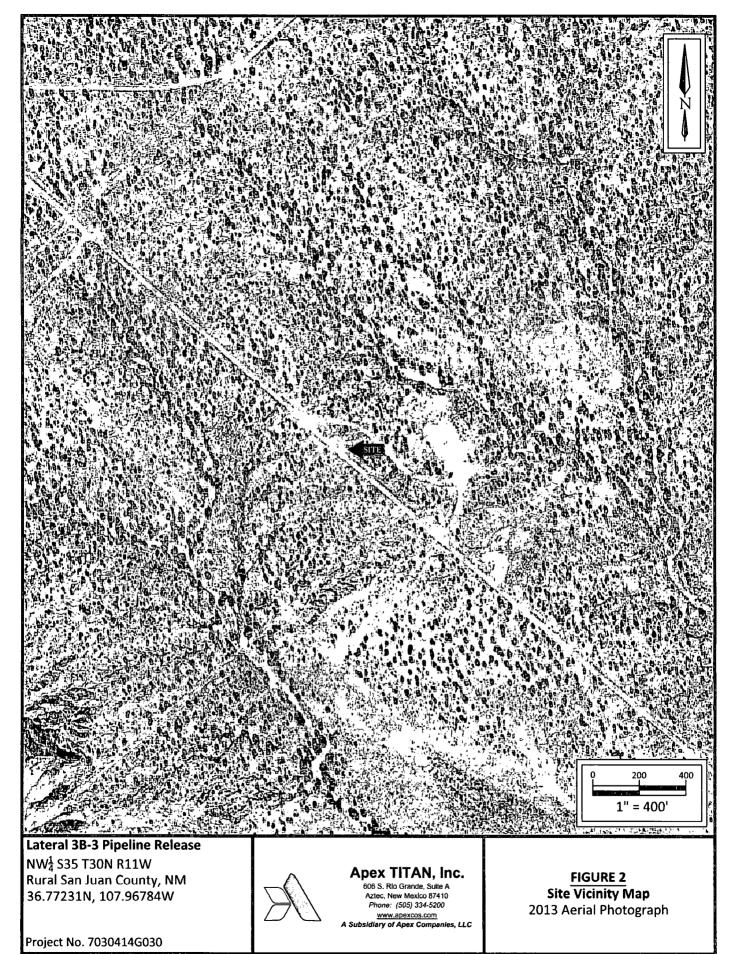


Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence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

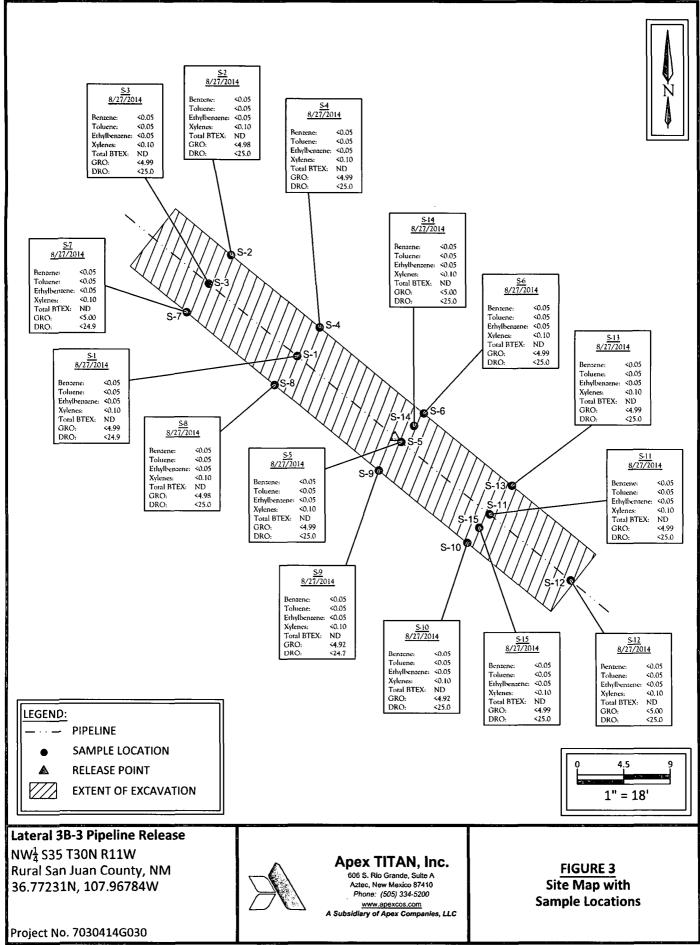
This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution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



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G030\Figure 1.dwg 09/24/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G030\Figure 2.dwg 09/24/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G030\Figure 3.dwg 09/24/14

Form C-138 Revised August 1, 2011

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

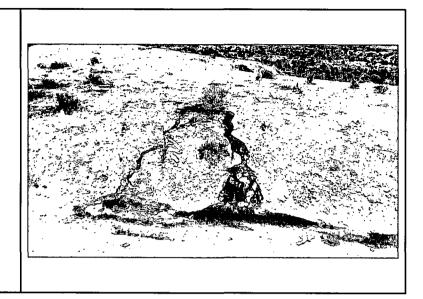
REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE 1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401 **Originating Site:** 2. Lateral 3B-3 Pipeline Location of Material (Street Address, City, State or ULSTR): 3 Unit Letter D, Section 35, T30N, R11W; 36.772307, -107.967842 4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline Estimated Volume 50 (yd^3) bbls Known Volume (to be entered by the operator at the end of the haul) 5. / bbls 5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS** I, Thomas Long representative or authorized agent for Enterprise Field Services, LLC do hereby PRINT & SIGN NAME COMPANY NAME certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification) RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-Operator Use Only: Waste Acceptance Frequency [] Monthly [] Weekly [] Per Load exempt waste. RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazar characteristics established in RCRA regulations. 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part. subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. the appropriate items) 9 🗆 MSDS Information 🔅 RCRA Hazardous Waste Analysis 🔅 Process Knowledge 🕞 Other (Provide description in Box 8-**GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS** , representative for Enterprise Field Services, LLC authorize IEI, Inc. to 8-21-14 **Generator Signature** complete the required testing/sign the Generator Waste Testing Certification. -, representative for IEI, Inc. do hereby certify that 1. representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The 🚍 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 (WSEC) n_0 **OCD Permitted Surface Waste Management Facility** Name and Facility Permit #: JFJ Landfarm/Industrial Ecosystems, Inc. * Permit #: NM 01-0010B Address of Facility: #49 CR 2150 Aztec, New Mexico Method of Treatment and/or Disposal: Treating Plant 🛛 Landfarm 🗌 Landfill 🗌 Other Waste Acceptance Status: APPROVED **DENIED** (Must Be Maintained As Permanent Record) TITLE: PRINT NAME TELEPHONE NO SIGNATURE: Surface Waste Management Facility Authorized Agent

-22-14



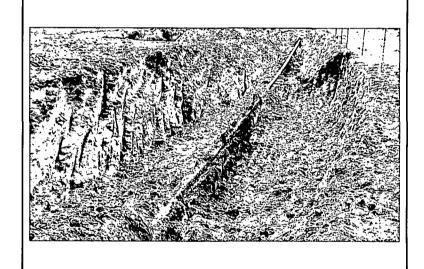
Photograph 1

View of site prior to excavation activities, facing northeast.



Photograph 2

View of the final excavation at the completion of corrective action activities, facing southeast.



Photograph 3

View of the final excavation at the completion of corrective action activities, facing northwest.

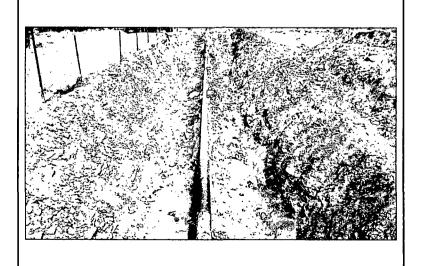




TABLE 1 Lateral 3B-3 Pipeline Release Soil Analytical Summary

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg).	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)
New Mexico Entergy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level		10	NE	NE	NE	50	1,0	000	
·····				Final Confin	nation Samples		<u></u>		
S-1	8/27/2014	4	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<24.9
S-2	8/27/2014	2 to 4	< 0.05	<0.05	<0.05	<0.10	ND	<4.98	<25.0
S-3	8/27/2014	4	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-4	8/27/2014	2 to 4	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-5	8/27/2014	4	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-6	8/27/2014	3 to 6	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-7	8/27/2014	2 to 4	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<24.9
S-8	8/27/2014	2 to 4	<0.05	< 0.05	<0.05	<0.10	ND	<4.98	<25.0
S-9	8/27/2014	3 to 6	<0.05	<0.05	<0.05	<0.10	ND	<4.92	<24.7
S-10	8/27/2014	3 to 6	< 0.05	<0.05	<0.05	<0.10	ND	<4.92	<25.0
S-11	8/27/2014	6	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-12	8/27/2014	3 to 6	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<25.0
S-13	8/27/2014	3 to 6	<0.05	<0.05	<0.05	<0.10	ND	<4.99	<25.0
S-14	8/27/2014	6	<0.05	<0.05	<0.05	<0.10	ND	<5.00	<25.0
S-15	8/27/2014	6	<0.05	< 0.05	<0.05	<0.10	ND	<4.99	<25.0

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

NE = Not Established

ND = Not Detected above Laboratory Reporting Limits



Analytical Report

Report Summary

Client: Enterprise Products Chain Of Custody Number: 17370 Samples Received: 8/27/2014 11:21:00AM Job Number: 97057-0352 Work Order: P408113 Project Name/Location: Lateral 3B-3

Date: 8/29/14

Entire Report Reviewed By:

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 8/29/14 11:11 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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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:41

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
S-1	P408113-01A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-2	P408113-02A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-3	P408113-03A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-4	P408113-04A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-5	P408113-05A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-6	P408113-06A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-7	P408113-07A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-8	P408113-08A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-9	P408113-09A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.
S-10	P408113-10A	Soil	08/27/14	08/27/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN					Reported: 29-Aug-14 11:41	
		P4081	S-1 13-01 (So	olid)					
Analus	Result	Reporting Limit	Units	Dilution		December		Mada d	
Analyte	Kesuit	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		106 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		104 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		7 9 .9 %	50-200		1435021	08/27/14	08/27/14	EPA 8015D	



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Ргоје	ct Name: ct Number: ct Manager:	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN				Reported: 29-Aug-14 11:41		
		P4081	S-2 13-02 (Se	olid)			7		
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		103 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		84.5 %	50	-200	1435021	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN				Reported: 29-Aug-14 11:41		
		P4081	S-3 13-03 (So	olid)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		105 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		102 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		101 %	50-200		1435021	08/27/14	08/27/14	EPA 8015D	



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	t Name: t Number: t Manager:	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN					Reported: 29-Aug-14 11:41	
		P4081	S-4 13-04 (Se	olid)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		102 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.4 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	ł	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo/a/pyrene		82.6 %	50	-200	1435021	08/27/14	08/27/14	EPA 8015D	



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Ргојес	et Name: et Number: et Manager:	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN				Reported: 29-Aug-14 11:41		
		P4081	S-5 13-05 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		99.9 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		79.0 %	50	-200	1435021	08/27/14	08/27/14	EPA 8015D	



Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	nber: 97057-0352					Reported: 29-Aug-14 11:41	
		P4081	S-6 13-06 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	-
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	I	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		102 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo/a/pyrene		85.6 %	50-200		1435021	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	9705	al 3B-3 7-0352 Summers-A	pex TITAN			Reported: 29-Aug-14 11	
		P4081	S-7 13-07 (Sc	olid)					
		Reporting		· · · · ·					
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		101 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Surrogate: Bromochlorobenzene		104 %	50	-150	1435022	08/27/14	08/28/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1435022	08/27/14	08/28/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	24.9	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		99.5 %	50	-200	1435021	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project	t Name: t Number: t Manager:	97 05′	al 3B-3 7-0352 Summers-A	pex TITAN			Reported: 29-Aug-14 11	
		P4081	S-8 13-08 (So	olid)					
	·	Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Volatile Organics by EPA 8021			•						
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
o,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
p-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Fotal Xylenes	ND	. 0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		97.2 %	50-	-150	1435022	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene	, .	94.8 %	50-	-150	1435022	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015			.						
Gasoline Range Organics (C6-C10)	, ND	4.98	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND .	25.0	mg/kg	1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		84.2 %	50-	-200	1435021	08/27/14	08/27/14	EPA 8015D	

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envir Analyti	'ote ical Labo		1.4					
Enterprise Products	Project	t Name:	Lateral 3B-3					
614 Reilly Ave	Projec	t Number:	97057-0352				Reported:	
Farmington NM, 87401	Projec	t Manager:	Kyle Summers-A	pex TITAN			29-Aug-14 11	:41
	· · ·	P4081	S-9 13-09 (Solid)					
Analyte	Result	Reporting Limit	Units Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021					_			
Benzene	ND	0.05	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	. 0.05	mg/kg · 1	1435022	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND .	0.05	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg l	1435022	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.5 %	50-150	1435022	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %	50-150	1435022	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015								
Gasoline Range Organics (C6-C10)	ND	4.92	mg/kg l	1435022	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	24.7	mg/kg 1	1435021	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo/a/pyrene		167 %	50-200	1435021	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	9705	al 3B-3 7-0352 Summers-A	pex TITAN			Reported: 29-Aug-14 11	
		P4081	S-10 13-10 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	i	1435022	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %	50-	-150	1435022	08/27/14	08/27/14	EPA 8021B	····
Surrogate: 1,3-Dichlorobenzene		98.0 %	50-	-150	1435022	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.92	mg/kg	1	1435022	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435021	08/27/14	08/28/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		198 %	50-	-200	1435021	08/27/14	08/28/14	EPA 8015D	

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envirotech Analytical Laboratory

Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:41

4 - 57 - 1

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Ŕ	Reporting Limit	Units	-	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1435022 - Purge and Trap EPA 5030A					i							
Blank (1435022-BLK1)					Р	repared: 2	7-Aug-14	Analyzed:	28-Aug-14			
Benzene	ND		0.001	mg/kg	.							
Toluene	ND		0.001	"								
Ethylbenzene	ND		0.001	"								
p,m-Xylene	ND		0.002	"								
o-Xylene	ND		0.001	"	ţ							
Total Xylenes	ND		0.001	"								
Total BTEX	ND		0.001	"	,							
Surrogate: 1,3-Dichlorobenzene	0.0448			"		0.0499		89.9	50-150			
Surrogate: Bromochlorobenzene	0.0459	e 1		"		0.0499		92.0	50-150			
Duplicate (1435022-DUP1)	S	ource:	P408113-	01	Р	repared: 2	7-Aug-14	Analyzed:	28-Aug-14			
Benzene	ND		0.05	mg/kg	t		ND				30	
Foluene	ND.		0.05				ND				30	
Ethylbenzene	ND		0.05				ND				30	
p,m-Xylene	ND		0.10				ND				30	
o-Xylene	ND		0.05				ND				30	
Surrogate: 1,3-Dichlorobenzene	0.0456			"		0.0498		91.4	50-150			
Surrogate: Bromochlorobenzene	0.0454			"		0.0498		91.1	50-150			
Matrix Spike (1435022-MS1)	S	ource:	P408113-	01	P	repared: 2	7-Aug-14	Analyzed:	28-Aug-14			
Benzene	38.7		•	ug/L	i.	50.0	ND	77.5	39-150			
Foluene	38.8			"	·	50.0	ND	77.7	46-148			
Ethylbenzene	38.6			"		50.0	ND	77.2	32-160			
p,m-Xylene	80.0			"	1	100	ND	80.0	46-148			
o-Xylene	38.9					50.0	ND	77.7	46-148			
Surrogate: 1,3-Dichlorobenzene	0.0385			mg/kg		0.0499		77.2	50-150			
Surrogate: Bromochlorohenzene	0.0392			"		0.0499		78.7	50-150			

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:41

Nonhalogenated Organics by 8015 - Quality Control

Notes

Envirotech Analytical Laboratory Spike %REC RPD Reporting Source Analyte Result Limit Units Level Result %REC Limits RPD Limit -Batch 1435021 - DRO Extraction EPA 3550M Prepared & Analyzed: 27-Aug-14 Blank (1435021-BLK1) Diesel Range Organics (C10-C28) ND 24.9 mg/kg 16.4 " 20.0 82.3 50-200 Surrogate: Benzo[a]pyrene Matrix Spike (1435021-MS1) Source: P408113-01 Prepared & Analyzed: 27-Aug-14 Diesel Range Organics (C10-C28) 571 25.0 499 ND 114 38-132 mg/kg 19.4 " 20.0 97.4 50-200 Surrogate: Benzo[a]pyrene Matrix Spike Dup (1435021-MSD1) Source: P408113-01 Prepared & Analyzed: 27-Aug-14 495 mg/kg 499 ND 38-132 14.1 20 Diesel Range Organics (C10-C28) 24.9 99.3 ... 16.2 20.0 81.4 50-200 Surrogate: Benzo/a]pyrene

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:41

Nonhalogenated Organics by 8015 - Quality Control

		Poportin ~		Smiles	Source		%REC		DDD	
Analyte	Result	Reporting Limit	Units	Spike Level	Result	%REC	Limits	RPD	RPD Limit	Notes
Batch 1435022 - Purge and Trap EPA 5030A				•						
Blank (1435022-BLK1)	*			Prepared: 2	7-Aug-14	Analyzed: 2	28-Aug-14			
Gasoline Range Organics (C6-C10)	ND	0.10	mg/kg		·					
Duplicate (1435022-DUP1)	Source	: P408113-	01	Prepared: 2	27-Aug-14	Analyzed: 2	28-Aug-14			
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg		ND				30	
Matrix Spike (1435022-MS1)	Source	e: P408113-	01	Prepared: 2	27-Aug-14	Analyzed: 2	28-Aug-14			
Gasoline Range Organics (C6-C10)	0.34		mg/L	0.450	ND	75.1	75-125			
				•						
		,¥								
				2.1						
				• `						

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:41

Notes and Definitions

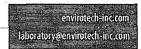
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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CHAIN OF CUSTODY RECORD

17370

Client:		Project Name / Location:							ANALYSIS / PARAMETERS														
Enterprise Field S			ateral 3B-3	3					200				<u>بن</u>	<u>ا ج</u> د ہو.	010	.			0				
Email results to: hwoods eape	excos Lon	Sar	Sampler Name:						5, 5	21)	ô												
tillange eprod. com			H. Woods / K. Summers						801	d_80	826	ś	· :		•	1. 							
Client Phone No.:		Clie	ent No.: 9705	-7	ATT	7			por	tho	pou	leta	nion		H	910	(f	ш				<u></u>	tact
(505)716-2787			7705	7 -	<u>U 770</u>	<u> </u>		4	Vietř	(Me	Met	8 N	V AI		with	ble	418.	RID				Ŭ 0	el
Sample No./ Identification	Sample Date	Sample Time	Lab No.		Volume ntainers	Pr HNO3	eservat HCI	ive cold	TPH (Method 8015)	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 Cool	Sample Intact
5-1	8/27/14	0740	P405/13-01	1-40	2 Glass			X	X	X	·					- •	· ·					X	X
5-2	8/27/14	0745	-02	1-40	2 Glars		- •••	X	X	y			•			-							
S-3	8/27/14	0750	-03	1-4	oz Glass			x	X	X									· .				
5.4	8/27/14	0755	-04	1-4	02 61033		,	X	X	Y													
<u>S-5</u>	8/27/14	0800	-05	1-4	oz Glass			×	x	X			;										
3-6	8/27/14	0805	-06	1-40	2 Glass			X	X	ý				: ;							;	2	
5-7	8127/14	OBIO	-07	1-40	n Glass	ļ		X	x	¥	÷												
S-8	B/27/14	0815	-08	1-40	2 Glass		1	×	R	X			:										
<u>s-9</u>	8/27/14	0820	-09	1-4	22 GIASS			×	×.	ÿ						:							1
5-10	8/27/14	0825	-10	1-40	z Glass			X	X	×				,							3		<u>.</u>
Relinquished by: (Signature)				Date	lime	Recei	ved b	iy: (Si	gnati	ند(ire	T										Date	Tin	ne
Heather M. Ub	ods			8/27/1	[1121							and the second second		A	٦					\$12	7/14	112	
Relinquished by: (Signature)					: : : :	Recei	ved b	iy: (Si	gnati	ure)	,		نو.	*									*
Sample Matrix				·	· ·																		
Soil 🕅 Solid 🗌 Sludge 🗌	Aqueous 🗌	Other 🗌	· .	-																			
Sample(s) dropped off after hours to secure drop off area.					·	ò				10	1 -	RUI	أ مام	مد مز ت	-01 ⁻¹	34	Field	d S	urn i	نە	(10.2	5
RUSH BIZE AM				3 e	P N V	I r (AHn	70	m L	-on	+	6						
□ Sample(s) dropped off after hours to secure drop off area. RUSH 8/28 Am Page 1 of 2 5795 US Highway 64 · Farmington, NM 87401 · 505-632-0615 · Three Springs · 65 Mercado Street, Suite 115, Durango, CO 81301 · laboratory@envirotech-inc.com																							

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Analytical Report

Report Summary

Client: Enterprise Products Chain Of Custody Number: 17371 Samples Received: 8/27/2014 11:21:00AM Job Number: 97057-0352 Work Order: P408112 Project Name/Location: Lateral 3B-3

Entire Report Reviewed By:

Tim Cain, Laboratory Manager

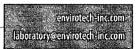
Date: 8/29/14

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.

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Enterprise Products	Project Name:	Lateral 3B-3		
614 Reilly Ave	Project Number:	97057-0352	Reported:	
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:05	

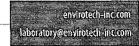
Analyical Report for Samples

Client Sample 1D	Lab Sample ID	Matrix		Sampled	Received	Container
S-11	P408112-01A	Soil		08/27/14	08/27/14	Glass Jar, 4 oz.
S-12	P408112-02A	Soil		08/27/14	08/27/14	Glass Jar, 4 oz.
S-13	P408112-03A	Soil		08/27/14	08/27/14	Glass Jar, 4 oz.
S-14	P408112-04A	Soil	e .,	08/27/14	08/27/14	Glass Jar, 4 oz.
S-15	P408112-05A	Soil		08/27/14	08/27/14	Glass Jar, 4 oz.

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project N Project N Project N	lumber:	Lateral 3B-3 97057-0352 Kyle Summers-A	Reported: 29-Aug-14 11:05				
		D 4004	S-11					
	· .	P4081	12-01 (Solid)					
Analyte	Result	Reporting Limit	Units Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021			·					
Benzene	ND	0.05	mg/kg 1	1435015	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg l	1435015	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg l	1435015	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg l	1435015	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg 1	1435015	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg l	1435015	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND ·	0.05	mg/kg l	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene	1	95.0 %	50-150	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene	•	94.0 %	50-150	1435015	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015			·					
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg l	1435015	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg l	1435014	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene	• •	92.5 %	50-200	1435014	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	t Name: t Number: t Manager:					Reported: 29-Aug-14 11:05		
		P4081	S-12 12-02 (So	olid)					
		Reporting				······			
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		80.6 %	50-	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		83.9 %	50-	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435014	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene	· ·	91.0 %	50	-200	1435014	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name:Lateral 3B-3Project Number:97057-0352Project Manager:Kyle Summers-Apex TITAN				Reported: 29-Aug-14 11:05				
	•	P4081	S-13 12-03 (So	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021	, [†]		,						
Benzene	ND	. 0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	i	1435015	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	. 0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.8 %	50	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.4 %	50	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435014	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene		98.5 %	50	-200	1435014	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec	et Name: et Number: et Manager:	9705	Lateral 3B-3 97057-0352 Kyle Summers-Apex TITAN				Reported: 29-Aug-14 11:05	
		P4081	S-14 12-04 (Se	olid)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		98.3 %	50	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		101 %	50	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435014	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo/a]pyrene		84.3 %	50	-200	1435014	08/27/14	08/27/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project	t Name: t Number: t Manager:	9705	al 3B-3 7-0352 Summers-A	pex TITAN			Reported: 29-Aug-14 11	:05
		P4081	S-15 12-05 (So	lid)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volotile Organics by FDA 8021				ŀ					
Volatile Organics by EPA 8021 Benzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
p,m-Xylene	ND	0.10	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg*	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		97.7 %	50-	.150	1435015	08/27/14	08/27/14	EPA 8021B	
Surrogate: Bromochlorobenzene		99.6 %	50-	-150	1435015	08/27/14	08/27/14	EPA 8021B	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1435015	08/27/14	08/27/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1435014	08/27/14	08/27/14	EPA 8015D	
Surrogate: Benzo[a]pyrene	################################	89.6%	50-	-200	1435014	08/27/14	08/27/14	EPA 8015D	

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envirotech Analytical Laboratory

Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:05

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 1435015 - Purge and Trap EPA	5030A									
Blank (1435015-BLK1)				Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05	"							
Ethylbenzene	ND	0.05	"	,						
,m-Xylene	ND	0.10	11	÷.						
-Xylene	ND	0.05	17							
Fotal Xylenes	ND	0.05	"							
Fotal BTEX	ND	0.05	"							
Surrogate: 1,3-Dichlorobenzene	0.0468		"	0.0500		93.6	50-150			
Surrogate: Bromochlorobenzene	0.0485		"	0.0500		97.0	50-150			
Duplicate (1435015-DUP1)	Sou	irce: P408107-	01 [·]	Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Benzene	ND	0.05	mg/kg		ND				30	
Foluene	ND	0.05	"		ND				30	
Ethylbenzene	ND	0.05	"		ND				30	
o,m-Xylene	ND	0.10	*1		ND				30	
p-Xylene	ND	0.05	"		ND				30	
Surrogate: 1,3-Dichlorobenzene	0.0506		"	0.0499		101	50-150			
Surrogate: Bromochlorobenzene	0.0520		"	0.0499		104	50-150			
Matrix Spike (1435015-MS1)	Sou	ırce: P408107-	01	Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Benzene	49.7		ug/L	50.0	ND	99.5	39-150			
Foluene	51.6		"	50.0	ND	103	46-148			
Ethylbenzene	51.4			50.0	ND	103	32-160			
o,m-Xylene	103		"	100	ND	103	46-148			
o-Xylene	51.9		"	50.0	ND	104	46-148			
Surrogate: 1,3-Dichlorobenzene	0.0510		mg/kg	0.0499		102	50-150			
Surrogate: Bromochlorobenzene	0.0525		"	0.0499		105	50-150			

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:05

Nonhalogenated Organics by 8015 - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1435014 - DRO Extraction EPA 3	3550M									
Blank (1435014-BLK1)				Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: Benzo[a]pyrene	16.9		"	20.0		84.5	50-200			
LCS (1435014-BS1)				Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Diesel Range Organics (C10-C28)	474	24.9	mg/kg	499		95.1	38-132			
Surrogate: Benzo[a]pyrene	18.5		"	20.0		92.5	50-200			
Matrix Spike (1435014-MS1)	Sourc	e: P408107-	-01	Prepared: 2	6-Aug-14	Analyzed:	27-Aug-14			
Diesel Range Organics (C10-C28)	506	25.0	mg/kg	499	25.7	96.2	38-132			
Surrogate: Benzo[a]pyrene	17.7		"	20.0		88.7	50-200			
Matrix Spike Dup (1435014-MSD1)	Sourc	e: P408107-	-01	Prepared: 2	26-Aug-14	Analyzed:	27-Aug-14			
Diesel Range Organics (C10-C28)	568	25.0	mg/kg	500	25.7	109	38-132	11.6	20	
Surrogate: Benzo[a]pyrene	19.1		"	20.0		95.4	50-200			

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:05

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 1435015 - Purge and Trap EPA 5030A												
Blank (1435015-BLK1)				Prepared: 2	26-Aug-14	Analyzed:	27-Aug-14					
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg									
Duplicate (1435015-DUP1)	Sou	irce: P408107-	-01	Prepared: 2	26-Aug-14	Analyzed:	27-Aug-14					
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND				30			
Matrix Spike (1435015-MS1)	Sou	irce: P408107-	-01	Prepared: 2	26-Aug-14	Analyzed:	27-Aug-14					
Gasoline Range Organics (C6-C10)	0.48		mg/L	0.450	ND	107	75-125					

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Enterprise Products	Project Name:	Lateral 3B-3	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	29-Aug-14 11:05

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr.

JIL CONS. DIV DIST. 3

NOV 17 2014

Form C-141 Revised August 8, 2011

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

				Sar	nta F	e, NM 87	505					
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		Enterprise					homas Long					
		Ave, Farmir					No. 505-599-					
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Surface Ov	wner: Stat	e		Mineral O	wner	State			API N	0.		
				LOCA		N OF REI	EASE					
Unit Letter	Section	Township	Range	Feet from		h/South	Feet from	Eas	Wes	County		_
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E-mail Addr	ess:jefields	s@eprod.com	ו 			Conditions	of Approval:			Attached	I 🗌	
Date: ///	7/204		Phor	ne: (713)381-66	684							
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Hobbs, NM 88240
811 S. First St., Artesia, NM 88210
District III 1000 Rio Brazos Road, Aztec, NM 87410
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

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

OIL CONS. DIV DIST. 3

NOV 17 2014

Form C-141 Revised August 8, 2011

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

Release Notification and Corrective Action															
Name of C	omnany:	Enterprise F	Field Son							Report		Final Report			
		ve, Farmin				Contact: Thomas Long Telephone No. 505-599-2286									
		al 14A Pipe				Facility Type: Natural Gas Gathering Line									
¥															
Surface Ov	vner:BLM			Mineral O	wner	BLM			API No) .					
				LOCA	TIOI	N OF REL	EASE								
Unit Letter	Section	Township	Range	Feet from		th/south	Feet from		Vest	County					
	34	32 N	9 W	the 1311	Line	;	the 1998	Line		San Ju	an				
L				1	I		1			-l					
Latitude <u>36.937596</u> Longitude <u>-107.769285</u>															
NATURE OF RELEASE															
Type of Release: Natural Gas and Natural Gas LiquidsVolume of Release 39.78Volume Recovered: NoneSource of Release: Internal CorrosionDate and Hour of Occurrence:Date and Hour of Discovery:															
Source of R	elease: Inte	ernal Corrosio	n				Hour of Occurre 4 @ 9:30 a.m.	ence:		d Hour of)14 10:30		ery:			
Was Immed	iate Notice	Given?					Whom? NMO	CD – C				etchum on			
		🗌 Yes	s 🗌 No	🛛 🛛 Not Req	uired	October 1									
By Whom?						Date and	Hour October 1	8, 2014	at 11:33	a.m.					
Was a Wate	rcourse Re		—	****			olume Impacting								
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visible impa dimensions yards of hyc Describe Ar Enterprise to visible impa dimensions	cts were ok measured Irocarbon ir ea Affected echnician ir cts were ok measured	oserved on the approximate npacted soil d and Cleant nitiated notific oserved on the approximate	e ground ly forty-six was excav up Action ation proc e ground ly forty-six	surface. Repa (46) feet long vated and trans Taken On Oc cedures. The p surface. Repa (46) feet long	irs an by f porte tober ipeline irs an g by f	d remediatio ourteen (14) d to a NMOC 10, 2014, a e was isolate d remediatio ourteen (14)	d, blown down, n were complet feet wide by s D approved lar pipeline leak w d, blown down, n were complet feet wide by s CD approved la	ted on (even (7 nd farm vas disc depres ted on (even (7	October 2 7) feet der facility. covered o surized, lo October 2 7) feet der	1, 2014. ep. Appro n the Late ocked out 1, 2014. ep. Appro	The fin oximate eral 14 and tag The fin oximate	al excavation ely 108 cubic A ROW. The gged out. No al excavation ely 108 cubic			
yards of hydrocarbon impacted soil was excavated and transported to a NMOCD approved land farm facility. A third party corrective action report is included with this "Final" C-141. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.											or releases ort" does not se a threat to				
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Printed Nan	ne: Jon Fiel	ds				Approved by Environmental Specialist:									
Title: Directe	or, Environ	mental	<u>.</u>			Approval Da	ate: 1/5/15	-	Expiration	Date:					
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Date:	<i>¥ / / 17 //</i> tional She	ets If Neces		ne: (713)381-66	84	LE IN	5 150	ne							
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Enterprise Products Lateral L-14A Pipeline Release Latitude North 36.937596°, Longitude West -107.769285° NW/SW (Unit L) Section 34, T32N R9W San Juan County, New Mexico November 4, 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

www.soudermiller.com



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	3
6.0	Closure and Limitations	3

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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 October 18, 20 and 21, 2014, Souder, Miller & Associates (SMA) responded to oversee the excavation of the hydrocarbon release associated with the Lateral L-14A pipeline. The release was initially reported on October 10, 2014 and is a result of internal and external corrosion of the four inch natural gas pipeline. The table below summarizes information about the pipeline remediation activities.

TABLE 1: RELEASE INFORMATION						
Name		Lateral L-14A Pipeline Release				
	Latitude/Longitude		Section, Township, Range			
Location	36.937596	-107.769285°	Unit L	Section 34	T 32N, R 9W	
Date Reported	October 10, 2014					
Reported to Tom Long						
Land Owner	Bureau of Land Management (BLM)					
Reported To	NM Oil Conservation Division (NMOCD) and BLM					
Diameter of Pipeline	4 inches					
Source of Release	Internal/External Corrosion					
Release Contents	Natural Gas Liquids/Condensate					
Release Volume	Unknown					
Nearest Waterway	Located approximately 950 feet to the NE of a tributary to Pine Canyon					
Depth to Groundwater	Assumed to be greater than 100 feet					
Nearest Domestic Water Source	Greater than 1,000 feet					
NMOCD Ranking	10				······································	
SMA Response Dates	10/18, 20, 21					
Subcontractors	West States Energy Contractors (WSEC)					
Disposal Facility Envirotech Landfarm						
Yd ³ Contaminated						
Soil Excavated and 108 (Reported on Completed Form C-138) 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 Lateral L-14A pipeline release site. The site is located in the NW ¼ SW ¼ Section 34, T32N, R9W, 36.937596°, -107.769285°, San Juan County, New Mexico, on land owned by the Bureau of Land Management (BLM). Figure 1 illustrates the location of the site.

3.0 Site Ranking and Land Jurisdiction

The release site is located about 950 feet to the northeast of a tributary to Pine Canyon, in an area owned by the BLM with an elevation of approximately 6,609 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is

estimated to be greater than 100 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 database for water wells in the vicinity of the release. No wells were located within 1,000 feet or 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 10 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 1000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On October, 18, 20 and 21, 2014, SMA responded to a hydrocarbon release associated with the Lateral L-14A pipeline. West States Energy Contractors (WSEC) had begun excavation activities prior to SMA's arrival. Under the supervision and direction of SMA, WSEC excavated soil for repair activities. SMA field-screened the excavated soil, stockpiles, and the walls and base of the excavation to determine the extent of the release using a calibrated photoionization detector (PID). Field screening indicated that the extent of the hydrocarbon release had been removed. Closure sampling was scheduled with the BLM and NMOCD on October 21, 2014, neither party was present. SMA collected 8 samples from the excavation (SC-1 through SC-8). Laboratory results from the October 21, 2014 activities determined contamination below NMOCD guidelines in the base and walls. A water line owned by Conoco Phillips crosses the 4" Enterprise pipeline about 3 feet south of the release point. Because the water line was exposed during the excavation, a representative from Conoco Phillips was on site.

The pipeline trends generally north-south in the area of the release and the excavation was elongated in that direction. After high initial PID readings on Saturday, October 19, an EPCO representative decided to leave the pit open over the weekend to see if it would air out. On Monday (October 20), WSEC continued the excavation until field screening indicated the extent of the hydrocarbon contamination had been excavated. By Tuesday (October 21) morning, the final extents had aired out yielding much lower PID results, and closure samples were collected. The final excavation measured approximately 46 feet long by 14 feet wide by 7 feet deep, covering an area of approximately 644 square feet. The entire excavation was left open until the lab results confirmed the final extents of the excavation where below NMOCD standards. In total, approximately 108 cubic yards of soil was removed from the site and replaced with clean backfill material. The contaminated soil was transported to Envirotech Landfarm near Bloomfield, NM. Soil disposal documentation is included in Appendix B.

Soil samples were initially field screened with a PID equipped with a 10.6 electron volt bulb. Samples were submitted for confirmation laboratory analysis for United States Environmental Protection Agency Methods 8021 for benzene, toluene, ethylbenzene, and xylenes (BTEX) and 8015 for diesel and gasoline range organics (DRO/GRO). 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.

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 10: 10 ppm (mg/kg) benzene, 50 ppm total BTEX, and 1000 ppm TPH.

Laboratory analytical results for all samples collected were at/or below NMOCD remediation soil standards of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1000 ppm total petroleum hydrocarbons, based on the site ranking. Soil contaminant concentrations are illustrated in Figure 3. A summary of laboratory analysis is included in Table 3. Laboratory reports are included in Appendix C

SMA recommends no further action at the Lateral L-14A pipeline release location.

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 Allen at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES

Jame E Sporp

Jesse Sprague Staff Scientist

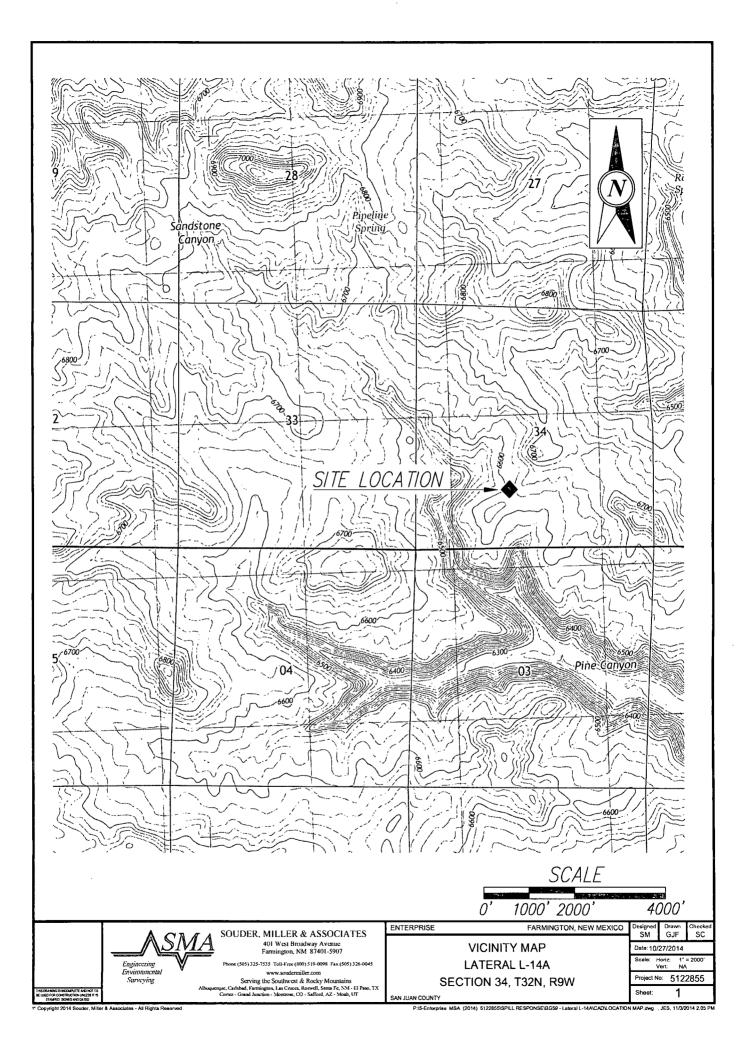
Reviewed by:

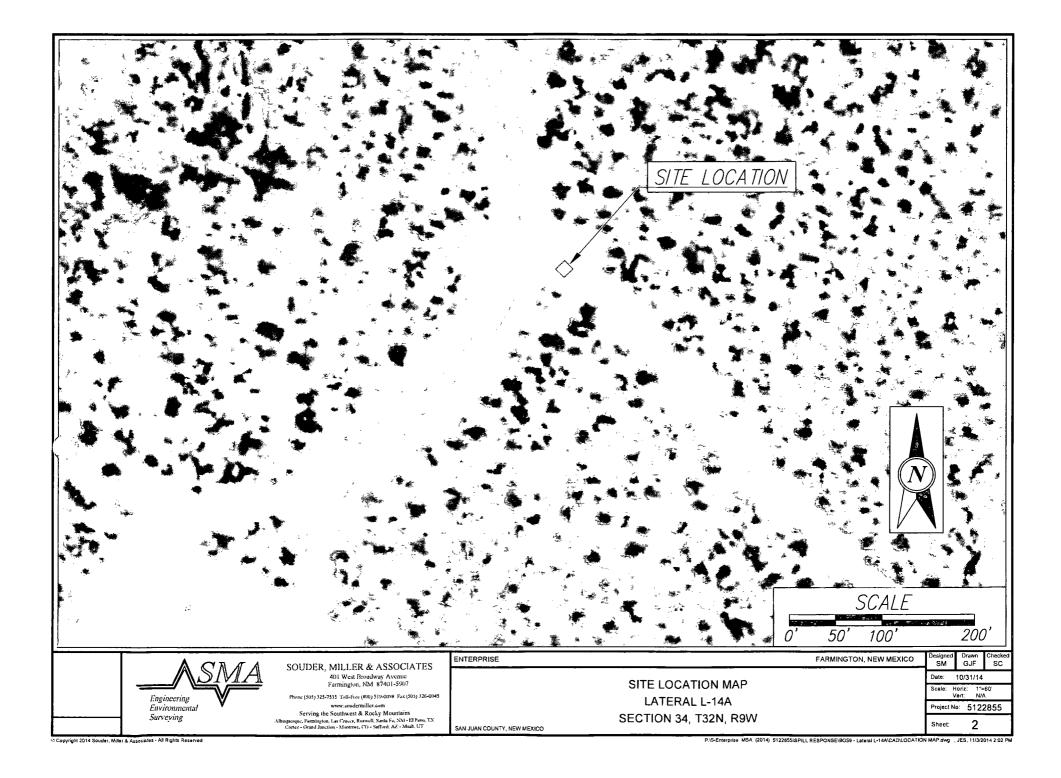
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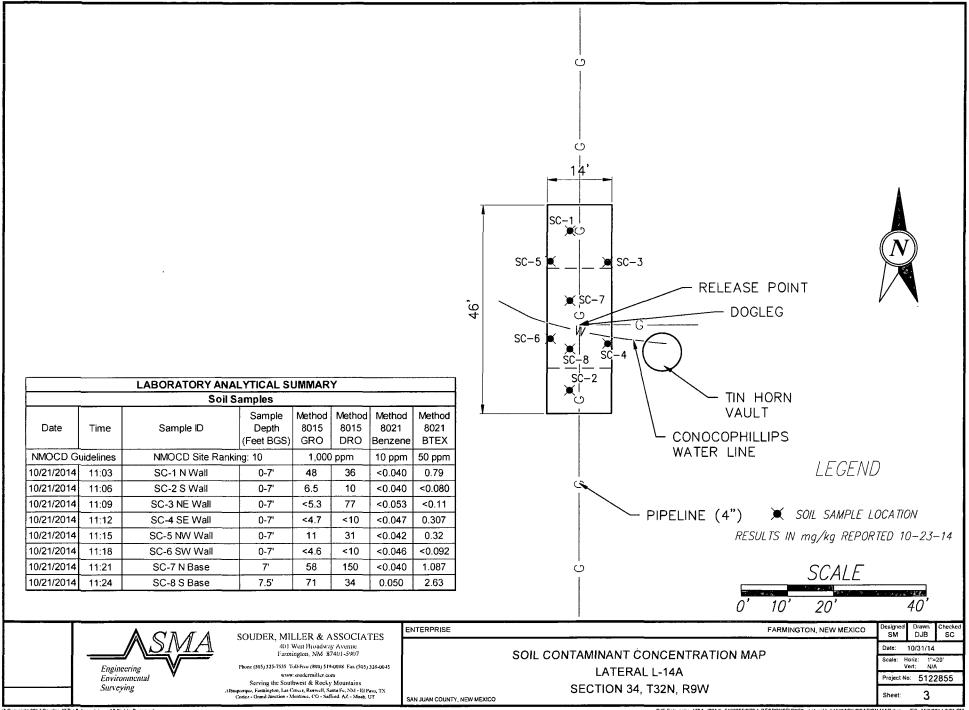
Steve Moskal Project Scientist

Figures

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P.S-Enterprise MSA (2014) 5122855/SPILL RESPONSE/BGS9 - Lateral L-14A/CADILOCATION MAP.dwg . JES, 11/3/2014 2:01 PM

Tables

Enterprise Products Table 2: Site Ranking Criteria

			11/4/2014		
Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 50 BGS = 20			Groundwater estimated		
50' to 99' = 10		Topographic Maps and Field Verification	to be approximately 100 feet below the Lateral L-		
>100' = 0	0		14 site.		
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes		
< 200' = 20					
200'-1000' = 10	10	Topographic Maps and Field Verification	Release location to be field verified. (~950 to surface water pathway)		
>1000'					
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	0	NM State Engineer Water Well Database	No recorded water wells located within 1,000 feet or within a 1 mile radius		
Total Site Ranking	10		l		
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 Products Table 3: Laboratory Results Summary

Lateral L-14A Pipeline Release 11/4/2014

		/m	a/ka)				11/4/2014			
	(mg/kg)						11/4/2014			
	LABORATORY ANALYTICAL SUMMARY									
L	Soil Samples									
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX			
NMOCD Guidelines		NMOCD Site Rankir	NMOCD Site Ranking: 10		1,000 ppm		50 ppm			
10/21/2014	11:03	SC-1 N Wall	0-7'	48	36	<0.040	0.79			
10/21/2014	11:06	SC-2 S Wall	0-7'	6.5	10	<0.040	<0.080			
10/21/2014	11:09	SC-3 NE Wall	0-7'	<5.3	77	<0.053	<0.11			
10/21/2014	11:12	SC-4 SE Wall	0-7'	<4.7	<10	<0.047	0.307			
10/21/2014	11:15	SC-5 NW Wall	0-7'	11	31	<0.042	0.32			
10/21/2014	11:18	SC-6 SW Wall	0-7'	<4.6	<10	<0.046	<0.092			
10/21/2014	11:21	SC-7 N Base	7'	58	150	<0.040	1.087			
10/21/2014	11:24	SC-8 S Base	7.5'	71	34	0.050	2.63			



Appendix A Photographic Documentation

Site Photographs Enterprise Products Lateral L-14A Pipeline Release

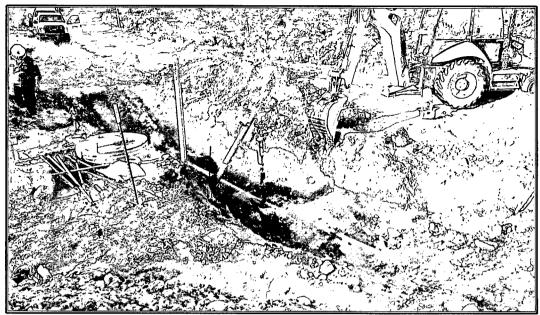


Photo 1: Beginning of excavation at the Lateral L-14A pipeline release at a depth of approximately 4' bgs. Strong odor present

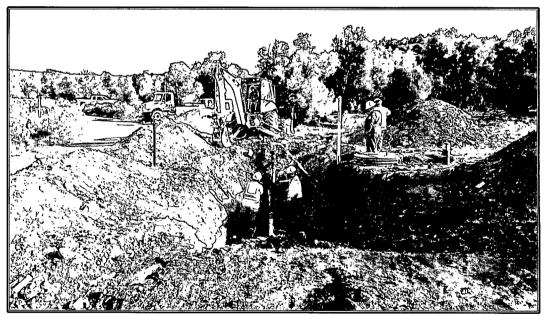


Photo 2: Monitoring air quality in excavation, Benzene levels stayed below PELs.

Site Photographs Enterprise Products Lateral L-14A Pipeline Release

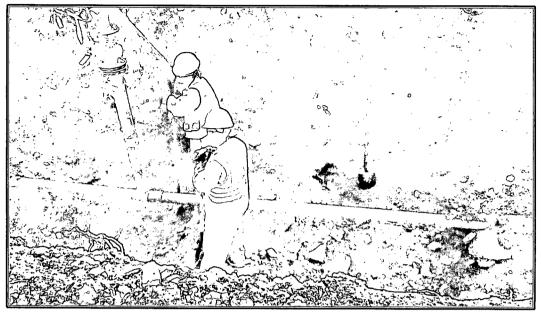


Photo 3: View of Conoco Phillips water line crossing under the pipeline.



Photo 4: Close up of waterline, exposed in center of photograph.

Site Photographs Enterprise Products Lateral L-14A Pipeline Release



Photo 5: Fully exposed Water Line, repairs completed.

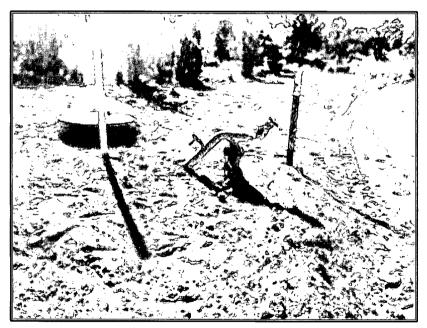


Photo 6: backfill complete.

Appendix B Soil Disposal Documentation

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State of New Mexico

Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources 97257-0666 Revised August 1. 2011 Oil Conservation Division 1220 South St. Francis Dr.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401 Oct. 2014
2. Originating Site: Lateral 14A Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter N, Section 34, T32N, R9W; 36.93632, -107.77001
 4. Source and Description of Waster Hydrocarbon impacted soils associated with a release from a natural gas pipeline 5. Estimated Volume 100 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 108 yd³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, Thomas Long representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby
PRINT & SIGN NAME COMPANY NAME
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. <i>Operator Use Only: Waste Acceptance Frequency</i> 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, <u>10-20-14</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.
I, <u>Envirotech, Inc.</u> do hereby certify that representative samples of the off field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Transporter: West State Entergy Contractors Paul + Sons, Moss, Foutz
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011 Address of Facility: Hilltop, NM
Method of Treatment and/or Disposal:
Waste Acceptance Status:
PRINT NAME: Kendra Runung TITLE: Waste Coordinator DATE: 10/21/14
SIGNATURE: Runing TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

Appendix C Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 23, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: (505) 325-5667 FAX (505) 327-1496

RE: Lateral L-14A

OrderNo.: 1410A15

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 8 sample(s) on 10/22/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report						
Lab Order 1410A15						
Date Reported: 10/23/2014						

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Souder, Miller and Associates
 Client Sample ID: SC-1 N Wall

 Project:
 Lateral L-14A
 Collection Date: 10/21/2014 11:03:00 AM

 Lab ID:
 1410A15-001
 Matrix: MEOH (SOIL)
 Received Date: 10/22/2014 8:00:00 AM

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Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS					Analy	st: BCN
Diesel Range Organics (DRO)	36	9.9		mg/Kg	1	10/22/2014 2:34:46 F	PM 16022
Surr: DNOP	75.5	63.5-128		%REC	1	10/22/2014 2:34:46 F	PM 16022
EPA METHOD 8015D: GASOLINE RA	NGE					Analy	vst: NSB
Gasoline Range Organics (GRO)	48	4.0		mg/Kg	1	10/22/2014 11:05:58	AM R22074
Surr: BFB	279	80-120	S	%REC	1	10/22/2014 11:05:58	AM R22074
EPA METHOD 8021B: VOLATILES						Analy	vst: NSB
Benzene	ND	0.040		mg/Kg	1	10/22/2014 11:05:58	AM R22074
Toluene	0.060	0.040		mg/Kg	1	10/22/2014 11:05:58	AM R22074
Ethylbenzene	0.10	0.040		mg/Kg	1	10/22/2014 11:05:58	AM R22074
Xylenes, Total	0.63	0.081		mg/Kg	1	10/22/2014 11:05:58	AM R22074
Surr: 4-Bromofluorobenzene	132	80-120	S	%REC	1	10/22/2014 11:05:58	AM R22074

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	od Blank				
	Ε	Value above quantitation range	Н	Holding times for preparation or analysis exceeded				
j		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 11			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Hall Environmental Analys CLIENT: Souder, Miller and Associates		Lab Order 1410A15 Date Reported: 10/23/					
Project: Lateral L-14A Lab ID: 1410A15-002	Matrix:	MEOH (S	OIL)			/21/2014 11:06:00 A /22/2014 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analy	st: BCN
Diesel Range Organics (DRO)	10	10		mg/Kg	1	10/22/2014 1:07:15 P	M 16022
Surr: DNOP	79.0	63.5 - 128		%REC	1	10/22/2014 1:07:15 P	M 16022
EPA METHOD 8015D: GASOLINE RAM	IGE					Analy	st: NSB
Gasoline Range Organics (GRO)	6.5	4.0		mg/Kg	1	10/22/2014 11:33:18	AM R22074
Surr: BFB	137	80-120	S	%REC	1	10/22/2014 11:33:18	AM R22074
EPA METHOD 8021B: VOLATILES						Analy	st: NSB
Benzene	ND	0.040		mg/Kg	1	10/22/2014 11:33:18	AM R22074
Toluene	ND	0.040		mg/Kg	1	10/22/2014 11:33:18	AM R22074
Ethylbenzene	ND	0.040		mg/Kg	1	10/22/2014 11:33:18	AM R22074
Xylenes, Total	ND	0.080		mg/Kg	1	10/22/2014 11:33:18	AM R22074
Surr: 4-Bromofluorobenzene	132	80-120	S	%REC	1	10/22/2014 11:33:18	AM R22074

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	od Blank			
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded			
J An		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 11		
	O RSD is greater than RSD limit		Р	Sample pH greater than 2.			
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
	S	Spike Recovery outside accepted recovery limits					

Analytical Report						
Lab Order 1410A15						
Date Reported: 10/23/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

 Project:
 Lateral L-14A

 Lab ID:
 1410A15-003

Client Sample ID: SC-3 NE Wall

Collection Date: 10/21/2014 11:09:00 AM Received Date: 10/22/2014 8:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI						Analy	st: BCN
Diesel Range Organics (DRO)	77	10		mg/Kg	1	10/22/2014 1:50:46 F	M 16022
Surr: DNOP	73.4	63.5-128		%REC	1	10/22/2014 1:50:46 F	PM 16022
EPA METHOD 8015D: GASOLINE RA	NGE					Analy	st: NSB
Gasoline Range Organics (GRO)	ND	5.3		mg/Kg	1	10/22/2014 12:00:36	PM R22074
Surr: BFB	114	80-120		%REC	1	10/22/2014 12:00:36	PM R22074
EPA METHOD 8021B: VOLATILES						Analy	vst: NSB
Benzene	ND	0.053		mg/Kg	1	10/22/2014 12:00:36	PM R22074
Toluene	ND	0.053		mg/Kg	1	10/22/2014 12:00:36	PM R22074
Ethylbenzene	ND	0.053		mg/Kg	1	10/22/2014 12:00:36	PM R22074
Xylenes, Total	ND	0.11		mg/Kg	1	10/22/2014 12:00:36	PM R22074
Surr: 4-Bromofluorobenzene	122	80-120	s	%REC	1	10/22/2014 12:00:36	PM R22074

Matrix: MEOH (SOIL)

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	E	Value above quantitation range	Н	Holding times for preparation or analysis exceede		
	J Analyte detected below quantitation limitsO RSD is greater than RSDlimit		ND	Page 3 of 11		
			Р	Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Hall Environmental Analysis		Date Reported: 10/23/2	014				
CLIENT: Souder, Miller and AssociatesProject:Lateral L-14ALab ID:1410A15-004	Matrix:	MEOH (Se)ate: 10/	2-4 SE Wall /21/2014 11:12:00 AM /22/2014 8:00:00 AM	1
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE C	ORGANICS					Analys	t: BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 2:12:50 PM	1 16022
Surr: DNOP	74.7	63.5-128		%REC	1	10/22/2014 2:12:50 PM	1 16022
EPA METHOD 8015D: GASOLINE RANG	Ε					Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	· 1	10/22/2014 12:27:53 P	M R22074
Surr: BFB	113	80-120		%REC	1	10/22/2014 12:27:53 P	M R22074
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.047		mg/Kg	1	10/22/2014 12:27:53 P	M R22074
Toluene	0.067	0.047		mg/Kg	1	10/22/2014 12:27:53 P	M R22074
Ethylbenzene	ND	0.047		mg/Kg	1	10/22/2014 12:27:53 P	M R22074
Xylenes, Total	0.24	0.095		mg/Kg	1	10/22/2014 12:27:53 P	M R22074
Surr: 4-Bromofluorobenzene	126	80-120	S	%REC	1	10/22/2014 12:27:53 P	M R22074

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

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank				
	Е	Value above quantitation range	Н	H Holding times for preparation or analysis exce				
	J Analyte detected below quantitation limitsO RSD is greater than RSDlimit		ND	Not Detected at the Reporting Limit	Page 4 of 11			
			Р	Sample pH greater than 2.				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Analytical Report Lab Order 1410A15

Hall Environmental Analysis		Date Reported: 10/23/2	014				
CLIENT: Souder, Miller and Associates Project: Lateral L-14A Lab ID: 1410A15-005	Client Sample ID: SC-5 NW Wall Collection Date: 10/21/2014 11:15:00 AM Matrix: MEOH (SOIL) Received Date: 10/22/2014 8:00:00 AM						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	ORGANICS					Analys	t: BCN
Diesel Range Organics (DRO)	31	9.9		mg/Kg	1	10/22/2014 1:08:40 PM	1 16022
Surr: DNOP	81.2	63.5-128		%REC	1	10/22/2014 1:08:40 PM	1 16022
EPA METHOD 8015D: GASOLINE RANG	θE					Analys	t: NSB
Gasoline Range Organics (GRO)	11	4.2		mg/Kg	1	10/22/2014 12:55:22 P	M R22074
Surr: BFB	155	80-120	S	%REC	1	10/22/2014 12:55:22 P	M R22074
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.042		mg/Kg	1	10/22/2014 12:55:22 P	M R22074
Toluene	0.062	0.042		mg/Kg	1	10/22/2014 12:55:22 P	M R22074
Ethylbenzene	0.048	0.042		mg/Kg	1	10/22/2014 12:55:22 P	M R22074
Xylenes, Total	0.21	0.084		mg/Kg	1	10/22/2014 12:55:22 P	M R22074
Surr: 4-Bromofluorobenzene	131	80-120	S	%REC	1	10/22/2014 12:55:22 P	M R22074

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the as
	Е	Value above quantitation range	Н	Holding times for prepara

- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- associated Method Blank

- preparation or analysis exceeded ıg
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 5 of 11

Analytical Report Lab Order 1410A15

Hall Environmental Analysi	s Labora	ntory, Ir	nc.			Lab Order 1410A15 Date Reported: 10/23/20)14
CLIENT: Souder, Miller and Associates			C	lient Sampl	e ID: SC	2-6 SW Wall	
Project: Lateral L-14A				Collection	Date: 10/	/21/2014 11:18:00 AM	
Lab ID: 1410A15-006	Matrix:	MEOH (S	OIL)	Received	Date: 10/	/22/2014 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/22/2014 1:39:51 PM	16022
Surr: DNOP	89.4	63.5-128		%REC	1	10/22/2014 1:39:51 PM	16022
EPA METHOD 8015D: GASOLINE RANG	GE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/22/2014 1:22:39 PM	R22074
Surr: BFB	105	80-120		%REC	1	10/22/2014 1:22:39 PM	R22074
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.046		mg/Kg	1	10/22/2014 1:22:39 PM	R22074
Toluene	ND	0.046		mg/Kg	1	10/22/2014 1:22:39 PM	R22074
Ethylbenzene	ND	0.046		mg/Kg	1	10/22/2014 1:22:39 PM	R22074
Xylenes, Total	ND	0.092		mg/Kg	1	10/22/2014 1:22:39 PM	R22074
Surr: 4-Bromofluorobenzene	120	80-120	S	%REC	1	10/22/2014 1:22:39 PM	R22074

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analys	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 6 of 11
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report
Lab Order 1410A15
Date Reported: 10/23/2014

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

 Project:
 Lateral L-14A

 Lab ID:
 1410A15-007

Client Sample ID: SC-7 N Base Collection Date: 10/21/2014 11:21:00 AM Matrix: MEOH (SOIL) Received Date: 10/22/2014 8:00:00 AM

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS					Analys	t: BCN
Diesel Range Organics (DRO)	150	9.8		mg/Kg	1	10/22/2014 2:10:51 PM	1 16022
Surr: DNOP	95.2	63.5-128		%REC	1	10/22/2014 2:10:51 PM	1 16022
EPA METHOD 8015D: GASOLINE RA	NGE					Analys	t: NSB
Gasoline Range Organics (GRO)	58	4.0		mg/Kg	1	10/22/2014 1:49:55 PM	R22074
Surr: BFB	331	80-120	S	%REC	1	10/22/2014 1:49:55 PN	1 R22074
EPA METHOD 8021B: VOLATILES						Analys	t: NSB
Benzene	ND	0.040		mg/Kg	1	10/22/2014 1:49:55 PM	R22074
Toluene	0.077	0.040		mg/Kg	1	10/22/2014 1:49:55 PM	R22074
Ethylbenzene	0.13	0.040		mg/Kg	1	10/22/2014 1:49:55 PM	R22074
Xylenes, Total	0.88	0.080		mg/Kg	1	10/22/2014 1:49:55 PN	R22074
Surr: 4-Bromofluorobenzene	149	80-120	s	%REC	1	10/22/2014 1:49:55 PM	R22074

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysi	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 7 of 11
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysi	s Labora	atory, Ir	ıc.	ana ay filin iyana ay ayaa	× ••••••••••••••••••••••••••••••••••••	Date Reported: 10/23/20	014
CLIENT: Souder, Miller and Associates			C	lient Sampl	e ID: SC	2-8 S Base	
Project: Lateral L-14A				Collection I	Date: 10/	/21/2014 11:24:00 AM	[
Lab ID: 1410A15-008	Matrix:	MEOH (S	OIL)	Received	Date: 10/	/22/2014 8:00:00 AM	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	34	10	ł	mg/Kg	1	10/22/2014 2:42:18 PM	16022
Surr: DNOP	93.8	63.5-128		%REC	1	10/22/2014 2:42:18 PM	16022
EPA METHOD 8015D: GASOLINE RANG	GE					Analyst	: NSB
Gasoline Range Organics (GRO)	71	3.9	I	mg/Kg	1	10/22/2014 2:17:10 PM	R22074
Surr: BFB	352	80-120	S	%REC	1	10/22/2014 2:17:10 PM	R22074
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	0.050	0.039	ŧ	mg/Kg	1	10/22/2014 2:17:10 PM	R22074
Toluene	0.40	0.039)	mg/Kg	1	10/22/2014 2:17:10 PM	R22074
Ethylbenzene	0.18	0.039)	mg/Kg	1	10/22/2014 2:17:10 PM	R22074
Xylenes, Total	2.0	0.078	i	mg/Kg	1	10/22/2014 2:17:10 PM	R22074

80-120

s

%REC

1

161

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

Qualifiers:	*
-------------	---

Surr: 4-Bromofluorobenzene

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Value exceeds Maximum Contaminant Level.

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

Page 8 of 11

Analytical Report Lab Order 1410A15

10/22/2014 2:17:10 PM R22074

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Project: Lateral L-14A

Sample ID MB-16022	SampT	ype: ME	BLK	Test	Code: EF	PA Method	8015D: Dies	el Range C	Organics	
Client ID: PBS	Batch	ID: 16	022	R	lunNo: 22	2059				
Prep Date: 10/22/2014	Analysis D	ate: 10)/22/2014	S	eqNo: 64	48870	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Sur: DNOP	9.3		10.00		92.9	63.5	128			
Sample ID LCS-16022 SampType: LCS				Tes	Code: EF	PA Method	8015D: Dies	ei Range (Drganics	
Client ID: LCSS	Batch	ID: 16	022	R	unNo: 2	2059				
Prep Date: 10/22/2014	Analysis D	ate: 10)/22/2014	S	eqNo: 64	48872	Units: mg/k	۶g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.9	68.6	130			
Surr: DNOP	4.8		5.000		96.8	63.5	128			
Surr: DNOP		ype: MS		Tes			128 8015D: Dies	el Range (Drganics	
	SampT	ype: M \$ 1D: 16	5			PA Method		el Range (Drganics	
Sample ID 1410A15-001AMS	SampT	1D: 16	5 022	F	tCode: El	PA Method 2059		C	Drganics	
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall	SampT Batch	1D: 16	5 022 0/22/2014	F	tCode: El RunNo: 2 SeqNo: 6	PA Method 2059	8015D: Dies	C	Drganics RPDLimit	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014	SampT Batch Analysis D	i ID: 16 ate: 10	5 022 0/22/2014	F S	tCode: El RunNo: 2 SeqNo: 6	PA Method 2059 49314	8015D: Dies Units: mg/ł	<g< td=""><td>•</td><td>Qual</td></g<>	•	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte	SampT Batch Analysis D Result	i ID: 16 ate: 10 PQL	5 022 0/22/2014 SPK value	F S SPK Ref Val	tCode: Ef RunNo: 2: SeqNo: 6 %REC	PA Method 2059 49314 LowLimit	8015D: Dies Units: mg/ł HighLimit	<g< td=""><td>•</td><td>Qual</td></g<>	•	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte Diesel Range Organics (DRO)	SampT Batch Analysis D Result 69 3.1	i ID: 16 ate: 10 PQL	5 022 0/22/2014 SPK value 49.26 4.926	F S SPK Ref Val 36.04	tCode: EF RunNo: 2: SeqNo: 6 %REC 67.0 63.7	PA Method 2059 49314 LowLimit 40.1 63.5	8015D: Dies Units: mg/ł HighLimit 152	(g %RPD	RPDLimit	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte Diesel Range Organics (DRO) Surr: DNOP	SampT Batch Analysis D Result 69 3.1 D SampT	a ID: 16 ate: 10 PQL 9.9	5 022 0/22/2014 SPK value 49.26 4.926 5D	F S SPK Ref Val 36.04 Tes	tCode: EF RunNo: 2: SeqNo: 6 %REC 67.0 63.7	PA Method 2059 49314 LowLimit 40.1 63.5 PA Method	8015D: Dies Units: mg/l HighLimit 152 128	(g %RPD	RPDLimit	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID 1410A15-001AMS	SampT Batch Analysis D Result 69 3.1 D SampT	a ID: 16 ate: 10 PQL 9.9 ype: MS a ID: 16	5 022 0/22/2014 SPK value 49.26 4.926 5D 022	F S SPK Ref Val 36.04 Tes F	tCode: EF RunNo: 2: SeqNo: 6 %REC 67.0 63.7 tCode: EF	PA Method 2059 49314 LowLimit 40.1 63.5 PA Method 2059	8015D: Dies Units: mg/l HighLimit 152 128	(g %RPD el Range (RPDLimit	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID 1410A15-001AMS Client ID: SC-1 N Wall	SampT Batch Analysis D Result 69 3.1 D SampT Batch	a ID: 16 ate: 10 PQL 9.9 ype: MS a ID: 16	5 022 0/22/2014 SPK value 49.26 4.926 5D 022 0/22/2014	F S SPK Ref Val 36.04 Tes F	tCode: EF RunNo: 2 SeqNo: 6 %REC 67.0 63.7 tCode: EF RunNo: 2 SeqNo: 6	PA Method 2059 49314 LowLimit 40.1 63.5 PA Method 2059	8015D: Dies Units: mg/ł HighLimit 152 128 8015D: Dies	(g %RPD el Range (RPDLimit	Qual
Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014 Analyte Diesel Range Organics (DRO) Surr: DNOP Sample ID 1410A15-001AMS Client ID: SC-1 N Wall Prep Date: 10/22/2014	SampT Batch Analysis D Result 69 3.1 D SampT Batch Analysis D	ype: MS provide the second se	5 022 0/22/2014 SPK value 49.26 4.926 5D 022 0/22/2014	F SPK Ref Val 36.04 Tes F S	tCode: EF RunNo: 2 SeqNo: 6 %REC 67.0 63.7 tCode: EF RunNo: 2 SeqNo: 6	PA Method 2059 49314 LowLimit 40.1 63.5 PA Method 2059 49315	8015D: Dies Units: mg/ł HighLimit 152 128 8015D: Dies Units: mg/ł	(g %RPD el Range ((g	RPDLimit	

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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1410A15 23-Oct-14

WO#:

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QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: Lateral L-14A

Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: EF	EPA Method 8015D: Gasoline Range					
Client ID: PBS	Batch	n ID: R2	2074	F	RunNo: 2	2074					
Prep Date:	Analysis D	Analysis Date: 10/22/2014			SeqNo: 649664 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		96.1	80	120				
Sample ID 2.5UG GRO LCS		ype: LC		Tes			120 8015D: Gaso	oline Rang	e		
	SampT	ype: LC	s			PA Method		bline Rang	e		
Sample ID 2.5UG GRO LCS	SampT	n ID: R2	s	F	tCode: El	PA Method 2074		•	e		
Sample ID 2.5UG GRO LCS Client ID: LCSS	SampT Batch	n ID: R2	S 22074 0/22/2014	F	tCode: El	PA Method 2074	8015D: Gasc	•	e RPDLimit	Qual	
Sample ID 2.5UG GRO LCS Client ID: LCSS Prep Date:	SampT Batch Analysis D	n ID: R2 Date: 1 1	S 2074 0/22/2014 SPK value	F	tCode: EF RunNo: 2 SeqNo: 6	PA Method 2074 49665	8015D: Gasc Units: mg/k	(g		Qual	

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

WO#: 1410A15 23-Oct-14

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QC

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 1410A15

23-Oct-14

Client:	Souder, N	filler and	Associa	tes							
Project:	Lateral L-	-14A									
Sample ID	5ML RB	SampT	ype: ME	LK	Tes	tCode: E	PA Method	8021B: Vola	tiles		
	PBS	Batcl	h ID: R2	2074	F	RunNo: 22074					
Prep Date:		Analysis E	Date: 10	/22/2014	S	SeqNo: 6	49672	Units: mg/k	۲g		
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-Brom	nofluorobenzene	1.0		1.000		101	80	120			
Sample ID	0 100NG BTEX LCS SampType: LCS				Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:					F	RunNo: 2	22074				
Prep Date:		Analysis Date: 10/22/2014		5	SeqNo: 6	49673	Units: mg/ł	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.97	0.050	1.000	0	97.2	80	120			
Toluene		0.97	0.050	1.000	0	96.8	80	120			
Ethylbenzene		0.97	0.050	1.000	0	96.8	80	120			
Xylenes, Total		3.1	0.10	3.000	0	103	80	120			
Surr: 4-Brom	nofluorobenzene	1.0		1.000		103	80	120			
Sample ID	1410A15-001AMS	Samp	Гуре: МS	;	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	SC-1 N Wall	Batc	h ID: R2	2074	F	RunNo: 2	22074				
Prep Date:		Analysis [Date: 10)/22/2014	S	SeqNo: 6	649676	Units: mg/l	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.81	0.040	0.8091	0	99.9	77.4	142			
Toluene		0.86	0.040	0.8091	0.05987	98.5	77	132			
Ethylbenzene		0.88	0.040	0.8091	0.1019	96.1	77.6	134			
Xylenes, Total		3.1	0.081	2.427	0.6284	103	77.4	132			
Surr: 4-Bron	nofluorobenzene	0.97		• 0.8091		120	80	120			S
Sample ID	1410A15-001AMS	D Samp	Гуре: М	\$D	Tes	tCode: E	PA Method	8021B: Vola	tiles		
Client ID:	SC-1 N Wall	Batc	h ID: R2	2074	F	RunNo: 2	22074				
Prep Date:		Analysis [Date: 10)/22/2014	5	SeqNo: 6	649677	Units: mg/l	Kg		
		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Analyte		Result						4.40	0.50	20	
Analyte Benzene		0.83	0.040	0.8091	0	102		142	2.56	20	
Benzene			0.040 0.040	0.8091 0.8091	0 0.05987	102 104	77.4 77	132	5.40	20 20	
Benzene Toluene		0.83					77				
		0.83 0.90	0.040	0.8091	0.05987	104	77 77.6	132	5.40	20	

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Page 11 of 11

- Р Sample pH greater than 2.
- RĹ Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: SMA-FARM	Nork Order Number: 1410A15		RcptNo:	
Received by/date	02210			
Logged By: Ashley Gallegos 10/	22/2014 8:00:00 AM	A		
	22/2014 8:31:03 AM	AF		
Reviewed By: M I	halu	U		
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No 🗌	Not Present	
2. Is Chain of Custody complete?	Yes 🛃	No 🗌	Not Present	
3. How was the sample delivered?	Courier			
<u>Log In</u>				
4. Was an attempt made to cool the samples?	Yes 🜌	No 🗌	NA 🗌	
5. Were all samples received at a temperature of	>0° C to 6.0°C Yes 🐱	No 🗆		
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 p	reserved? 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	
12. Does paperwork match bottle labels?	Yes 🐱	No 🗌	bottles checked for pH:	
(Note discrepancies on chain of custody)		🗖	<2 o Adjusted?	r >12 unless noted
13, Are matrices correctly identified on Chain of Cu				
14. Is it clear what analyses were requested? 15. Were all holding times able to be met?	Yes 🐱 Yes 🐱	No 🗌	Checked by:	
(If no, notify customer for authorization.)				
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this	sorder? Yes 🗌	No 🗌	NA 🛃	
Person Notified:		The restrict of a model of a state of a stat]
By Whom:		Phone T Fax	In Person	
Regarding:	Via: 📋 eMail 🛄			
Client Instructions:	19422-1482-1495-1497-1497-1497-1497-1497-1497-1497-1497		LITER RECORDER STATISTICS OF COMPANY AND A	
17. Additional remarks:	۰]

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

· C	hain	of-Cu	ustody	Record	Turn	-Around	Time:										-								
Client:	5M	Α		(<u> </u>		Standard		Rush	Same	Dacy															7
					Proje	ect Name	9 :				ANALYSIS LABORA					1	. ~								
Mailing	Address	4.01	Broad		1 (Late	ral	L-	4-A			49	01 H									109			
5	. \			. 1	Project #: 4901 Hawkins NE - Albu Tel. 505-345-3975 Fi									4107											
	<u>n:ngte</u>	•		87481	+		z 855)	BG			IE	a. ou		0-3:					345- ûést				۰. و	.,
Phone ;		505		7535	Drain			<u>_</u>				5			j		interi y								
		Steven	, Moska	le soudsmille a	Fiole	۰.					31)	luo						So	s						
QA/QC I □ Stan	⁵ ackage: dard		🗆 Level 4	4 (Full Validation)		51	are	Ņ	loskel		+ JMB' s (8021)	TPH (Gas only)				SIMS)		Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	PCB's						
Accredi	tation				Sam	pler:	Jesse	<u>د</u>	Shacer	_	₽	H	9	,	Ę	8270 5		Q2	082						
	AP	□ Othe	er		and the second se	e	Yes	يندي رو مورو در المر محتور الم	Nor			+		418.1)	504.1)	r 82	6	03,1	s / 8		(A		ļ		S-
	(Type)		······		Sam	ple Tem	perature:				Ë	ШШ	Q	od A	g	0	etal	N N	Side	A	2-1			ŀ	Z
						atoinar	Desser	-			Ŧ	BTEX + MTBE	TPH 8015B GROVDR	TPH (Method	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Щ,	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
Date	Time	Matrix	Samp	le Request ID		ntainer e and #	Preserva Type		HEAL I	No.		X	180	≥ T	≥ m	T's (RA	suc	- E	B	0 (S				Bub
								-	1410A1	5	BTEX	BTB	百	Ē		PA	RCI NCI	Anio	808	826	827				Air
ofwh	1103	soil	2-1	N weall	1.4	02			-0(>1	X		X												
1	1106		SC-Z	5 Junal					- DI	02	X		X												
	409		-	NE wall					-0	03	X		X												
	1112		56-4	SE Wall						04	X		\mathbf{N}												
	1115			NW Wall	17					05_	K		X	T									7		Γ
	1118			Sw wall	\top					00	R		X					·					1		\square
1-	1121		1	N Base	+					01	X		K									-+-		1-	\top
	1129-			•	┼╌╂		<u>├</u> ┣			203	Z		R										+	+-	+
	110		JC- D	5 Base	+		┼──╂──			00												-+			+
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121/14	1801	- 40		/ //	\square	lust	relifa	ell	21 121/12	861	51		,		.	120	٠.	N-0	ัน		01	Saud	snill	s. 4	3~
Date:	Time:	Relinquish	ied by:		Receiv	/ed by:		١	Date T			sc	6	Ľ	A	110	{~ .	٢"	-	ېرې د		ŝ			•••
21/11	1820	/Shr	notu	Walter			\leq	ib	22/14	DBD															
- r If	necessary,	samples sub	mitted to Hall E	invirorimental may be subc	ontracted	to other ad	ccredited labo	oratorie	s. This serves as i	notice of this	possil	oility. A	Any su	b-conti	acted	data v	will be	clearly	/ notat	ed on i	the an	alytical r	eport.		
		\sim					Ŷ												/						

<u>District I</u> 1625 N. French District II	n Dr., Hobbs,	NM 88240				New Mex		ARTES	DNSERVA	Form C-141 Revised August 8, 2011	
811 S. First St., Artesia, NM 88210 District III 1000 Bio Brazos Boad, Aztec, NM 87410					Energy Minerals and Natural Resources					÷	
								NGUL	in acco	to appropriate District Office rdance with 19.15.29 NMAC	
<u>District IV</u> 1220 S. St. Fra	incis Dr. Sar	nta Fe. NM 875	505			vation Di					
1220 0. 01. 114		<i>μ</i> α τ ο, ταπ ο τ				St. Fran		RE	CEIVED		
						e, NM 87					
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Nome of C	ompony	Enterprise F	Field Son		-	ERATO	K homas Long	<u>L</u>	_ Initial I	Report 🛛 Final Repo	
		Ave, Farmin					No. 505-599-2	2286			
		al 2A-3 Pip					be: Natural Ga		thering Li	ne	
Surface Ov				Mineral Ov	whor	RIM			API No		
Sunace Ov	VIIEL DLIVI			I						·	
Unit Letter	Section	Township	Range	Feet from			Feet from	East	West	County	
M	27	27N	10W	the	Line		the	Line	Vest	San Juan	
				375			312		0	IL CONS. DIV DIST, 3	
		Latitude	36.55	4534		Lonaitu	ie -107.890)875	U		
		-			IDE	OF REL				DEC 08 2014	
Type of Rele	ease: Natur	al Gas and N	Jatural Ga		INE		FRelease 34.92		Volume I	Recovered: None	
f		ernal Corrosid					Hour of Occurre			Hour of Discovery:	
							@ 7:00 a.m.			4 @ 7:45 a.m.	
Was Immed	late Notice	Given?	s 🗌 No	🛛 🛛 Not Requ	ired	If YES, To – Shari K		tesy no	otification to	NMOCD – Cory Smith; BLN	
By Whom?	<u>.</u>	·····				Date and	Hour				
Was a Wate	ercourse Re		🗌 Yes	🛛 No		If YES, V	olume Impacting	g the W	/atercourse		
If a Waterco		mpacted, Des	cribe Full	· · ·							
Describe Ca the Lateral 2 depressurize identified, re	ause of Prol 2A-3 pipelin ed, locked o paired and	blem and Rei le ROW. The out and tagge remediated.	medial Ac Enterpris ed out. Re Approxim	tion: On August e technician init epairs and reme ately two-hundr	iated r diatio	notification n were com	procedures. The pleted on Septe	pipelir mber 8	ne was isol 8, 2014.Thr	forming a pipeline patrol on ated, blown down, ee release locations were d soil was excavated and	
•		CD approved		-						· · · · · · · · · · · · · · · · · · ·	
the Lateral 2 depressurize identified, re	2A-3 pipelin ed, locked o paired and	e ROW. The out and tagge remediated.	Enterprised ed out. Re Approxim	e technician init epairs and reme ately two-hundr	iated r diatior ed-thi	notification n were com ty (230) cu	procedures. The pleted on Septe	pipelir mber 8 rocarbo	ne was isol 3, 2014.Thr on impacte	rforming a pipeline patrol on ated, blown down, ee release locations were d soil was excavated and "Final" C-141.	
rules and re which may e relieve the o ground wate	gulations al endanger pu perator of l er, surface v	ll operators a ublic health o iability should vater, human	re require or the envir d their ope n health or	d to report and/ ronment. The a erations have fa the environmer	or file ccepta iled to nt. In a	certain rele ance of a C adequately addition, NN	ase notifications -141 report by th investigate and	and point and NMC I remed ace of a	erform corr DCD marke diate contar i C-141 rep	nd that pursuant to NMOCD ective actions for releases ed as "Final Report" does not mination that pose a threat to ort does not relieve the	
Signature:	So	n Free	llo							DIVISION	
Printed Nam	e. Jon Fiel	ds				Approved b	y Environmental	l Speci	alist:	me the	
Title: Directo	or, Environn	nental			/	Approval Date: 115/15 Expiration Date:					
E-mail Addro	ess:jefields	@eprod.com			Conditions of Approval:					Attached	
Date:	11-20	2 - 20/4 ets If Neces	Phon	e: (713)381-668	34						
Attach Addi	tional She	ets If Néces	sarv			#NCS					

53



CORRECTIVE ACTION REPORT

OIL CONS. DIV DIST. 3 DEC 08 2014

Property:

Lateral 2A-3 Pipeline Releases SW 1/4, S22 T27N R10W San Juan County, New Mexico

November 7, 2014 Apex Project No. 7030414G033

Prepared for:

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

Prepared by:

ther M. Woods

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

Elizabeth Scaggs, P.G. Senior Program Manager

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

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Appendix A:	Figure 1 – Topographic Map Figure 2 – Site Vicinity Map Figure 3A – North Excavation Site Map with Sample Locations Figure 3B – Middle Excavation Site Map with Sample Locations Figure 3C – South Excavation Site Map with Sample Locations
Appendix B:	Executed C-138 Solid Waste Acceptance Forms
Appendix C:	Photographic Documentation
Appendix D:	Tables
Appendix E:	Laboratory Analytical Reports & Chain of Custody Documentation



CORRECTIVE ACTION REPORT

Lateral 2A-3 Pipeline Release SW 1/4, S22 T27N R10W San Juan County, New Mexico

Apex Project No. 7030414G033

1.0 INTRODUCTION

1.1 Site Description & Background

The Lateral 2A-3 Pipeline Release Site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the southwest (SW) ¼ of Section 22 in Township 27 North and Range 10 West in rural San Juan County, New Mexico (North Excavation 36.55462N, 107.89087W; Middle Excavation 36.55437N, 107.89080W; South Excavation 36.55367N, 107.89062W), referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to an unpaved road, 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 production and gathering facilities, including the Enterprise natural gas gathering pipeline which traverses the area from approximately north to south.

On September 3, 2014, Enterprise shut in the Lateral 2A-3 pipeline and initiated excavation activities at the Site in an effort to locate and repair three subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by releases of natural gas and/or minor staining at the ground surface.

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



Ranking		Ranking Score	
	<50 feet	20	
Depth to Groundwater	50 to 99 feet	10	0
	>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	20		

Based on Apex's evaluation of the scoring criteria, the Site would have a maximum Total Ranking Score of "20". This ranking is based on the following:

- Depth to groundwater is estimated to be greater than 100 feet below grade surface (bgs) based on two cathodic protection deepwell groundbed reports. The Gordon #5 wells site is located approximately 700 feet to the northeast of the Site and similar in elevation. The cathodic report indicates that groundwater was observed in the borehole at a depth of approximately 115 feet bgs. The Johnson #2 well site is located approximately 1,800 feet to the northwest of the Site. The cathodic report indicates that groundwater was observed in the borehole at a depth of approximately 120 feet bgs. The Johnson #2 well site is located approximately 1,800 feet to the northwest of the Site. The cathodic report indicates that groundwater was observed in the borehole at a depth of approximately 120 feet bgs. The elevation of the Johnson #2 well site is approximately 30 feet lower in elevation than the Site, resulting in an approximate depth to groundwater at the Site of 150 feet bgs by correlation. No nearby water wells were identified on the OSE website database.
- No water source wells (municipal/community wells) were identified within 1,000 feet of the Site. No private domestic water sources were identified within 200 feet of the Site.
- The three release points are located in or within 100 feet of small ephemeral washes which ultimately drain to the wash of the East Fork of Kutz Canyon. Based on this proximity, a ranking for distance to surface water was assigned at "20".

3.0 **RESPONSE ACTIONS**

3.1 Soil Excavation Activities

On September 3, 2014, Enterprise shut in the Lateral 2A-3 pipeline and initiated excavation activities at the Site in an effort to locate and repair three subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by releases of natural gas and/or minor staining at the ground surface. During the corrective action activities, West States Energy Contractors provided heavy equipment and labor support, and Heather Woods, an Apex environmental professional, provided environmental support.

The surface expression of the North Excavation measured approximately 26 feet long by 13 feet wide and 6 feet bgs in depth; the Middle Excavation measured approximately 16 feet long by 9 feet wide and 7 feet bgs in depth; and the South Excavation measured approximately 22 feet long by 18 feet wide and 4 feet bgs in depth. The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, underlain by sandstone.



A total of approximately 230 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 excavations were backfilled with clean imported fill and contoured to surrounding grade.

Figures 3A, 3B, and 3C are site maps indicating the approximate locations of the excavated areas 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 electron volt (eV) lamp to aid in determining the excavation limits.

Apex's soil sampling program included the collection of six (6) final confirmation samples (C-1 North through C-6 North) from the North Excavation, five (5) final confirmation samples (C-1 Mid through C-5 Mid) from the Middle Excavation, and five (5) final confirmation samples (C-1 South through C-5 South) from the South Excavation for laboratory analysis. Figures 3A, 3B, and 3C show 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 Albuquerque, 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-ofcustody forms and laboratory data sheets are provided in Appendix E.

4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to condensate releases, the New Mexico EMNRD OCD utilizes the *Guidelines* for *Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically New Mexico Administrative Code 19.15.29 *Remediation Plan.* 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 (C-1 North through C-6 North, C-1 Middle through C-5 Middle, and C-1 South through C-5 South) collected from the excavated areas to the OCD *Remediation Action Levels* (RALs) for sites having a total ranking score of "20".



- 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 indicate total BTEX concentrations ranging from below the laboratory reporting limits to 0.067 mg/kg, which are below the OCD *Remediation Action Levels*.
- 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 42 mg/kg, which are below the OCD *Remediation Action Levels* for a Site ranking of "20".

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

5.0 FINDINGS AND RECOMMENDATIONS

The Lateral 2A-3 Pipeline Release Site is located within the Enterprise pipeline ROW in the SW¼ of Section 22 in Township 27 North and Range 10 West in rural San Juan County, New Mexico (North Excavation 36.55462N, 107.89087W; Middle Excavation 36.55437N, 107.89080W; South Excavation 36.55367N, 107.89062W). The Site is located adjacent to an unpaved road, on public land managed by the BLM. 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 north to south.

On September 3, 2014, Enterprise shut in the Lateral 2A-3 pipeline and initiated excavation activities at the Site in an effort to locate and repair three subsurface leaks. The leaks were subsequently identified and repaired. An unknown quantity of dry natural gas and pipeline liquids were released from the pipeline as a result of internal corrosion at each release location. The leaks were identified by releases of natural gas and/or minor staining at the ground surface.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD RALs using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The lithology encountered during the completion of corrective action activities consisted primarily of unconsolidated silty and clayey sands, underlain by sandstone.
- The surface expression of North Excavation measured approximately 26 feet long by 13 feet wide and 6 feet bgs in depth; the Middle Excavation measured approximately 16 feet long by 9 feet wide and 7 feet bgs in depth; and the South Excavation measured approximately 22 feet long by 18 feet wide and 4 feet bgs in depth.
- Prior to backfilling, final confirmation samples were collected from the resulting excavations 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 "20".
- A total of approximately 230 cubic yards of hydrocarbon affected soils were transported to the Envirotech Landfarm near Hilltop, New Mexico for disposal/remediation. The excavations were backfilled with clean imported fill and contoured to surrounding grade.



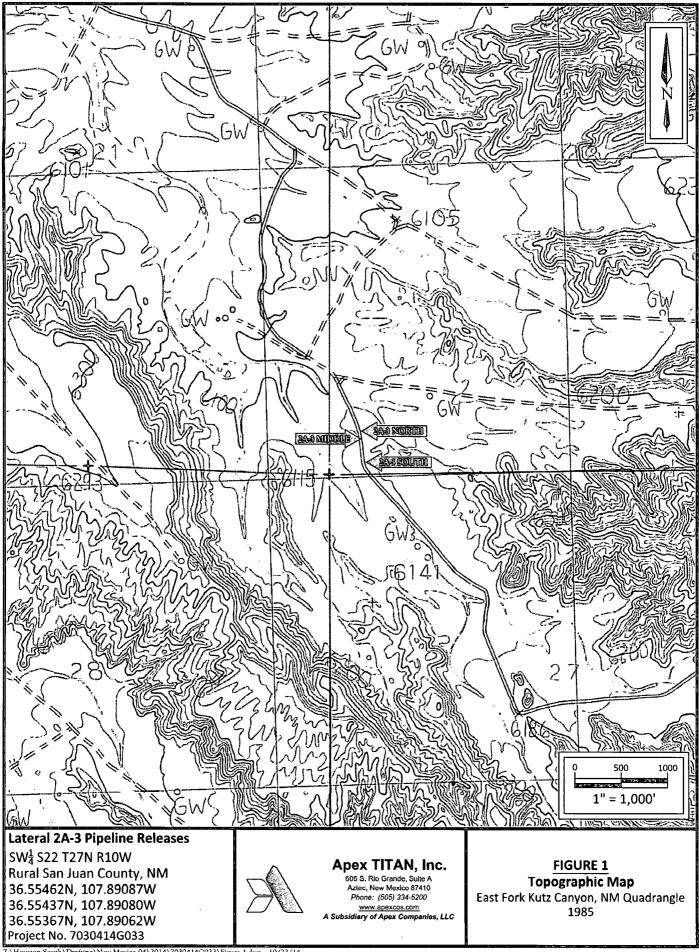
Based on field observations and laboratory analytical results, no additional investigation or corrective action appears warranted at this time.

6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

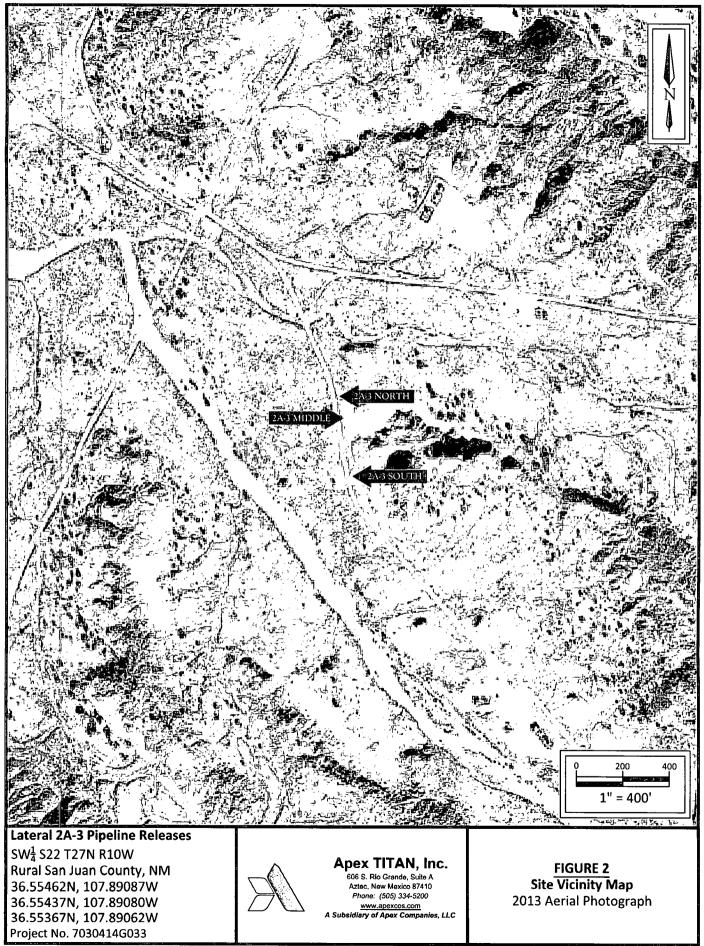
Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work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

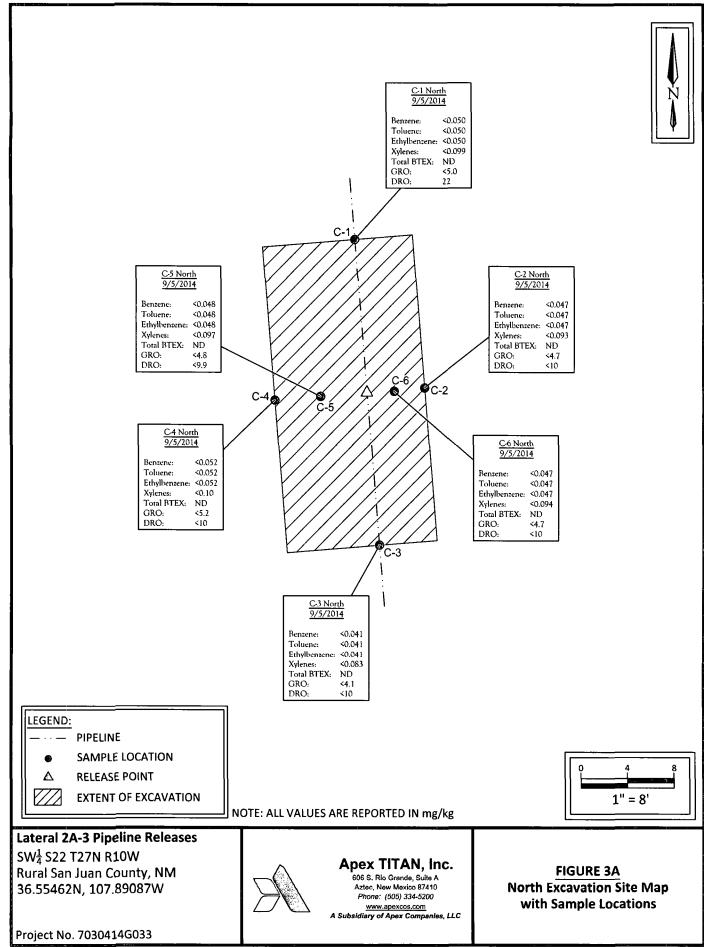
This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution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



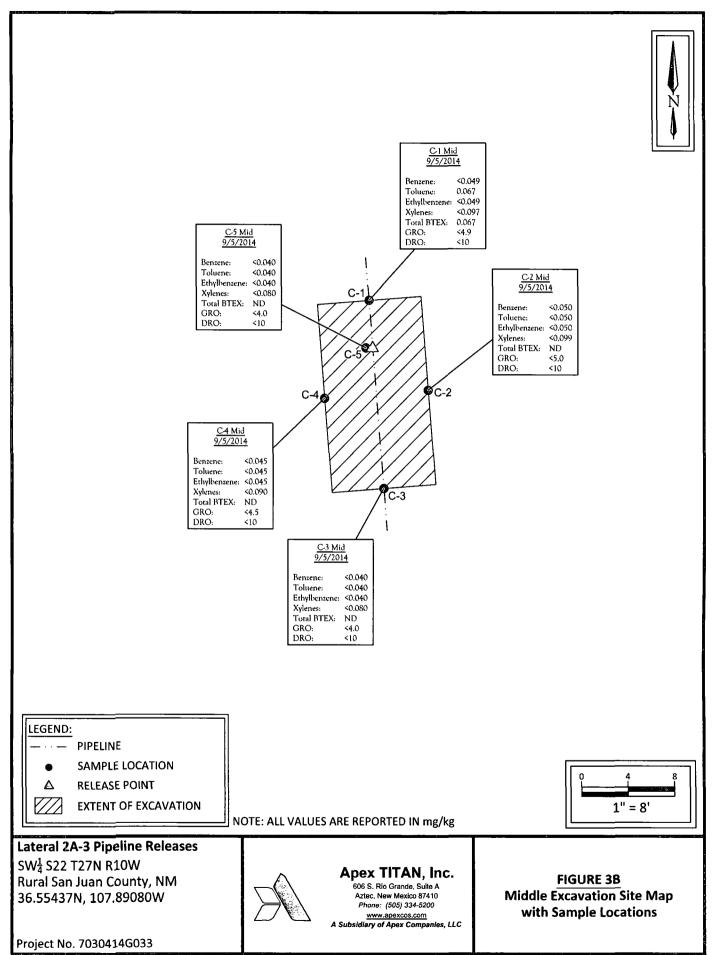
Z:\Houston South\Drafting\New Mexico 04\2014\7030414G033\Figure 1.dwg 10/23/14



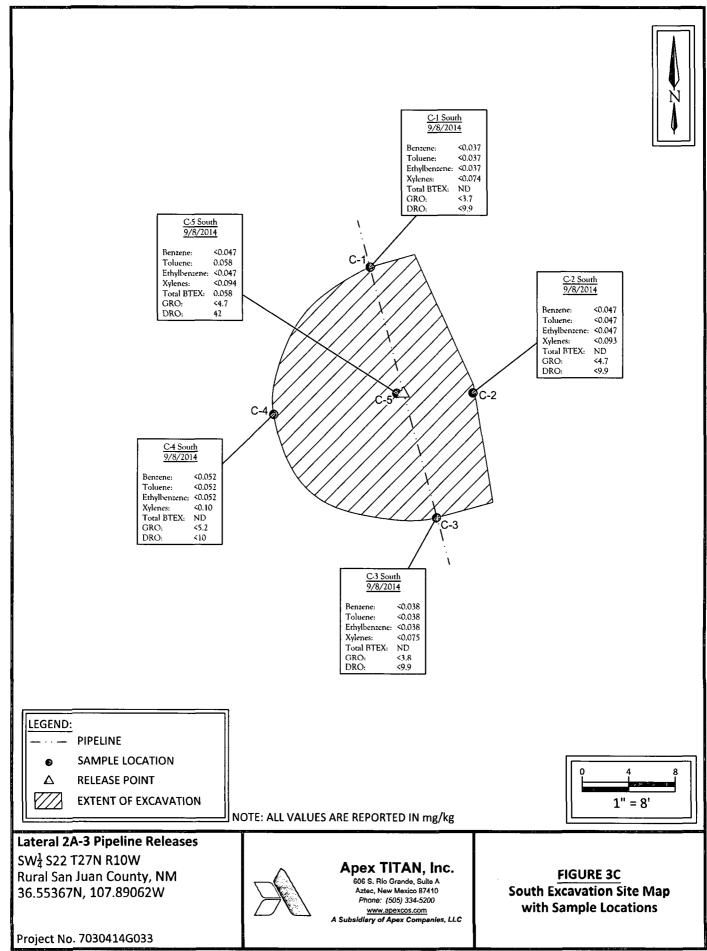
Z:\Houston South\Drafting\New Mexico 04\2014\7030414G033\Figure 2.dwg 10/23/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G033\Figure 3.dwg 10/23/14



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Z:\Houston South\Drafting\New Mexico 04\2014\7030414G033\Figure 3.dwg 10/23/14

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

Form C-138 **G 7057-0669** Revised August 1, 2011

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401
2. Originating Site:
Lateral 2A-3 Pipeline Sep. 2014
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter M, Section 27, T27N, R10W; 36.554534, -107.890875
 4. Source and Description of Weste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline 5. Estimated Volume50 (yd³) bbls Known Volume (to be entered by the operator at the end of the haul) dy bbls bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <u>PRINT & SIGN NAME</u> do hereby
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. <i>Operator Use Only: Waste Acceptance Frequency: Monthly: Weekly: Per Load</i>
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, <u>9-4-14</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature complete the required testing/sign the Generator Waste Testing Certification.
I, Kenden Runner, representative for <u>Envirotech, Inc.</u> do hereby certify that
I, <u>Envirotech. Inc.</u> do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Transporter: West States Energy-Contractors (WSEC) La Plata Construction, Rosen baum Construction
OCD Permitted Surface Waste Management Facility Name and Facility Permit #: Envirotech, Inc. Soil Remediation Facility * Permit #: NM 01-0011 Address of Facility: Hilltop, NM
Method of Treatment and/or Disposal:
Waste Acceptance Status:
PRINT NAME: Kendra Running TITLE: Waste Coord: nator DATE: 9/14
SIGNATURE:
\mathcal{O}

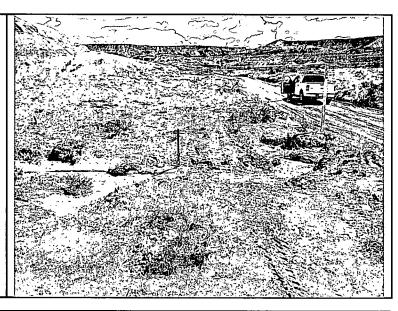




Lateral 2A-3 Pipeline Releases

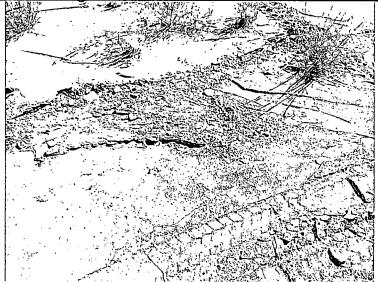
Photograph 1

View of Site prior to excavation activities (North release location in foreground, Middle release location in background), facing south.



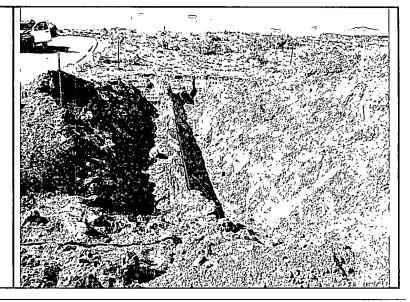
Photograph 2

View of the South release location prior to excavation activities.



Photograph 3

View of the final North Excavation, facing north.





SITE PHOTOGRAPHS

Lateral 2A-3 Pipeline Releases

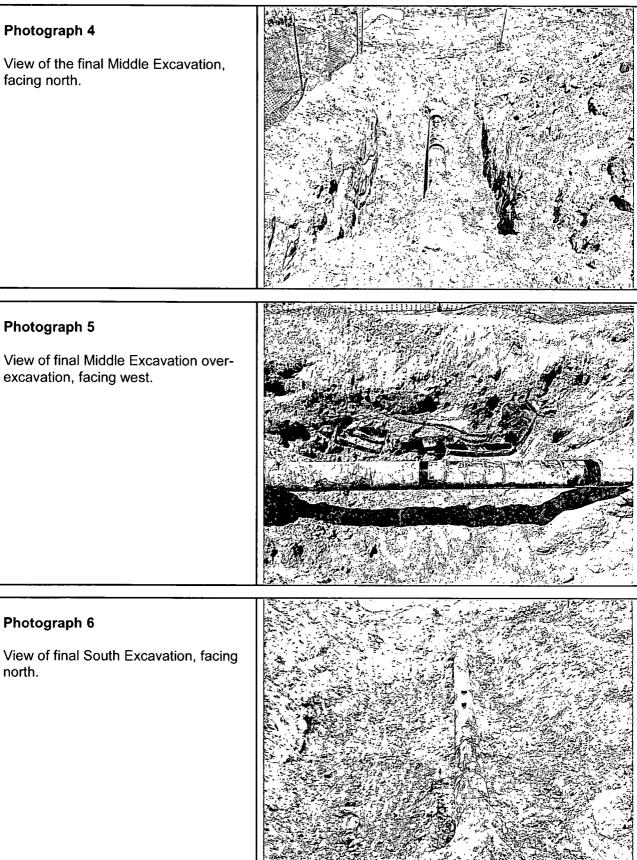
Photograph 4

Photograph 5

Photograph 6

north.

View of the final Middle Excavation, facing north.



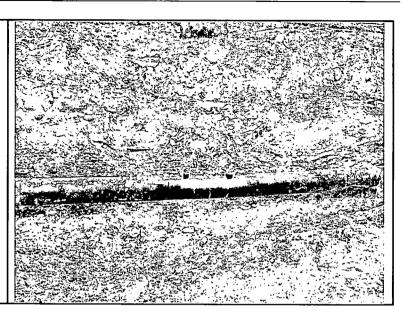


SITE PHOTOGRAPHS

Lateral 2A-3 Pipeline Releases

Photograph 7

View of final South Excavation, facing west.



Photograph 8	Street the
View of Site during backfilling activities, facing south.	



TABLE 1 Lateral 2A-3 Pipeline Releases 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	1	00
			Fin	al Confirmation Sa	mples - North Excav	ation			• •
C-1 North	9/5/2014	4 to 6	<0.050	< 0.050	<0.050	<0.099	ND	<5.0	22
C-2 North	9/5/2014	4 to 6	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<10
C-3 North	9/5/2014	4 to 6	<0.041	<0.041	<0.041	<0.083	ND	<4.1	<10
C-4 North	9/5/2014	4 to 6	<0.052	<0.052	<0.052	<0.10	ND	<5.2	<10
C-5 North	9/5/2014	6	<0.048	<0.048	<0.048	<0.097	ND	<4.8	<9.9
C-6 North	9/5/2014	6	<0.047	<0.047	<0.047	<0.094	ND	<4.7	<10
			Fina	al Confirmation San	nples - Middle Excav	vation	· · · ·		
C-1 Mid	9/5/2014	4 to 7	<0.049	0.067	<0.049	<0.097	0.067	<4.9	<10
C-2 Mid	9/5/2014	4 to 7	<0.050	<0.050	<0.050	<0.099	ND	<5.0	<10
C-3 Mid	9/5/2014	4 to 7	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<10
C-4 Mid	9/5/2014	4 to 7	<0.045	<0.045	<0.045	<0.090	ND	<4.5	<10
C-5 Mid	9/5/2014	7	<0.040	<0.040	<0.040	<0.080	ND	<4.0	<10
			Fin	al Confirmation Sar	nples - South Excav	ation			
C-1 South	9/8/2014	2 to 4	<0.037	<0.037	<0.037	<0.074	ND	<3.7	<9.9
C-2 South	9/8/2014	2 to 4	<0.047	<0.047	<0.047	<0.093	ND	<4.7	<9.9
C-3 South	9/8/2014	2 to 4	<0.038	<0.038	<0.038	<0.075	ND	<3.8	<9.9
C-4 South	9/8/2014	2 to 4	<0.052	<0.052	<0.052	<0.10	ND	<5.2	<10
C-5 South	9/8/2014	4	<0.047	0.058	<0.047	< 0.094	0.058	<4.7	42

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

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

October 03, 2014

Heather Woods Enterprise Field Services 614 Reilly Ave. Farmington, NM 87401 TEL: (505) 599-2141 FAX

OrderNo.: 1409278

Dear Heather Woods:

RE: Lateral 2A-3 North

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/6/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 08, 2014.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report					
Lab Order 1409278					
Date Reported: 10/3/2014					

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services Client Sample ID: C-1 North Lateral 2A-3 North **Project:** Collection Date: 9/5/2014 11:12:00 AM Lab ID: 1409278-001 Matrix: MEOH (SOIL) Received Date: 9/6/2014 6:45:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: BCN

						BUN
Diesel Range Organics (DRO)	22	10	mg/Kg	1	9/7/2014 3:32:24 AM	15157
Surr: DNOP	97.8	57. 9 -140	%REC	1	9/7/2014 3:32:24 AM	15157
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/7/2014 7:55:24 PM	R21049
Surr: BFB	105	80-120	%REC	1	9/7/2014 7:55:24 PM	R21049
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.050	mg/Kg	1	9/7/2014 7:55:24 PM	R21049
Benzene Toluene	ND ND	0.050 0.050	mg/Kg mg/Kg	1 1	9/7/2014 7:55:24 PM 9/7/2014 7:55:24 PM	R21049 R21049
				1 1 1		
Toluene	ND	0.050	mg/Kg	1 1 1 1	9/7/2014 7:55:24 PM	R21049
Gasoline Range Organics (GRO)	ND			1	9/7/2014 7:55:24 PM	R2

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank	
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 9	
	0	O RSD is greater than RSD limit		Sample pH greater than 2.		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report					
Lab Order 1409278					
Date Reported: 10/3/2014					

Hall Environmental Analysis Laboratory, Inc.

alyzed							
5:00 AM							
17:00 AM							
Client Sample ID: C-2 North							
	17:00 AM 5:00 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	9/8/2014 11:21:32 AM	15157
Surr: DNOP	89.1	57.9-140	%REC	1	9/8/2014 11:21:32 AM	15157
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/7/2014 8:25:37 PM	R21049
Surr: BFB	88.5	80-120	%REC	1	9/7/2014 8:25:37 PM	R21049
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	9/7/2014 8:25:37 PM	R21049
Toluene	ND	0.047	mg/Kg	1	9/7/2014 8:25:37 PM	R21049
Ethylbenzene	ND	0.047	mg/Kg	1	9/7/2014 8:25:37 PM	R21049
Xylenes, Total	ND	0.093	mg/Kg	1	9/7/2014 8:25:37 PM	R21049
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	9/7/2014 8:25:37 PM	R21049

Qualifiers:		Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	sexceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 2 01 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1409278 Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

Analyses	Result	RL Qual	Units	DF Date Analyzed	Batch		
Lab ID: 1409278-003	Matrix: N	MEOH (SOIL)	Received	Date: 9/6/2014 6:45:00 AM			
Project: Lateral 2A-3 North			Collection	Date: 9/5/2014 11:21:00 AM			
CLIENT: Enterprise Field Services	Client Sample ID: C-3 North						

			····	· · · ·		
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/8/2014 11:43:04 AM	15157
Surr: DNOP	82.9	57.9-140	%REC	1	9/8/2014 11:43:04 AM	15157
EPA METHOD 8015D: GASOLINE RAN	GE				Analys	: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	9/7/2014 9:25:47 PM	R21049
Surr: BFB	102	80-120	%REC	1	9/7/2014 9:25:47 PM	R21049
EPA METHOD 8021B: VOLATILES					Analys	: NSB
Benzene	ND	0.041	mg/Kg	1	9/7/2014 9:25:47 PM	R21049
Toluene	ND	0.041	mg/Kg	1	9/7/2014 9:25:47 PM	R21049
Ethylbenzene	ND	0.041	mg/Kg	1	9/7/2014 9:25:47 PM	R21049
Xylenes, Total	ND	0.083	mg/Kg	1	9/7/2014 9:25:47 PM	R21049
Surr: 4-Bromofluorobenzene	120	80-120	%REC	1	9/7/2014 9:25:47 PM	R21049

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysi	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 9
	0	RSD is greater than RSD limit	Р	Sample pH greater than 2.	1 age 5 61 5
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

...

Analytical Report
Lab Order 1409278
Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Enterprise Field Services
 Client Sample ID: C-4 North

 Project: Lateral 2A-3 North
 Collection Date: 9/5/2014 11:26:00 AM

 Lab ID: 1409278-004
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Applying
 Projuge
 Party Applying

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	9/8/2014 12:04:51 PM	15157
Surr: DNOP	80.2	57.9-140	%REC	1	9/8/2014 12:04:51 PM	15157
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg	1	9/7/2014 9:55:38 PM	R21049
Surr: BFB	89.9	80-120	%REC	1	9/7/2014 9:55:38 PM	R21049
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.052	mg/Kg	1	9/7/2014 9:55:38 PM	R21049
Toluene	ND	0.052	mg/Kg	1	9/7/2014 9:55:38 PM	R21049
Ethylbenzene	ND	0.052	mg/Kg	1	9/7/2014 9:55:38 PM	R21049
Xylenes, Total	ND	0.10	mg/Kg	1	9/7/2014 9:55:38 PM	R21049
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	9/7/2014 9:55:38 PM	R21049

Qualifiers:	*	* Value exceeds Maximum Contaminant Level. B Analyte detected in the associated Method		od Blank	
	E	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 4 01 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report
Lab Order 1409278

Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Enterprise Field Services
 Client Sample ID: C-5 North

 Project: Lateral 2A-3 North
 Collection Date: 9/5/2014 11:30:00 AM

 Lab ID: 1409278-005
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL Qual Units
 DF Date Analyzed
 Batch

V		e -						
EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: BO								
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/7/2014 4:57:51 AM	15157		
Surr: DNOP	85.7	57.9-140	%REC	1	9/7/2014 4:57:51 AM	15157		
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/7/2014 10:25:55 PM	R21049		
Surr: BFB	97.2	80-120	%REC	1	9/7/2014 10:25:55 PM	R21049		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.048	mg/Kg	1	9/7/2014 10:25:55 PM	R21049		
Toluene	ND	0.048	mg/Kg	1	9/7/2014 10:25:55 PM	R21049		
Ethylbenzene	ND	0.048	mg/Kg	1	9/7/2014 10:25:55 PM	R21049		
Xylenes, Total	ND	0.097	mg/Kg	1	9/7/2014 10:25:55 PM	R21049		
Surr: 4-Bromofluorobenzene	114	80-120	%REC	1	9/7/2014 10:25:55 PM	R21049		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 5 01 9
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report
Lab Order 1409278

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/3/2014

CLIENT:	Enterprise	Field	Services

Project: Lateral 2A-3 North Lab ID: 1409278-006

Client Sample ID: C-6 North Collection Date: 9/5/2014 11:34:00 AM Matrix: MEOH (SOIL)

Received Date: 9/6/2014 6:45:00 AM

Analyses	Result	RL Qual Units		DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/7/2014 5:19:04 AM	15157
Surr: DNOP	86.2	57.9-140	%REC	1	9/7/2014 5:19:04 AM	15157
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/7/2014 10:56:06 PM	R21049
Surr: BFB	89.0	80-120	%REC	1	9/7/2014 10:56:06 PM	R21049
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	9/7/2014 10:56:06 PM	R21049
Toluene	ND	0.047	mg/Kg	1	9/7/2014 10:56:06 PM	R21049
Ethylbenzene	ND	0.047	mg/Kg	1	9/7/2014 10:56:06 PM	R21049
Xylenes, Total	ND	0.094	mg/Kg	1	9/7/2014 10:56:06 PM	R21049
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	9/7/2014 10:56:06 PM	R21049

Qualifiers: *	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	E Value above quantitation range		Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 6 of 9
	0	RSD is greater than RSD limit	Р	Sample pH greater than 2.	1 age 0 01 y
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

	rise Field Services								
Sample ID MB-15157	SampType: I	MBLK	Tes	tCode: EF	PA Method	8015D: Diese	el Range (Organics	
Client ID: PBS	Batch ID:	15157	·F	RunNo: 2	1040				
Prep Date: 9/6/2014	Analysis Date:	9/6/2014	S	SeqNo: 6	12637	Units: mg/K	g		
Analyte	Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 1	0							
Surr: DNOP	8.8	10.00		88.3	57.9	140			
Sample ID LCS-15157	SampType:	LCS	Tes	tCode: EF	PA Method	8015D: Diese	el Range (Drganics	
Client ID: LCSS	Batch ID:	15157	F	RunNo: 2	1040				
Prep Date: 9/6/2014	Analysis Date:	9/6/2014	S	eqNo: 6	12639	Units: mg/K	g		
Analyte	Result PQI	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49 1	0 50.00	0	98.3	68.6	130			
Surr: DNOP	4.1	5.000		81.7	57.9	140			

Qualifiers:

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- * 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

WO#: 1409278

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03-Oct-14

Enterprise Field Services

Project: Lateral 2	A-3 North			
Sample ID MB-15128 MK	SampType: MBLK	TestCode: EPA Method	8015D: Gasoline Rang	e
Client ID: PBS	Batch ID: R21049	RunNo: 21049		
Prep Date:	Analysis Date: 9/7/2014	SeqNo: 612585	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 1000 1000	101 80	120	
Sample ID LCS-15128 MK	SampType: LCS	TestCode: EPA Method	8015D: Gasoline Rang	e
Client ID: LCSS	Batch ID: R21049	RunNo: 21049		
Prep Date:	Analysis Date: 9/7/2014	SeqNo: 612587	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 99.7 65.8	139	
Surr: BFB	950 1000	95.1 80	120	
Sample ID LCSD-15128 MK	SampType: LCSD	TestCode: EPA Method	8015D: Gasoline Rang	e
Client ID: LCSS02	Batch ID: R21049	RunNo: 21049		
Prep Date:	Analysis Date: 9/7/2014	SeqNo: 612589	Units: %REC	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Surr: BFB	1100		0	0

Qualifiers:

Client:

- * 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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03-Oct-14

WO#: 1409278

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Enterprise Field Services

Project: Lateral 2	A-3 North									
Sample ID MB-15128 MK	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles	· · · · · · · · · · · · · · · · · · ·	
Client ID: PBS	Batch	n ID: R2	1049	F	RunNo: 2	1049				
Prep Date:	Analysis D)ate: 9/	7/2014	S	SeqNo: 6	12641	Units: mg/h	٢g		
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	1.2		1.000		120	80	120			-
Sample ID LCS-15128 MK	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batch	n ID: R2	1049	F	RunNo: 2	1049				
Prep Date:	Analysis D)ate: 9 /	7/2014	S	SeqNo: 6	12642	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	89.9	80	120			
Toluene	0.90	0.050	1.000	0	90.4	80	120			
Ethylbenzene	0.93	0.050	1.000	0	93.2	80	120			
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120			
Surr: 4-Bromofluorobenzene	0.90		1.000		89.6	80	120			
Sample ID LCSD-15128 MK	SampT	ype: LC	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS02	Batch	n ID: R2	1049	F	RunNo: 2	1049				
Prep Date:	Analysis D	Date: 9 /	7/2014	S	SeqNo: 6	12643	Units: mg/l	٨g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	89.9	80	120	0.0223	20	
Toluene	0.90	0.050	1.000	0	90.0	80	120	0.543	20	
Ethylbenzene	0.94	0.050	1.000	0	93.7	80	120	0.460	20	
Xylenes, Total	2.9	0.10	3.000	0	98.0	80	120	0.0204	20	
Surr: 4-Bromofluorobenzene	1.2		1.000		120	80	120	0		

Qualifiers:

Client:

- * 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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03-Oct-14

WO#: 1409278

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client N	ame: Ente	rprise	Work Order Number:	14092	78		RcptNo:	1
Received	by/date:		oglochie				,,,	
Logged E	By: Line	dsay Mangin	9/6/2014 6:45:00 AM			Andy Hugo		
Complete	ed By: Line	dsay Mangin	9/6/2014 7:20:14 AM			Author		
Reviewe	d By:							
<u>Chain o</u>	of Custody	· · ·						
1. Cust	ody seals inta	ict on sample bottle	es?	Yes		No 🗌	Not Present 🗹	
2. Is Ch	nain of Custod	ly complete?		Yes	V	No 🗌	Not Present	
3 How	was the sam	ple delivered?		Çouri	er			
<u>Log In</u>								
4. Was	an attempt n	nade to cool the sa	imples?	Yes		No 🗌	NA 🗔	
5. Were	e all samples	received at a temp	perature of >0° C to 6.0°C	Yes	V	No 🗌	na 🗌	
6. Sam	iple(s) in prop	er container(s)?		Yes		No 🗌		
7. Suffi	cient sample	volume for indicate	ed test(s)?	Yes	V	No 🗔		
8. Are s	amples (exce	pt VOA and ONG	properly preserved?	Yes	Y	No 🗔		
9. Was	preservative	added to bottles?		Yes		No 🗹	NA 🗌	
10.voa	vials have ze	ero headspace?		Yes		No 🗆	No VOA Vials 🗹	
11, Wen	e any sampie	containers receive	ed broken?	Yes		No 🗹	# of preserved	
40 5			,	Yes		No 🗔	bottles checked for pH:	
		natch bottle labels		Yes	Y I			or >12 unless noted)
		ectly identified on C		Yes	✓	No 🗆	Adjusted?	
14, Is it o	clear what an	alyses were reques	sted?	Yes	\checkmark	No 🗆		
	-	mes able to be me mer for authorizati		Yes		No 🗔	Checked by:	
<u>Special</u>	Handling	(if applicable)						
16, Was	client notified	l of all discrepanci	es with this order?	Yes		No 🗌		_
	Person Notif	fied:	Date:					
	By Whom:		Via:	🔲 eMa	ti 🗌] Phone 🗌 Fax	In Person	
	Regarding:							
ĺ	Client Instru	ctions:						1

17. Additional remarks:

18. Cooler Information

Gooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Yes		5	

.

C	hain	of-Cu	stody Record	Turn-Around	Time:		ļ				AI		FN	VI	R	ON	MF	INT	TAL	_
Client:	Enterp	rise Fie	eld Services	Standard	🛒 Rush	Same Day												ATC		
				Project Name):	Ū			n,	٧	ww.	halle	enviro	onme	ental	.com				
Mailing	Address	: 614	Reilly Avenue 1 87401 -2787		24-3 N	orth		490	01 H	awkir	ns NI	Ξ-,	Albuc	quere	que,	NM 8	7109	;		
Far	ningt	in , NA	<u>N 87401</u>	Project #:												15-41(and the state	the a the Day of	Section .
Phone #	#: (So	5) 716	-2787							્રિ		Ân	***		eque	est,				Ter Co. 1.
email or	r Fax#:			Project Mana	iger:		E	(ylno							s					
QA/QC F	Package: dard		Level 4 (Full Validation)	Heathe	r Woods	5	+ 10021)	(Gas (RO/M			SIMS)			Z PCBS					
Accredi			_	Sampler: H.	Woods			H	2	, _	<u>=</u>	8270								Î
			ſſ	On Ice	Xeyes			+ ш	ы В С	418	504	20	ရှိန်		es /	Q				Ծ
Date	Time	Matrix	Sample Request ID		Preservative Type		BTEX + NABE	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / Marco)	TPH (Method 418.1)	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Allions (F, U), NU3, NU2, FU4, SU4)		8270 (Semi-VOA)				Air Bubbles (Y
915/14	1112	501	C-1	MeOH Kit 1-402 Glass	MIOH	-001	X		χ											
915/14	1117	Soil	C-2	Meot Kit 1-402 Glass	MiOH /_	-002	X		×				:							
		Soil	C-3	MeOHKit 1-4pzGlass	MEDH/_	-003	X		×											
		Soil	C-4	MOHKit 1-402 Glass	MIOH	-004	X		x											
715/14			C-5	MLOH KIL	MeOH	-005	X		x											
		Soil		Meott Kit 1-402 Glass	Miou /	-006	X		X											$\overline{+}$
	*								-		+		+		+		<u> </u>			+-
		·····																		—
										_					_		ļ	\square	+	\perp
									_		_			+			+	┝─┼	+	+
Date:	Time: //j20	Relinguishe Hea	ed by: the M. Woods		ubbele	Date Time 9/5/11 /1020	Ren	harks) 5: D A)irec Ha:	+ B Ter	:11 - n L	lo E Ong	- Intr	-pris	u Fu	Ld.	Servi	ـــــــــــــــــــــــــــــــــــــ	
Date: 9/5/N	Time: 1830		ed by:	Received by:	t ogle	Date Time	4	ay	82 Lug	29- Re	199	7 2.00	5							
/ / 'If	necessary,	amples subr	nitted to Hall Environmental may be subc	contracted to other ad	credited laboratorie	es. This serves as notice of this	possit	oility. A	vny sul	o-contra	icted d	ata wi	li be cle	early n	otated	on the a	analytic	al repor	t.	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

October 03, 2014

Heather Woods Enterprise Field Services 614 Reilly Ave. Farmington, NM 87401 TEL: (505) 599-2141 FAX

OrderNo.: 1409276

Dear Heather Woods:

RE: Lateral 2A-3 Mid

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/6/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 08, 2014.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

andig

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1409276

Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Enterprise Field Services		C	lient Samp	le ID: C-	1 Mid	
Project: Lateral 2A-3 Mid			Collection	Date: 9/5	5/2014 11:43:00 AM	
Lab ID: 1409276-001	Matrix: M	IEOH (SOIL)	Received	Date: 9/6	5/2014 6:45:00 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	ma/Ka	1	9/6/2014 11:15:41 PM	15157

Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/6/2014 11:15:41 PM	15157
Surr: DNOP	92.9	57.9-140	%REC	1	9/6/2014 11:15:41 PM	15157
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/7/2014 8:32:34 PM	R21046
Surr: BFB	93.4	80-120	%REC	1	9/7/2014 8:32:34 PM	R21046
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.049	mg/Kg	1	9/7/2014 8:32:34 PM	R21046
Toluene	0.067	0.049	mg/Kg	1	9/7/2014 8:32:34 PM	R21046
Ethylbenzene	ND	0.049	mg/Kg	1	9/7/2014 8:32:34 PM	R21046
Xylenes, Total	ND	0.097	mg/Kg	1	9/7/2014 8:32:34 PM	R21046
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	9/7/2014 8:32:34 PM	R21046

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	r age r or o
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1409276 Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Enterprise Field Services
 Client Sample ID: C-2 Mid

 Project:
 Lateral 2A-3 Mid
 Collection Date: 9/5/2014 11:47:00 AM

 Lab ID:
 1409276-002
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL
 Oual
 Units
 DF
 Date Analyzed
 Batch

Analyses	Result			Dr	Date Analyzeu	Daten
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/7/2014 12:19:46 AM	15157
Surr: DNOP	88.0	57.9-140	%REC	1	9/7/2014 12:19:46 AM	15157
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	9/7/2014 9:01:13 PM	R21046
Surr: BFB	92.0	80-120	%REC	1	9/7/2014 9:01:13 PM	R21046
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.050	mg/Kg	1	9/7/2014 9:01:13 PM	R21046
Toluene	ND	0.050	mg/Kg	1	9/7/2014 9:01:13 PM	R21046
Ethylbenzene	ND	0.050	mg/Kg	1	9/7/2014 9:01:13 PM	R21046
Xylenes, Total	ND	0.099	mg/Kg	1	9/7/2014 9:01:13 PM	R21046
Surr: 4-Bromofluorobenzene	99.8	80-120	%REC	1	9/7/2014 9:01:13 PM	R21046

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 uge 2 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report
Lab Order 1409276
Date Reported: 10/3/2014

Batch

Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Enterprise Field Services
 Client Sample ID: C-3 Mid

 Project: Lateral 2A-3 Mid
 Collection Date: 9/5/2014 11:51:00 AM

 Lab ID: 1409276-003
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL Qual Units
 DF Date Analyzed

EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/7/2014 12:41:12 AM	15157
Surr: DNOP	91.5	57.9-140	%REC	1	9/7/2014 12:41:12 AM	15157
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	9/7/2014 9:29:46 PM	R2104
Surr: BFB	91.5	80-120	%REC	1	9/7/2014 9:29:46 PM	R2104
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.040	mg/Kg	1	9/7/2014 9:29:46 PM	R2104
Toluene	ND	0.040	mg/Kg	1	9/7/2014 9:29:46 PM	R2104
Ethylbenzene	ND	0.040	mg/Kg	1	9/7/2014 9:29:46 PM	R2104
Xylenes, Total	ND	0.080	mg/Kg	1	9/7/2014 9:29:46 PM	R2104
Surr: 4-Bromofluorobenzene	99.3	80-120	%REC	1	9/7/2014 9:29:46 PM	R2104

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 5 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Lab Order 1409276

Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Enterprise Field Services
 Client Sample ID: C-4 Mid

 Project:
 Lateral 2A-3 Mid
 Collection Date: 9/5/2014 11:56:00 AM

 Lab ID:
 1409276-004
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL Qual
 Units
 DF Date Analyzed
 Batch

an a						
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/7/2014 1:02:53 AM	15157
Surr: DNOP	89.4	57.9-140	%REC	1	9/7/2014 1:02:53 AM	15157
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.5	mg/Kg	1	9/7/2014 9:58:29 PM	R21046
Surr: BFB	90.6	80-120	%REC	1	9/7/2014 9:58:29 PM	R21046
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.045	mg/Kg	1	9/7/2014 9:58:29 PM	R21046
Toluene	ND	0.045	mg/Kg	1	9/7/2014 9:58:29 PM	R21046
Ethylbenzene	ND	0.045	mg/Kg	1	9/7/2014 9:58:29 PM	R21046
Xylenes, Total	ND	0.090	mg/Kg	1	9/7/2014 9:58:29 PM	R21046
Surr: 4-Bromofluorobenzene	97.4	80-120	%REC	1	9/7/2014 9:58:29 PM	R21046

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J Analyte detected below quantitation limits		ND	Not Detected at the Reporting Limit	Page 4 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 4 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1409276 Date Reported: 10/3/2014

Batch

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Enterprise Field Services
 Client Sample ID: C-5 Mid

 Project:
 Lateral 2A-3 Mid
 Collection Date: 9/5/2014 12:00:00 PM

 Lab ID:
 1409276-005
 Matrix: MEOH (SOIL)
 Received Date: 9/6/2014 6:45:00 AM

 Analyses
 Result
 RL Qual Units
 DF Date Analyzed

, ,		<u> </u>				
EPA METHOD 8015D: DIESEL RANGE	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/7/2014 1:24:18 AM	15157
Surr: DNOP	90.7	57.9-140	%REC	1	9/7/2014 1:24:18 AM	15157
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	9/7/2014 10:27:12 PM	R21046
Surr: BFB	91.9	80-120	%REC	1	9/7/2014 10:27:12 PM	R21046
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.040	mg/Kg	1	9/7/2014 10:27:12 PM	R21046
Toluene	ND	0.040	mg/Kg	1	9/7/2014 10:27:12 PM	R21046
Ethylbenzene	ND	0.040	mg/Kg	1	9/7/2014 10:27:12 PM	R21046
Xylenes, Total	ND	0.080	mg/Kg	1	9/7/2014 10:27:12 PM	R21046
Surr: 4-Bromofluorobenzene	98.0	80-120	%REC	1	9/7/2014 10:27:12 PM	R21046

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 8
	0	RSD is greater than RSD1imit	Р	Sample pH greater than 2.	1 age 5 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

OC SUMMARY REPORT

Enterprise Field Services

SampT

Analysis D Result

SampT

Result

49

4.1

Result

Result

51

4.2

49

4.2

Analysis Date: 9/6/2014

SampType: MS

Batch ID: 15157

Analysis Date: 9/6/2014

SampType: MSD

Batch ID: 15157

Analysis Date: 9/6/2014

PQL

10

PQL

10

PQL

10

SPK value SPK Ref Val

SPK value SPK Ref Val

SPK value SPK Ref Val

0

0

0

50.00

5.000

50.05

5.005

50.20

5.020

Mid									
SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Diese	el Range C	Drganics	
Batch	ID: 15	157	F	RunNo: 2	1040				
ilysis D	ate: 9/	6/2014	S	eqNo: 6	12637	Units: mg/M	ίg		
esult	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND	10								
8.8		10.00		88.3	57.9	140			
 SampT	ype: LC		Tes	tCode: E	PA Method	8015D: Diese	el Range C	Drganics	
Batch	ID: 15	157	F	RunNo: 2	1040				

LowLimit

68.6

57.9

40.1

57.9

LowLimit

40.1

57.9

Units: mg/Kg

130

140

Units: mg/Kg

152

140

Units: mg/Kg

152

140

HighLimit

HighLimit

%RPD

%RPD

%RPD

3.62

0

RPDLimit

RPDLimit

RPDLimit

32.1

0

Qual

Qual

Qual

HighLimit

TestCode: EPA Method 8015D: Diesel Range Organics

TestCode: EPA Method 8015D: Diesel Range Organics

SegNo: 612639

%REC

98.3

81.7

RunNo: 21040

SeqNo: 612700

97.3

83.4

RunNo: 21040

SeqNo: 612703

%REC

101

84.4

%REC LowLimit

Hall Environmental Analysis Laboratory, Inc.

Lateral 2A-3 Mid

Client: Project:

Client ID:

Prep Date:

Surr: DNOP

Client ID:

Prep Date:

Surr: DNOP

Analyte

Analyte

Analyte

Surr: DNOP

Surr: DNOP

Analyte

Sample ID MB-15157

Diesel Range Organics (DRO)

Sample ID LCS-15157

Diesel Range Organics (DRO)

Client ID: C-1 Mid

Prep Date: 9/6/2014

Diesel Range Organics (DRO)

Client ID: C-1 Mid

Prep Date: 9/6/2014

Diesel Range Organics (DRO)

LCSS

Sample ID 1409276-001AMS

Sample ID 1409276-001AMSD

9/6/2014

PBS

9/6/2014

- **Qualifiers:**
 - Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- Analyte detected below quantitation limits ł
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits R
- S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

Page 6 of 8

WO#: 1409276

03-Oct-14

	orise Field Se al 2A-3 Mid	ervices								
Sample ID MB-15146 MK	Samp	Туре: МЕ	3LK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Bato	h ID: R2	1046	F	RunNo: 2	1046				
Prep Date:	Analysis I	Date: 9 /	7/2014	S	BeqNo: 6	12473	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		90.4	80	120			
Sample ID LCS-15146 MI	C Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Client ID: LCSS	Bato	h ID: R2	21046	F	RunNo: 2	1046				
Prep Date:	Analysis I	Date: 9/	7/2014	5	GeqNo: 6	12477	Units: mg/M	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.8	65.8	139			
Surr: BFB	990		1000		98.7	80	120			

- * 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 7 of 8

1409276 *03-Oct-14*

WO#:

1.1

Enterprise Field Services

Project: Lateral 2A-3 Mid Sample ID MB-15146 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612505 Units: mg/Kg Result SPK value SPK Ref Val %REC LowLimit Analyte PQL HighLimit %RPD **RPDLimit** Qual Benzene ND 0.050 ND 0.050 Toluene Ethylbenzene ND 0.050 ND 0.10 Xylenes, Total Surr: 4-Bromofluorobenzene 1.0 1.000 100 80 120 Sample ID LCS-15146 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R21046 RunNo: 21046 Prep Date: Analysis Date: 9/7/2014 SeqNo: 612506 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Benzene 0.93 0.050 1.000 0 93.0 80 120 Toluene 0.93 0.050 1.000 0 93.2 80 120 0.96 0.050 1.000 0 95.8 80 120 Ethylbenzene 2.9 3.000 0 96.3 Xylenes, Total 0.10 80 120

106

80

120

1.000

Qualifiers:

Client:

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

Surr: 4-Bromofluorobenzene

- 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 8 of 8

1409276 *03-Oct-14*

WO#:

ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-34	mental Analysis Laborata 4901 Hawkins I Albuquerque, NM 871 5-3975 FAX: 505-345-41 www.hallenvironmental.co	⁰⁹ Sam	ole Log-In Cl	neck List
Client Name: Enterprise Work Order Nu	umber: 1409276		RcptNo:	1
Received by/date: 09/0/c/1L(Logged By: Lindsay Mangin 9/6/2014 6:45:00) AM	Alla		
Completed By: Lindsay Mangin 9/6/2014 7:10:34	AM	June of the second s		
Reviewed By:				
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes 🗋	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?	Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?	Courier			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗌	na 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	na 🗀	
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		J
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?	Yes 🗌	No 🗹	NA 🗌	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved bottles checked	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗌	for pH:	>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:	
<u>Special Handling (if applicable)</u>				
16. Was client notified of all discrepancies with this order?	Yes	No 🗌	NA 🗹	
A particular de la construcción de la construcci	Date: /ia:eMaiiP	hone 🗌 Fax	In Person	
Regarding:				
Client Instructions:			· · · · · ·	
17. Additional remarks:				
18. <u>Cooler Information</u> <u>Cooler No.</u> Temp C Condition Seal Intact Seal I <u>1</u> 1.6 Good Yes	No Seal Date	Signed By		

Client:	hain- Enter	of-Cu erize F	istody Record	Turn-Around	🛒 Rush	Same Day				A	N/	AL'	YS	SIS	5 L		30		NT.	al)ry	q
Mailing Far	Address	614 ton, N	Reilly Avenue M 67401	Lateral Project #:	2A-3 /	Mid	_	Te	l. 50	awkir 5-34{	is Ni 5-39	E -	Albi F	uque ax t	ərque 505-:	e, NI 345-	Vi 87 4107	7	s. San tanang sa		
email or		>) +16	• 2787	Project Mana	iger:		(
QA/QC F	•		Level 4 (Full Validation)	Heath	ur Wood	S	REALES (8021)	(Gas ol	RO /			SIMS)		,PO4,S(2 PCB's						
Accredit		Othe		Sampler: H	MAY oo	. 🗉 No 🐨 🕺	+	Hd Hd +	RO / DI	118.1)	504.1)	r 8270 :	s	03,N02	s / 808;		(A)				or N)
Date	(Type)_ Time	Matrix	Sample Request ID	Sample, Tem Container Type and #	Preservative Type	HEAL NOTES	BTEX +-	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / 4450)	TPH (Method 418.1)	EDB (Method (PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
915/14	1143	5011	C-1	MOH Kit 1-402 Glass	1-	-001	X		X												\Box
915/14	1147	Soil	C-2	Meoff Kit 1- 402 Glass		-002	X		x	_											
7/5/14	1151	Soi1	C-3	Mecti Kil- 1-402 Glass	MOOH	-003	X		x									$ \rightarrow $	\perp		
7/5/14	1156	5011	C-4	MiOH K: 1 1-402 Glass	Meoti /_	-004	X		X									\square			
7 <u>15/14</u>	1200	50;1	C-S	MEOHKI+ 1-462 GLASS	MLOH/_	-05	X		x		_							+		+	+
			· · · · · · · · · · · · · · · · · · ·																		
Date:	1620	Relinquish Hunt Relinquish	the M. Woods	Received by:	he fibet	Date Time 9/5/14/1420 2 Date Time	Ren		HA	μ ι , '	Tor	n l			rpr	154	Fie	Id S	ierul	 دوع	
9/5/J	1830	1 An	st black	$ V \neq$	K-n	abily ANS		-		29 R			2								
· / /	necessary,	eamples sub	mitted to Hall Environmental may be subc	contracted to other at	credited laboratori	es. This serves as notice of this					-		-	clearly	y notai	ted on	the an	alytical	report.	<u></u>	

HALL Environmental Analysis Laboratory

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

October 03, 2014

Heather Woods Enterprise Field Services 614 Reilly Ave. Farmington, NM 87401 TEL: (505) 599-2141 FAX

RE: Enterprise Lateral 2A-3 South

OrderNo.: 1409340

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/9/2014 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued September 10, 2014.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1409340 Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Enterprise Field Services	(Client Sample ID: C-1 South
Project:	Enterprise Lateral 2A-3 South		Collection Date: 9/8/2014 2:15:00 PM
Lab ID:	1409340-001	Matrix: MEOH (SOIL)	Received Date: 9/9/2014 7:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/9/2014 11:03:35 AM	15188
Surr: DNOP	122	57.9-140	%REC	1	9/9/2014 11:03:35 AM	15188
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	3.7	mg/Kg	1	9/9/2014 10:34:58 AM	R21095
Surr: BFB	89.2	80-120	%REC	1	9/9/2014 10:34:58 AM	R21095
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.037	mg/Kg	1	9/9/2014 10:34:58 AM	R21095
Toluene	ND	0.037	mg/Kg	1	9/9/2014 10:34:58 AM	R21095
Ethylbenzene	ND	0.037	mg/Kg	1	9/9/2014 10:34:58 AM	R21095
Xylenes, Total	ND	0.074	mg/Kg	1	9/9/2014 10:34:58 AM	R21095
Surr: 4-Bromofluorobenzene	96.9	80-120	%REC	1	9/9/2014 10:34:58 AM	R21095

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 ugo 1 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1409340 Date Reported: 10/3/2014

CLIENT	Enterprise Field Services		•	Client Sample ID: C-2 South
Project:	Enterprise Lateral 2A-3 South			Collection Date: 9/8/2014 11:45:00 AM
Lab ID:	1409340-002	Matrix:	MEOH (SOIL)	Received Date: 9/9/2014 7:00:00 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	9.9	mg/Kg	1	9/9/2014 11:25:04 AM	15188
Surr: DNOP	116	57.9-140	%REC	1	9/9/2014 11:25:04 AM	15188
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/9/2014 11:03:37 AM	R21095
Surr: BFB	90.5	80-120	%REC	1	9/9/2014 11:03:37 AM	R21095
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.047	mg/Kg	1	9/9/2014 11:03:37 AM	R21095
Toluene	ND	0.047	mg/Kg	1	9/9/2014 11:03:37 AM	R21095
Ethylbenzene	ND	0.047	mg/Kg	1	9/9/2014 11:03:37 AM	R21095
Xylenes, Total	ND	0.093	mg/Kg	1	9/9/2014 11:03:37 AM	R21095
Surr: 4-Bromofluorobenzene	98.5	80-120	%REC	1	9/9/2014 11:03:37 AM	R21095

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8	
	0	RSD is greater than RSDlimit	P Sample pH greater than 2.		1 age 2 01 8	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report Lab Order 1409340 Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT:	Enterprise Field Services	(Client Sample ID: C-3 South
Project:	Enterprise Lateral 2A-3 South		Collection Date: 9/8/2014 2:35:00 PM
Lab ID:	1409340-003	Matrix: MEOH (SOIL)	Received Date: 9/9/2014 7:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/9/2014 11:46:26 AM	15188
Surr: DNOP	126	57.9-140	%REC	1	9/9/2014 11:46:26 AM	15188
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	3.8	mg/Kg	1	9/9/2014 11:32:17 AM	R21095
Surr: BFB	92.1	80-120	%REC	1	9/9/2014 11:32:17 AM	R21095
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.038	mg/Kg	1	9/9/2014 11:32:17 AM	R21095
Toluene	ND	0.038	mg/Kg	1	9/9/2014 11:32:17 AM	R21095
Ethylbenzene	ND	0.038	mg/Kg	1	9/9/2014 11:32:17 AM	R21095
Xylenes, Total	ND	0.075	mg/Kg	1	9/9/2014 11:32:17 AM	R21095
Surr: 4-Bromofluorobenzene	99.7	80-120	%REC	1	9/9/2014 11:32:17 AM	R21095

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND Not Detected at the Reporting L		Page 3 of 8	
	O RSD is greater than RSD limit		Р	Sample pH greater than 2.	14ge 5 61 6	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report
Lab Order 1409340

Date Reported: 10/3/2014

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	RL Oua	l Units	DF Date Analyzed	
Lab ID:	1409340-004	Matrix:	MEOH (SOIL)	Receive	d Date: 9/9/2014 7:00:00 AM	
Project:	Enterprise Lateral 2A-3 South			Collectio	n Date: 9/8/2014 3:30:00 PM	
CLIENT:	Enterprise Field Services	Client Sample ID: C-4 South				

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	9/9/2014 12:07:51 PM	15188
Surr: DNOP	127	57.9-140	%REC	1	9/9/2014 12:07:51 PM	15188
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	5.2	mg/Kg	1	9/9/2014 12:00:54 PM	R21095
Surr: BFB	91.6	80-120	%REC	1	9/9/2014 12:00:54 PM	R21095
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.052	mg/Kg	1	9/9/2014 12:00:54 PM	R21095
Toluene	ND	0.052	mg/Kg	1	9/9/2014 12:00:54 PM	R21095
Ethylbenzene	ND	0.052	mg/Kg	1	9/9/2014 12:00:54 PM	R21095
Xylenes, Total	ND	0.10	mg/Kg	1	9/9/2014 12:00:54 PM	R21095
Surr: 4-Bromofluorobenzene	97.8	80-120	%REC	1	9/9/2014 12:00:54 PM	R21095

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded		
	J	Analyte detected below quantitation limits	ND	ND Not Detected at the Reporting Limit P		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	Page 4 of 8	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report							
Lab Order 1409340							
Date Reported: 10/3/2014							

Hall Environmental Analysis Laboratory, Inc.

Analyses		Result	RL Qual	Units	DF Date Analyzed	E
Lab ID:	1409340-005	Matrix:	MEOH (SOIL)	Received	I Date: 9/9/2014 7:00:00 AM	
Project:	Enterprise Lateral 2A-3 South			Collection	Date: 9/8/2014 11:40:00 AM	
CLIENT:	Enterprise Field Services	Client Sample ID: C-5 South				

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	42	10	mg/Kg	1	9/9/2014 12:29:14 PM	15188
Surr: DNOP	128	57.9-140	%REC	1	9/9/2014 12:29:14 PM	15188
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/9/2014 12:29:30 PM	R21095
Surr: BFB	92.5	80-120	%REC	1	9/9/2014 12:29:30 PM	R21095
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	9/9/2014 12:29:30 PM	R21095
Toluene	0.058	0.047	mg/Kg	1	9/9/2014 12:29:30 PM	R21095
Ethylbenzene	ND	0.047	mg/Kg	1	9/9/2014 12:29:30 PM	R21095
Xylenes, Total	ND	0.094	mg/Kg	1	9/9/2014 12:29:30 PM	R21095
Surr: 4-Bromofluorobenzene	99.4	80-120	%REC	1	9/9/2014 12:29:30 PM	R21095

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E Value above quantitation range H Holding times for		Holding times for preparation or analysis	exceeded	
J Analyte detected		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 5 61 6
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

1	rise Field Services rise Lateral 2A-3 South			
Sample ID MB-15188 Client ID: PBS Prep Date: 9/9/2014	SampType: MBLK Batch ID: 15188 Analysis Date: 9/9/2014	TestCode: EPA Method RunNo: 21055 SeqNo: 613919	8015D: Diesel Range C Units: mg/Kg	Drganics
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO) Surr: DNOP	ND 10 8.6 10.00	86.3 57.9	140	
Sample ID LCS-15188	SampType: LCS	TestCode: EPA Method	8015D: Diesel Range C	Drganics
Client ID: LCSS	Batch ID: 15188	RunNo: 21055		
Prep Date: 9/9/2014	Analysis Date: 9/9/2014 SeqNo: 613920		Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Diesel Range Organics (DRO)	49 10 50.00	0 97.1 68.6	130	
Surr: DNOP	3.9 5.000	78.7 57.9	140	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- **Reporting Detection Limit** RL

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03-Oct-14

Enterprise Field Services

Enterprise Lateral 2A-3 South

SampType: MBLK

Analysis Date: 9/9/2014

Batch ID: R21095

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO) Surr: BFB	ND 900	5.0	1000		89.8	80	120								
Sample ID 2.5UG GRO LCS	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e									
Client ID: LCSS	Client ID: LCSS Batch ID: R21095				RunNo: 21095										
Prep Date:	Analysis Date: 9/9/2014			S	eqNo: 6	14205	Units: mg/M	٢g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	65.8	139								
Surr: BFB	990		1000		99.4	80	120								
Sample ID 1409340-002AMS SampType: MS				TestCode: EPA Method 8015D: Gasoline Range											
Client ID: C-2 South	Batch ID: R21095			F	RunNo: 2	1095									
Prep Date:	Analysis Date: 9/9/2014			SeqNo: 614207			Units: mg/Kg								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	23	4.7	23.28	0	97.8	71.8	132								
Surr: BFB	920		931.1		98.5	80	120								
Sample ID 1409340-002AMS	D SampT	ype: M	SD	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e						
Client ID: C-2 South	Batch	n ID: R2	21095	F	RunNo: 2	1095									
Prep Date:	Analysis D)ate: 9,	/9/2014	S	GeqNo: 6	14208	Units: mg/H	٢g							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Gasoline Range Organics (GRO)	25	4.7	23.28	0	106	71.8	132	7.70	20						
Surr: BFB	940		931.1		101	80	120	0	0						

Qualifiers:

Client:

Project:

Client ID:

Prep Date:

Sample ID 5ML RB

PBS

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

TestCode: EPA Method 8015D: Gasoline Range

Units: mg/Kg

RunNo: 21095

SeqNo: 614202

- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit

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03-Oct-14

WO#: 1409340

Client: Project:	Enterprise Enterprise			uth								
Sample ID	5ML RB SampType: MBLK TestCode: EPA Method 8021B: Volatiles											
Client ID:	PBS	Batcl	h ID: R2	1095	F	RunNo: 2	1095					
Prep Date:		Analysis D	Date: 9 /	9/2014	5	SeqNo: 6	14223	۲g				
Analyte		Result	PQL	SPK value	SPK Ref Val		LowLimit	HighLimit	- %RPD	RPDLimit	Qual	
Benzene		ND	0.050			///////////////////////////////////////	LOWLINK	TilghEinni	///TED		Quai	
Toluene		ND	0.050									
Ethylbenzene		ND	0.050									
Xylenes, Total		ND	0.10									
Surr: 4-Bron	ofluorobenzene	0.97		1.000		97.0	80	120				
Sample ID	100NG BTEX LCS	SampT	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID:	LCSS	Batcl	h ID: R2	1095	F	RunNo: 2	1095					
Prep Date:		S	SeqNo: 6	14224	Units: mg/k							
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		1.0	0.050	1.000	0	100	80	120	·			
Toluene		1.0	0.050	1.000	0	101	80	120				
Ethylbenzene		1.0	0.050	1.000	0	103	80	120				
Xylenes, Total		3.1	0.10	3.000	0	104	80	120				
Surr: 4-Bron	ofluorobenzene	1.0		1.000		103	80	120	<u>. </u>			
Sample ID	1409340-001AMS	SampT	Гуре: М\$	<u> </u>	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID:	C-1 South	Batcl	h ID: R2	1095	F	RunNo: 2	1095					
Prep Date:		Analysis E	Date: 9/	9/2014	SeqNo: 614225			Units: mg/k	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		0.64	0.037	0.7353	0	86.6	77.4	142				
Toluene		0.63	0.037	0.7353	0.006809	85.4	77	132				
Ethylbenzene		0.66	0.037	0.7353	0	89.2	77.6	134				
Xylenes, Total		2.0	0.074	2.206	0.009956	88.9	77.4	132				
Surr: 4-Bron	ofluorobenzene	0.77		0.7353		104	80	120				
Sample ID	1409340-001AMS) Samp1	Гуре: МS	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles			
Client ID:	C-1 South	Batcl	h ID: R2	1095	F	RunNo: 2	1095					
Prep Date:		Analysis C	Date: 9/	9/2014	5	SeqNo: 6	14226	Units: mg/h	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene		0.64	0.037	0.7353	0	87.5	77.4	142	0.932	20		
Toluene		0.64	0.037	0.7353	0.006809	86.0	77	132	0.648	20		
Ethylbenzene		0.66	0.037	0.7353	0	90.3	77.6	134	1.16	20		
Xylenes, Total		2.0	0.074	2.206	0.009956	89.9	77.4	132	1.05	20		
Surr: 4-Bron	ofluorobenzene	0.77		0.7353		104	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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1409340

03-Oct-14

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ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345-397	l Analysis Labor 4901 Hawki buquerque, NM & 5 FAX: 505-345 allenvironmenta	ns NE 87105 Samp -4107	ole Log-In Ch	eck List
Client Name: Enterprise Work Order Number	r: 1409340	·	RcptNo:	<u> </u>
Received by/date: 09/09/14			<u> </u>	
Logged By: Lindsay Mangin 9/9/2014 7:00:00 AM		And Happo		
Completed By: Lindsay Mangin 9/9/2014 7:19:28 AM		And Marco		
Reviewed By: 51/9/9/14		0 5.00		
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?	Courler			
Log In				
4. Was an attempt made to cool the samples?	Yes 🗹	No 🗌		
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌		
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗍	_	
9. Was preservative added to bottles?	Yes 🗌	No 🗹	na 🗌	
10.VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?	Yes 🗆	No 🗹 🏻	# of preserved	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🔽	No 🗆	bottles checked for pH:	>12 unless note
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	
14. Is it clear what analyses were requested?	Yes 🗹	No 🗌		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗌	Checked by:	
Special Handling (If applicable)				
16. Was client notified of all discrepancies with this order?	Yes	No 🗆	NA 🗹	
Person Notified: Date:				
By Whom: Via:	eMail	Phone 🗌 Fax	In Person	
Regarding:				
Client Instructions:		· · · · · · · · · · · · · · ·	<u> </u>	
17. Additional remarks:				
18. <u>Cooler Information</u> <u>Cooler No</u> Temp ^o C Condition Seal Intact Seal No 1 1.8 Good Yes	Seal Date	Signed By		·
· · · · · · · · · · · · · · · · · · ·				

•

Chain-of-Custody Record		Turn-Around Time:				HALL ENVIRONMENTAL															
Client:	Enterp	risl F	ield Services	Di Standard A Rush Same Day				ANALYSIS LABORATORY													
			Project Name: 0				www.hallenvironmental.com														
Mailing	Mailing Address: 614 Reilly Avenue		Enterprise Lateral 2A-3 South				4901 Hawkins NE - Albuquerque, NM 87109														
Farm	Farmington, NM 87401			Project #:		····]	Te	el. 50	5-34	5-39	975	F	ax	505-	-345-	4107	7			
Phone #: (505) #716 - 2787			- .				-				_			and the second se	_			2.8 8			
email or Fax#:			Project Mana	iger:				<u></u>													
	Package:				•		021	s on				<u> </u>		SC,	B's						
D: Stan	-		Level 4 (Full Validation)	Heather	Woods		1000 (8021)	+ TPH (Gas only)	DRO /			(SMIS)		0 0	PC						
Accred				Sampler: H.				H	Ľ	=	,	2		ş	082						
NELAP Other			Onlice Party My Acting and INC			+	– +	8	8	6	8270	(0)	°°°	s / 8		(¥				2	
□ EDD (Type)			Sample Terri	perature	6	8	ШШ	0	<u>8</u>	5 pd	Š	etals	Ň	side	F	ş	Ì			Z	
				Castainan	Descention		BTEX + NOT	BTEX + MTBE	TPH 8015B (GRO	(Method 418.1)	EDB (Method 504.1)	PAH's (8310 or	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	(Semi-VOA)			ļ	Air Bubbles (Y or N)
Date	Time	Matrix	Sample Request ID	Container	Preservative Type	HEAL NOTICE	X	X	8	≥	S S	1's (Ĩ	suc	1 P	g	S) 0				Bub
					.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	EPP340-	BTE	BTE	힡	H	<u>ä</u>	ΒĀ	₩ 2	Anic	808	826	8270			l	Air
1/8/4	1415	Soi)	C -1	1-4 02 Glas		-001	X		X												
2/8/14	1145	Soil	C-2	1-402 Gles		-002	X		X			_									
	1435		C-3	1-402GK0		-003	X		×												\Box
V8/H	1530	Soil	C-4	1 - 402 Glas-		-004	X		X												
	1140		C-5	1-4026100		-005	X		X									\square			\downarrow
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	<u> </u>	1							-+	- †											+
Date:	Time:	Relinguish	ned by:	Received by:	L	Date Time	Ren	harks			<u> </u>		<u> </u>						<u> </u>		
18/11	1807	Hear	the M. inboots	1 Mistry 1/264 18/14 1801			7 Remarks: Direct B:11 to Enterprise Field Services 7 Attn: Tom Long														
	Time:	Relinquish		Received by:					329			•	ŭ	•							
Maji4			WT WWW mitted to Hall Environmental may be subc			HUDHY UTW	140	J.K.	iz.	KB	21	200		olcar	u poto	tod ac	the er		meat		
	песеззелу,		anneed to their Environmental may be subt			55. THIS SELVES AS LIDUCE OF THIS	, hossi	anty. F	ary SUL		acted	ueta V	viii D6	Gean	y nota	nea on	une afi	aiyucal	report.		

District I	ku u≉ Dr. Liabba	NIM 00040		Sta	te of	New Me		SERVA	TION	Form C-141
1625 N. Frencł <u>District II</u> 811 S. First St.				Energy	/ Mine	rals and	Motural			Deviced Avauat 9, 2011
District III					Res	sources	NUVI	Subm	it 1 Cop	y to appropriate District Office ordance with 19.15.29 NMAC.
District IV		tec, NM 87410		Oil Co	onser	vation Di	vision	:ī\/FD	in acci	
220 S. St. Fra	incis Dr., Sa	nta Fe, NM 87	505	1220 \$	South	St. Fran	cis Dr. RECE	.1960		
						e, NM 87				
		F	Releas	e Notifica	atior	n and C	orrective	Actio	n	
						ERATO		\square	Initial	Report 🔲 Final Repor
		Enterprise I Ave, Farmin					homas Long No. 505-599-2	2286		
		K #7 Rele					be: Natural Ga		ering L	ine
Surface Ov				Mineral C	· · · ·				API No	
Surface Ov	VIIEL DLIN									J
11-11 - 14	Continu	Taurahin				OF REI	_EASE Feet from	EastW		County
Unit Letter G	Section 26	Township	Range 8W	Feet from the	Line	bouin	the	Line	esi	San Juan
				1754			881	l	01	CONS. DIV DIST. 3
		Latitude	36.54	687		Longitud	e <u>-107.646</u>	825		
				NAT	URE		EASE			DEC 08 2014
		al Gas and N				Volume o	f Release Unkn			Recovered: Unknown
Source of R	elease: Inte	ernal Corrosio	on				Hour of Occurre 4 @ 3:30 p.m.			d Hour of Discovery:)14 @ 10:00 p.m
Nas Immed	iate Notice									BLM – Shari Ketchum
		🗌 Ye	s 🗌 No	🛛 Not Req	uired					
By Whom?							Hour 10/29/201			
Was a Wate	rcourse Re		🗌 Yes	🛛 No		If YES, Volume Impacting the Watercourse				
	<u></u>		·							
		npacted, Des				014 a third	north reported		the True	nk K pipeline right of way.
Technicians applied. Re	were dispa	atched to the	location a re in progr	nd the leak wa	s confi	med. The l	ne was isolated	and de-p	pressuriz	zed and lock out tag out was on activities and collect
Technicians applied. Re	were dispa pairs and re ples during	atched to the emediation a	location a re in progr	nd the leak wa ess. A third p	s confii arty en	med. The livironmenta	ne was isolated I contractor will o	and de-p oversee e	oressuriz excavati	pipeline right of way. zed and lock out tag out was on activities and collect iental contractor corrective
rules and reg which may e relieve the o ground wate	gulations a ndanger pi perator of l r, surface v	ll operators a ublic health o iability should vater, human	re require r the envii t their ope health or	d to report and conment. The a rations have fa the environme	/or file (accepta ailed to ent. In a	certain relea ance of a C- adequately addition, NN	ase notifications 141 report by th investigate and	and perf e NMOC remediat ce of a C	orm cori D marke te conta	nd that pursuant to NMOCD rective actions for releases ed as "Final Report" does not mination that pose a threat to port does not relieve the
Γ Γ Γ Γ Γ Γ						OIL CONSERVATION DIVISION				
Signature: Yon selds						Approved by Environmental Specialist:				
Title: Directo						Approval Da	IL.		piration	Date:
E-mail Addre	ess:jefields	@eprod.com					of Approval:			Attached
Date:		- 2014		e: (713)381-66	84					_
ttach Addit	ional She	ets If Neces	sary			#AX:	5 15005	-419	750	2

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and the District I 1625 N. French Dr., Hobbs, NM 88240 District II Bistrict III District III 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 CONS. DIV DIST. 3

Form C-141 Revised August 8, 2011

DEC 1 5 2014 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Oil Conservation Division 1220 South St. Francis Dr.

Sar	nta Fe, NM 87505							
Release Notification and Corrective Action								
OPERATOR 🗌 Initial Report 🛛 Final Repo								
Name of Company: Enterprise Field Services LLC	Contact: Thomas Long							
Address: 614 Reilly Ave, Farmington, NM 87401	Telephone No. 505-599							
Facility Name: Chaco Produced Water Tanks	Facility Type: Natural (Gas Processing F	acility					
Surface Owner: Navajo Tribal Mineral C	Owner: Navajo Tribal	API No.	······					
	TION OF RELEASE							
Unit LetterSectionTownshipRangeFeet fromN1626N12Wthe	North/South Feet from Line the	East West Line	County San Juan					
1548	2553							
Latitude <u>36.485274</u>	Longitude <u>-108.1</u>	17159						
Type of Release: Produced Water Source of Release: Tank Overflow	Volume of Release 110 Date and Hour of Occu		Recovered: 110 BBLS					
	12/5/2014 @ 8:00 a.m.		4 @ 8:00 a.m.					
Was Immediate Notice Given?	If YES, To Whom? NM	OCD – Cory Smith						
By Whom? Thomas Long	Date and Hour 12/5/20	14 @ 11:07 a m						
Was a Watercourse Reached?	If YES, Volume Impacti							
🗌 Yes 🖾 No		-						
If a Watercourse was Impacted, Describe Fully.*								
Describe Cause of Problem and Remedial Action: On Decer produced water tanks were overflowing into the lined tank co were dispatched to remove the water from the containment a the containment area. After the water was removed the line	ontainment area. Atmospheric ma area and tanks. Approximately 1	onitoring was condu 10 barrels of produc	cted and vacuum trucks ed water was removed from					
Describe Area Affected and Cleanup Action: On December & produced water tanks were overflowing into the lined tank co were dispatched to remove the water from the containment a the containment area. After the water was removed the line	ontainment area. Atmospheric ma area and tanks. Approximately 1	onitoring was condu 10 barrels of produc	cted and vacuum trucks ed water was removed from					
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.								
Signature: Jan EFull	<u>OIL CO</u>	OIL CONSERVATION DIVISION						
Printed Name: Jon E. Fields	Approved by Environmen	Approved by Environmental Specialist:						
Title: Director, Field Environmental	Approval Date: ///2	/15 Expiration	Date:					
E-mail Address:jefields@eprod.com	Conditions of Approval:		Attached					
Date: 12-9-2014 Phone: (713)381-66	684							

Attach Additional Sheets If Necessary

#10cs 1501231748

Nation I	by				OIL CONS. DIV DIST. 3						
District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III				State of New Energy Minerals a			xico		C 1 8 20	Form C	
					Res	sources		Sub	mit 1 Copy	y to appropriate District O ordance with 19.15.29 NM	
District IV		ec, NM 87410		Oil Co	onser	vation Di	vision		in acco	proance with 19.15.29 NM	
220 S. St. Fra	ancis Dr., Sai	nta Fe, NM 87	505	1220 \$	South	St. Fran	icis Dr.				
				Sar	nta Fe	e, NM 87	505				
<u></u>			Releas	e Notifica	atior	n and C	orrective	Acti	on		
					OP	ERATO	R] Initial I	Report 🛛 Final R	
		Enterprise I					homas Long				
		Ave, Farmin al C-27 Re					No. 505-599-2 pe: Natural Ga		horing Li		
			lease on	·····	· · · · ·						
Surface O	wner: State	e		Mineral C	wner:	State	· · · · · ·		API No).	
				······································		OF RE				I <u> </u>	
Unit Letter F	Section 2	Township 26N	Range 9W	Feet from the	Line	South	Feet from the	Eas	Wes	County San Juan	
•	-	2011	511	2353			1693	Line			
		Latitude	36.51	7785		Longitu	de -107.761	1700			
						OF REL					
Type of Rel	ease: Natur	al Gas and N	latural Ga		URE		FRelease 6.15	MCF	Volume	Recovered: None	
		ernal Corrosio				Date and	Hour of Occurre		Date and	d Hour of Discovery:	
Was Immed	liata Natiaa	Civen?					14 @ 1:00 p.m. o Whom? NMO(14 @ 3:00 p.m.	
	hate Notice		s 🛛 No	Not Reg	uired			50 - 00	Siy Siniur		
☐ Yes ⊠ No ☐ Not Required						Date and Hour 11/4/2014 @ 2:26 p.m.					
By Whom?	Thomas Lo	ona				Date and	Hour 11/4/2014	@ 2:26	3 p.m.		
By Whom? Was a Wate		ached?				If YES, V	olume Impacting	g the W		e Unknown volume of nat	
		ached?	🛛 Yes	□ No		If YES, V		g the W		e Unknown volume of nat	
Was a Wate	ercourse Re	eached?			e site is	If YES, V gas and r	olume Impacting natural gas liquio	g the W ds	atercourse	e Unknown volume of nat ds were observed at the	
Was a Wate	ercourse Re ourse was Ir ace	eached?	scribe Full	ly.* The release		If YES, V gas and r located in	olume Impacting natural gas liquid a small epheme	g the W ds ral was	atercourse	ds were observed at the	
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Enterprise Products Lateral C-27 Pipeline Release Latitude North 36.517785°, Longitude West -107.761700° SE/NW (Unit F) Section 2, T26N R9W San Juan County, New Mexico November 20, 2014



OIL CONS. DIV DIST. 3

DEC 18 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



www.soudermiller.com

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1.0 Executive Summary

On November 4, 5, and 7, 2014, Souder, Miller & Associates (SMA) responded to oversee the excavation of the hydrocarbon release associated with the Lateral C-27 pipeline. The release was initially reported on October 30, 2014 and is a result of internal and external corrosion of the eight inch natural gas pipeline. The table below summarizes information about the pipeline remediation activities.

TABLE 1: RELEASE INFORMATION								
Name	Lateral C-27 Pipeline Release							
	Latitude	Se	Section, Township, Range					
Location	36.517785	-107.761700°	Unit F	Section 2	T 26N, R 9W			
Date Reported	October 30, 20	14						
Reported to	Tom Long		_					
Land Owner	State of New M	lexico						
Reported To	NM Oil Conser	vation Division (NM	10CD)					
Diameter of Pipeline	8 inches							
Source of Release	Internal/Extern	al Corrosion						
Release Contents	Natural Gas Li	quids/Condensate						
Release Volume	Unknown							
Nearest Waterway	Located in an u	unnamed tributary of	of the Ree	d Canyon	Wash			
Depth to Groundwater	Estimated to be	e less than 50 feet						
Nearest Domestic Water Source	Greater than 1	,000 feet						
NMOCD Ranking	40							
SMA Response Dates	11/4, 11/5, 11/	7/2014						
Subcontractors	Energy Mainte	nance Services (EM	MS)					
Disposal Facility	Envirotech							
Yd ³ Contaminated								
Soil Excavated and 12 (Reported on Completed C-138) 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 Lateral C-27 pipeline release site. The site is located in the SE ¼ NW ¼ (Unit F) Section 2, T26N, R9W, 36.517785°, -107.761700°, San Juan County, New Mexico, on land owned by the State of New Mexico. Figure 1 illustrates the location of the site.

3.0 Site Ranking and Land Jurisdiction

The release site is in an unnamed tributary of the Reed Canyon Wash, in an area owned by the State of New Mexico with an elevation of approximately 6,311 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 database for water wells in the vicinity of the release. No wells were located within 1,000 feet but, 2 wells were located within a 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 40 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 November 4, 5, and 7, 2014, SMA responded to a hydrocarbon release associated with the Lateral C-27 pipeline. Under the supervision and direction of SMA, EMS excavated soil for repair activities. SMA guided the excavation activities by collecting soil samples for field screening with a calibrated photo-ionization detector (PID). Two release points were found, located approximately 11 feet apart in the center of the final excavation.

The final excavation measured approximately 39 feet long by 7 to 10 feet wide with depths of 5 to 7 feet, covering an area of approximately 348 square feet. Field screening indicated that soils from the east end of the excavation were not suitable as backfill material. In total approximately 12 cubic yards of contaminated soil was removed and replaced with clean backfill material. The contaminated soil was transported to Envirotech Landfarm, near Bloomfield, NM. Soil disposal documentation is included in Appendix B.

Soil samples were submitted for confirmation laboratory analysis per United States Environmental Protection Agency Methods: 8021 for benzene, toluene, ethylbenzene, and xylenes (BTEX) and 8015 for diesel and gasoline range organics (DRO/GRO). All samples were analyzed by Hall Environmental Analytical Laboratory in Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation, composite soil sample locations, and laboratory results.

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 10: 10 ppm (mg/kg) benzene, 50 ppm total BTEX, and 100 ppm TPH.

Laboratory analytical results for all samples collected were below NMOCD Guidelines for benzene (10 ppm), BTEX (50 ppm) and combined GRO/DRO (100 ppm). TPH was detected in the east wall sample, but the concentration was below standard at 32 ppm GRO. All other analytes in all other samples were below laboratory detection limits.

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

SMA recommends no further action at the Lateral C-27 pipeline release location.

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:

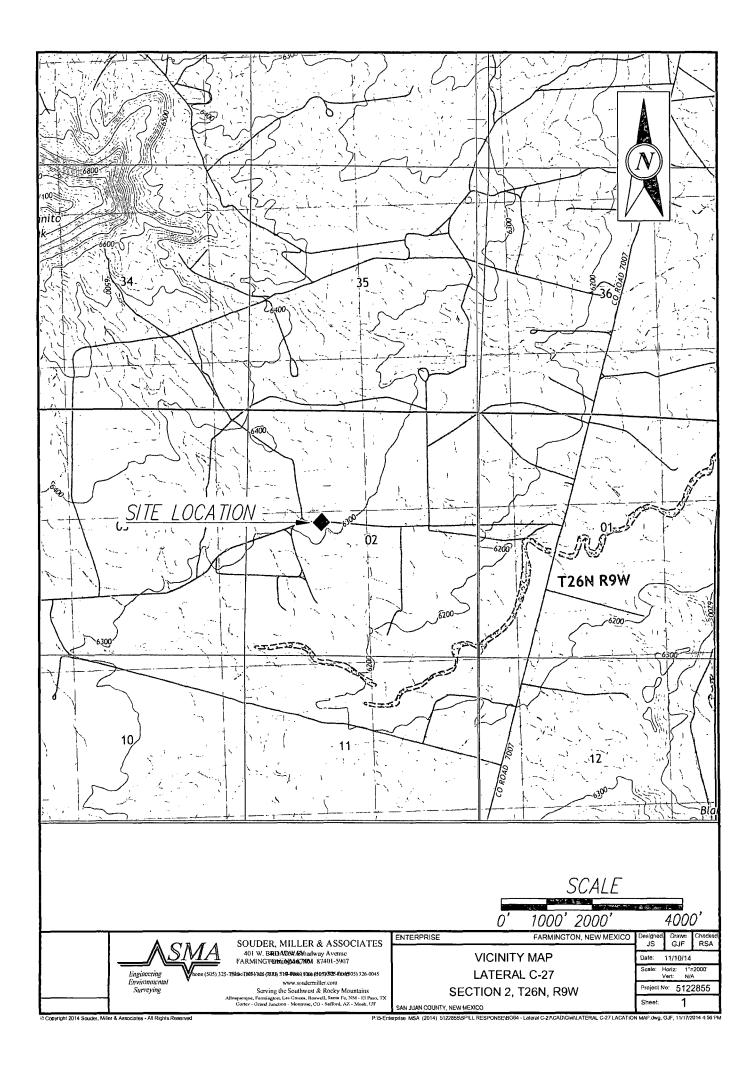
SOUDER, MILLER & ASSOCIATES

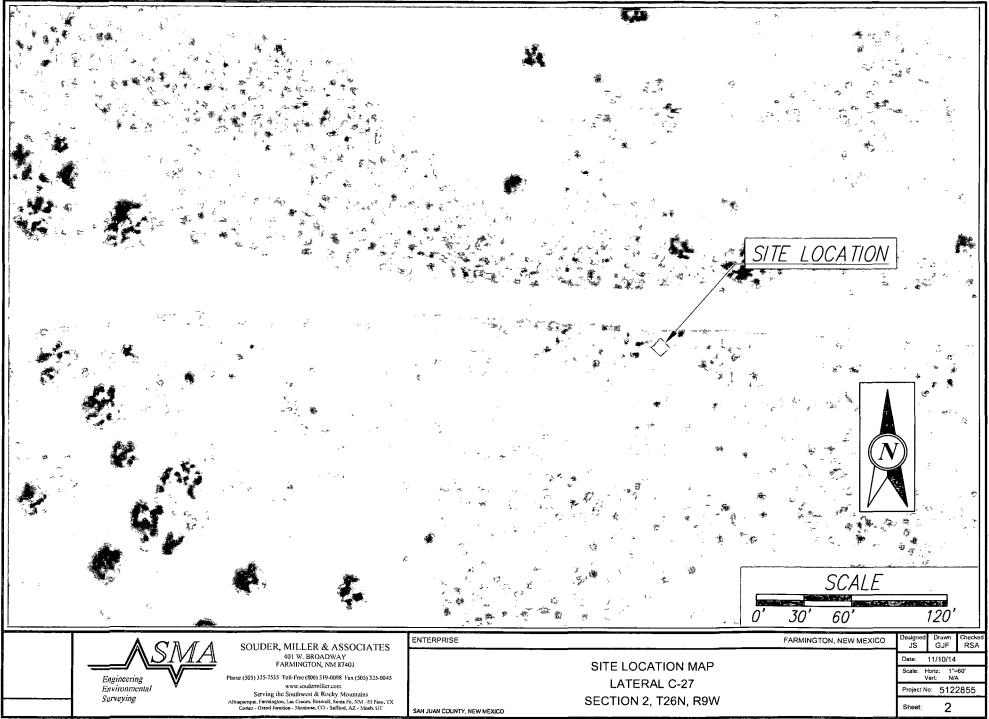
Alicia Patterson Staff Scientist

L. alle

Reid Allan, P.G. Vice President/Principal Scientist

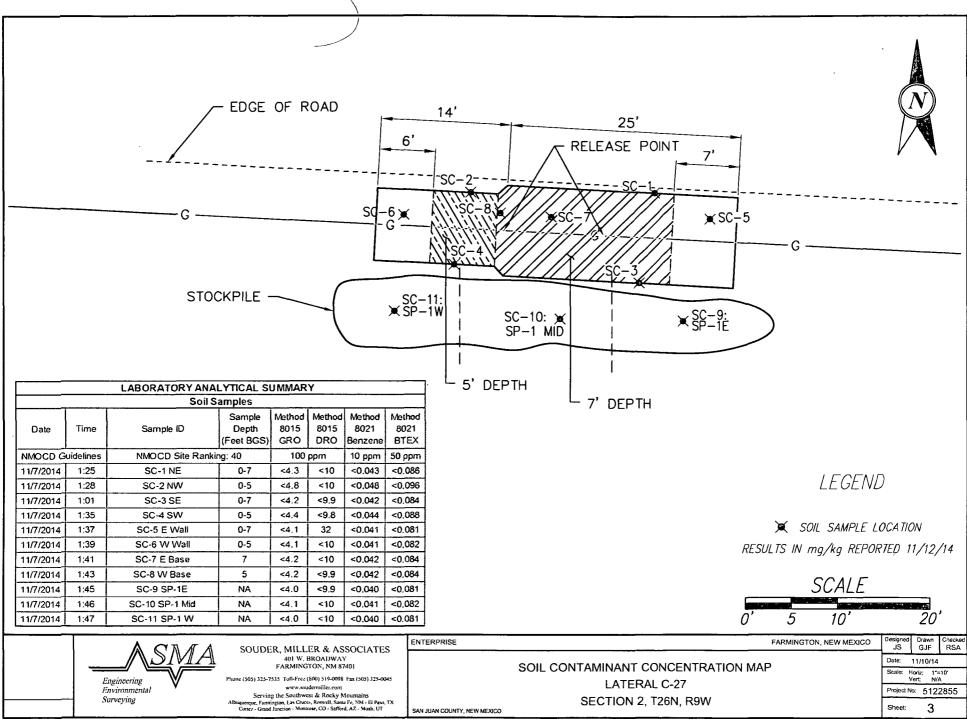
Figures





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P.\5-Enterprise MSA (2014) 5122855\SPILL RESPONSEBG64 - Lateral C-27\CADICIVITLATERAL C-27 LACATION MAP.dwg, GJF, 11/17/2014 4:56 PM



Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P15-Enterprise MSA (2014) 5122855/SPILL RESPONSE/BG64 - Lateral C-27/CAD/CMILATERAL C-27 LACATION MAP.dwg. GJF, 11/17/2014 4:55 PM

Tables

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Enterprise Products Table 2: Site Ranking Criteria

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 50 BGS = 20				
50' to 99' = 10		Topographic Maps and Field Verification	Groundwater estimated to be less than 50 feet below ground surface.	
>100' = 0	0		below ground surface.	
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 200' = 20	20			
200'-1000' = 10		Topographic Maps and Field Verification	Located in an unnamed tributary of Reed	
>1000'			Canyon Wash	
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		NM State Engineer Water Well Database	No recorded water wells located within 1,000 feet and two wells within a 1 mile radius.	
Total Site Ranking		40		
Soil Remedation Standards	0 to 9	40 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 Products

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Table 3: Laboratory Results Summary

Lateral C-27 Pipeline Release 11/20/2014

	(mg/kg) 1										
	LABORATORY ANALYTICAL SUMMARY										
	Soil Samples										
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX				
NMOCD G	uidelines	NMOCD Site Rankin	g: 40	100	ppm	10 ppm	50 ppm				
11/7/2014	1:25	SC-1 NE	0-7	<4.3	<10	<0.043	<0.086				
11/7/2014	1:28	SC-2 NW	0-5	<4.8	<10	<0.048	<0.096				
11/7/2014	1:01	SC-3 SE	0-7	<4.2	<9.9	<0.042	<0.084				
11/7/2014	1:35	SC-4 SW	0-5	<4.4	<9.8	<0.044	<0.088				
11/7/2014	1:37	SC-5 E Wall	0-7	<4.1	32	<0.041	<0.081				
11/7/2014	1:39	SC-6 W Wall	0-5	<4.1	<10	<0.041	<0.082				
11/7/2014	1:41	SC-7 E Base	7	<4.2	<10	<0.042	<0.084				
11/7/2014	1:43	SC-8 W Base	5	<4.2	<9.9	<0.042	<0.084				
11/7/2014	1:45	SC-9 SP-1E	NA	<4.0	<9.9	<0.040	<0.081				
11/7/2014	1:46	SC-10 SP-1 Mid	NA	<4.1	<10	<0.041	<0.082				
11/7/2014	1:47	SC-11 SP-1 W	NA	<4.0	<10	<0.040	<0.081				



Appendix A Photographic Documentation

Site Photographs Enterprise Products Lateral C-27 Pipeline Release

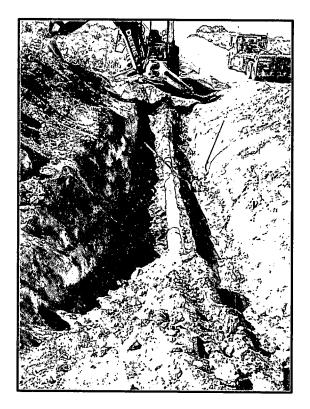


Photo 1: Lateral C-27 pipeline prior to repairs.

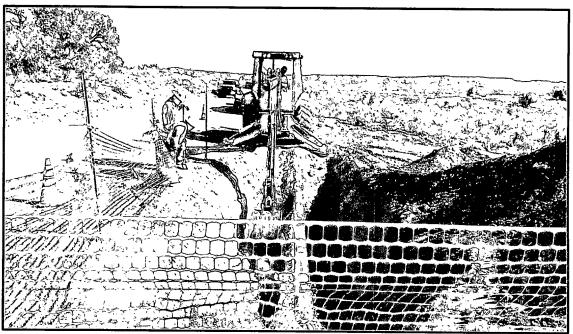


Photo 2: Lateral C-27 pipeline after repairs.

Site Photographs Enterprise Products Lateral C-27 Pipeline Release

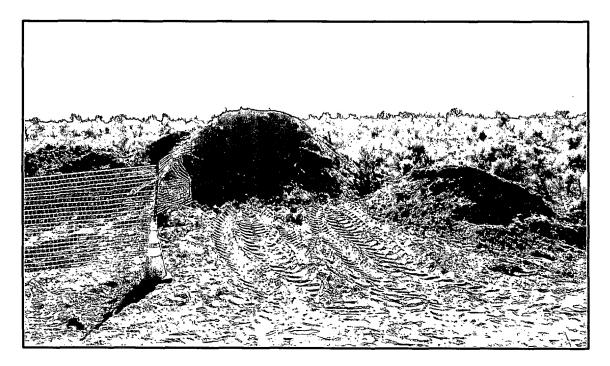


Photo 3: View of stockpiled soil at the Lateral C-27 pipeline release site.

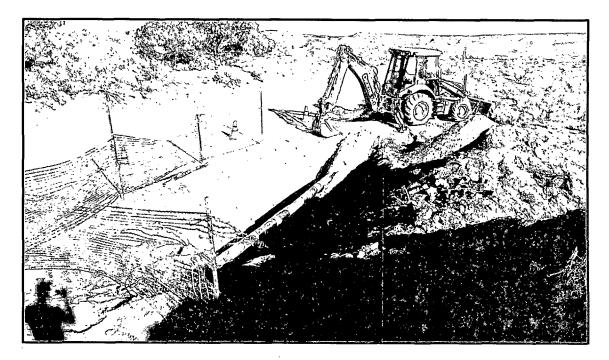


Photo 4: View of Lateral C-27 pipeline excavation at its fullest extent.

Appendix B Soil Disposal Documentation

State of New Mexico Energy Minerals and Natural Resources

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

Form C-138 97857-0674 Revised August 1, 2011

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE
1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Avenue, Farmington, NM 87401 Nov. 2014
2. Originating Site: Lateral C-27 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter F, Section 2, T26N, R9W; 36.517785, -107.761700
 4. Source and Description of Waste: Hydrocarbon impacted soils associated with a release from a natural gas pipeline. 5. Estimated Volume 20 yd³ bbls Known Volume (to be entered by the operator at the end of the haul) 2 yd³ bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
I, <u>Thomas Long</u> representative or authorized agent for <u>Enterprise Field Services, LLC</u> do hereby <u>PRINT & SIGN NAME</u> certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. Operator Use Only: Waste Acceptance Frequency I Monthly I Weekly I 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, <u>Harry Lay</u> I, <u>11-11-14</u> , representative for <u>Enterprise Field Services, LLC</u> authorize Envirotech, Inc. to Generator Signature
complete the required testing/sign the Generator Waste Testing Certification.
I, <u>Envirotech</u> , Inc. do hereby certify that representative samples of the off-field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
6. Transporter: West State Entergy Contractors- EMS
DCD 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 I Landfarm I Landfill Other
Waste Acceptance Status:
APPROVED DENIED (Must Be Maintained As Permanent Record)
PRINT NAME: Gree Crabtree TITLE: Environmental Manager DATE: 11/11/14 SIGNATURE: Manager DATE: 11/11/14 TELEPHONE NO.: 505-632-0615
Surface Waste Management Facility Authorized Agent

Appendix C Laboratory Analytical Reports

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 12, 2014

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

RE: C-27

OrderNo.: 1411328

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 11 sample(s) on 11/8/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report
Lab Order 1411328
Date Reported: 11/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: C-27

Lab ID: 1411328-001

Client Sar

Matrix: SOIL

Client Sample ID: SC-1 NE Collection Date: 11/7/2014 1:25:00 PM Received Date: 11/8/2014 10:20:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE				Anal	yst: JME	
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/10/2014 10:28:59	AM 16305
Surr: DNOP	98.5	63.5-128	%REC	1	11/10/2014 10:28:59	AM 16305
EPA METHOD 8015D: GASOLINE RAI	NGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	11/10/2014 10:25:23	AM R22438
Surr: BFB	92.0	80-120	%REC	1	11/10/2014 10:25:23	3 AM R22438
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.043	mg/Kg	1	11/10/2014 10:25:23	3 AM R22438
Toluene	ND	0.043	mg/Kg	1	11/10/2014 10:25:23	3 AM R22438
Ethylbenzene	ND	0.043	mg/Kg	1	11/10/2014 10:25:23	3 AM R22438
Xylenes, Total	ND	0.086	mg/Kg	1	11/10/2014 10:25:23	8 AM R22438
Surr: 4-Bromofluorobenzene	97.5	80-120	%REC	1	11/10/2014 10:25:23	3 AM R22438

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank				
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 15			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Hall Environmental Analys		Analytical Report Lab Order 1411328 Date Reported: 11/12							
CLIENT: Souder, Miller and Associate	s		Client Sample	e ID: SC	2-2 NW				
Project: C-27			Collection I	Date: 11/	/7/2014 1:28:00 PM				
Lab ID: 1411328-002	Matrix:	SOIL	Received I	Received Date: 11/8/2014 10:20:00 AM					
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch			
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Anal	yst: JME			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/10/2014 10:59:21	AM 16305			
Surr: DNOP	101	63.5-128	%REC	1	11/10/2014 10:59:21	AM 16305			
EPA METHOD 8015D: GASOLINE RAI	NGE				Anal	yst: NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/10/2014 10:54:01	I AM R22438			
Surr: BFB	91.8	80-120	%REC	1	11/10/2014 10:54:01	I AM R22438			
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB			
Benzene	ND	0.048	mg/Kg	1	11/10/2014 10:54:01	AM R22438			
Toluene	ND	0.048	mg/Kg	1	11/10/2014 10:54:01	I AM R22438			
Ethylbenzene	ND	0.048	mg/Kg	1	11/10/2014 10:54:01	I AM R22438			
Xylenes, Total	ND	0.096	mg/Kg	1	11/10/2014 10:54:01	I AM R22438			
Surr: 4-Bromofluorobenzene	96.3	80-120	%REC	1	11/10/2014 10:54:01	I AM R22438			

Qualifiers:	*	 Value exceeds Maximum Contaminant Level. 		Analyte detected in the associated Meth	od Blank
	Ε	Value above quantitation range	Н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 460 2 01 10
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report
Lab Order 1411328
Date Reported: 11/12/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: C-27

Lab ID: 1411328-003

Client Sample ID: SC-3 SE Collection Date: 11/7/2014 1:01:00 PM Received Date: 11/8/2014 10:20:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Anal	yst: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/10/2014 11:29:53	3 AM 16305
Surr: DNOP	95.4	63.5-128	%REC	1	11/10/2014 11:29:53	3 AM 16305
EPA METHOD 8015D: GASOLINE RA	ANGE				Anal	yst: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	11/10/2014 11:22:4*	I AM R22438
Surr: BFB	94.9	80-120	%REC	1	11/10/2014 11:22:4	I AM R22438
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.042	mg/Kg	1	11/10/2014 11:22:47	I AM R22438
Toluene	ND	0.042	mg/Kg	1	11/10/2014 11:22:41	I AM R22438
Ethylbenzene	ND	0.042	mg/Kg	1	11/10/2014 11:22:4	1 AM R22438
Xylenes, Total	ND	0.084	mg/Kg	1	11/10/2014 11:22:47	1 AM R22438
Surr: 4-Bromofluorobenzene	99.6	80-120	%REC	1	11/10/2014 11:22:4	1 AM R22438

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 460 5 01 15
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analys	is Labora	tory, Inc.			Lab Order 1411328 Date Reported: 11/12	/2014
CLIENT: Souder, Miller and Associates	•		Client Sampl	e ID: SC	-4 SW	
Project: C-27			Collection I	Date: 11/	7/2014 1:35:00 PM	
Lab ID: 1411328-004	Matrix:	SOIL	Received I)ate: 11/	/8/2014 10:20:00 AM	Л
Analyses	Result	RL Qı	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analy	/st: JME
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	11/10/2014 12:00:40	PM 16305
Surr: DNOP	97.9	63.5-128	%REC	1	11/10/2014 12:00:40	PM 16305
EPA METHOD 8015D: GASOLINE RAN	IGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	11/10/2014 11:51:19	AM R22438
Surr: BFB	93.2	80-120	%REC	1	11/10/2014 11:51:19	AM R22438
EPA METHOD 8021B: VOLATILES					Analy	vst: NSB
Benzene	ND	0.044	mg/Kg	1	11/10/2014 11:51:19	AM R22438
Toluene	ND	0.044	mg/Kg	1	11/10/2014 11:51:19	AM R22438
Ethylbenzene	ND	0.044	mg/Kg	1	11/10/2014 11:51:19	AM R22438
Xylenes, Total	ND	0.088	mg/Kg	1	11/10/2014 11:51:19	AM R22438
Surr: 4-Bromofluorobenzene	97.3	80-120	%REC	1	11/10/2014 11:51:19	AM R22438

Analytical Report

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analy	vsis Labora	tory, Inc			Analytical Report Lab Order 1411328 Date Reported: 11/12	/2014
CLIENT: Souder, Miller and Associat	tes		Client Sampl	e ID: SC	C-5 E Wall	
Project: C-27			Collection I	Date: 11	/7/2014 1:37:00 PM	
Lab ID: 1411328-005	Matrix:	SOIL	Received I	Date: 11	/8/2014 10:20:00 AN	1
Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG					Analy	st: JME
Diesel Range Organics (DRO)	32	9.9	mg/Kg	1	11/10/2014 9:53:24 A	M 16305
Surr: DNOP	89.6	63.5-128	%REC	1	11/10/2014 9:53:24 A	M 16305
EPA METHOD 8015D: GASOLINE RA	ANGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	11/10/2014 12:20:01	PM R22438
Surr: BFB	91.8	80-120	%REC	1	11/10/2014 12:20:01	PM R22438
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.041	mg/Kg	1	11/10/2014 12:20:01	PM R22438
Toluene	ND	0.041	mg/Kg	1	11/10/2014 12:20:01	PM R22438
Ethylbenzene	ND	0.041	mg/Kg	1	11/10/2014 12:20:01	PM R22438
Xylenes, Total	ND	0.081	mg/Kg	1	11/10/2014 12:20:01	PM R22438
Surr: 4-Bromofluorobenzene	95.8	80-120	%REC	1	11/10/2014 12:20:01	PM R22438

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	od Blank	
	Е	Value above quantitation range	н	Holding times for preparation or analys	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 5 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage 5 or 15
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

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Hall Environmental Analys	is Labora	tory, In	c.		Date Reported: 11/12	2/2014
CLIENT: Souder, Miller and Associates			Client Sample	ID: SC	c-6 W Wall	
Project: C-27			Collection D	ate: 11/	/7/2014 1:39:00 PM	
Lab ID: 1411328-006	Matrix:	SOIL	Received D	ate: 11	/8/2014 10:20:00 AN	M
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analy	/st: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/10/2014 12:31:16	PM 16305
Surr: DNOP	96.9	63.5-128	%REC	1	11/10/2014 12:31:16	PM 16305
EPA METHOD 8015D: GASOLINE RAN	GE				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	11/10/2014 12:48:43	PM R22438
Surr: BFB	93.1	80-120	%REC	1	11/10/2014 12:48:43	PM R22438
EPA METHOD 8021B: VOLATILES					Analy	yst: NSB
Benzene	ND	0.041	mg/Kg	1	11/10/2014 12:48:43	PM R22438
Toluene	ND	0.041	mg/Kg	1	11/10/2014 12:48:43	PM R22438
Ethylbenzene	ND	0.041	mg/Kg	1	11/10/2014 12:48:43	PM R22438
Xylenes, Total	ND	0.082	mg/Kg	1	11/10/2014 12:48:43	PM R22438
Surr: 4-Bromofluorobenzene	96.6	80-120	%REC	1	11/10/2014 12:48:43	PM R22438

Analytical Report Lab Order 1411328

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 6 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 0 01 15
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysi	s Labora	tory, In	IC.		Lab Order 1411328 Date Reported: 11/12/2	014
CLIENT: Souder, Miller and Associates			Client Sam	ple ID: SC	C-7 E Base	
Project: C-27			Collection	Date: 11	/7/2014 1:41:00 PM	
Lab ID: 1411328-007	Matrix:	SOIL	Received	Date: 11	/8/2014 10:20:00 AM	
Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/10/2014 1:03:03 PN	16305
Surr: DNOP	101	63.5-128	%REC	1	11/10/2014 1:03:03 PM	16305
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	11/10/2014 1:17:24 PM	R22438
Surr: BFB	93.2	80-120	%REC	1	11/10/2014 1:17:24 PM	R22438
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.042	mg/Kg	1	11/10/2014 1:17:24 PM	R22438
Toluene	ND	0.042	mg/Kg	1	11/10/2014 1:17:24 PM	R22438
Ethylbenzene	ND	0.042	mg/Kg	1	11/10/2014 1:17:24 PN	R22438
Xylenes, Total	ND	0.084	mg/Kg	1	11/10/2014 1:17:24 PN	R22438
Surr: 4-Bromofluorobenzene	97.1	80-120	%REC	1	11/10/2014 1:17:24 PN	R22438

Analytical Report

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

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Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Meth	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analyst	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 7 of 1:
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	ruge / er r
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

·	es		Client Sampl							
Project: C-27 Lab ID: 1411328-008	Matrix:		Collection Date: 11/7/2014 1:43:00 PM Received Date: 11/8/2014 10:20:00 AM							
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	/st: JME				
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/10/2014 10:36:39	AM 16305				
Surr: DNOP	85.5	63.5-128	%REC	1	11/10/2014 10:36:39	AM 16305				
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB				
Gasoline Range Organics (GRO)	ND	4.2	mg/Kg	1	11/10/2014 1:46:04 F	PM R22438				
Surr: BFB	93.6	80-120	%REC	1	11/10/2014 1:46:04 F	PM R22438				
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB				
Benzene	ND	0.042	mg/Kg	1	11/10/2014 1:46:04 F	PM R22438				
Toluene	ND	0.042	mg/Kg	1	11/10/2014 1:46:04 F	PM R22438				
Ethylbenzene	ND	0.042	mg/Kg	1	11/10/2014 1:46:04 F	PM R22438				
Xylenes, Total	ND	0.084	mg/Kg	1	11/10/2014 1:46:04 F	PM R22438				
Surr: 4-Bromofluorobenzene	96.6	80-120	%REC	1	11/10/2014 1:46:04	PM R22438				

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Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank					
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 8 of 15			
	0	RSD is greater than RSD limit	Р	Sample pH greater than 2.	ruge o or re			
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Analytical Report Lab Order 1411328

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 11/12/2014

CLIENT: Souder, Miller and Associates Project: C-27

Lab ID: 1411328-009

Client Sample ID: SC-9 SP-1E Collection Date: 11/7/2014 1:45:00 PM Received Date: 11/8/2014 10:20:00 AM

Analyses	Result	RL (Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analy	/st: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/10/2014 11:20:07	AM 16305
Surr: DNOP	85.1	63.5-128	%REC	1	11/10/2014 11:20:07	AM 16305
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	11/10/2014 2:14:45 F	PM R22438
Surr: BFB	92.4	80-120	%REC	1	11/10/2014 2:14:45 F	PM R22438
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB
Benzene	ND	0.040	mg/Kg	1	11/10/2014 2:14:45 F	PM R22438
Toluene	ND	0.040	mg/Kg	1	11/10/2014 2:14:45 F	PM R22438
Ethylbenzene	ND	0.040	mg/Kg	1	11/10/2014 2:14:45 F	PM R22438
Xylenes, Total	ND	0.081	mg/Kg	1	11/10/2014 2:14:45 F	PM R22438
Surr: 4-Bromofluorobenzene	96.1	80-120	%REC	1	11/10/2014 2:14:45 F	PM R22438

Matrix: SOIL

		A 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	od Blank
	E	Value above quantitation range	Н	Holding times for preparation or analysi	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 9 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analys	ll Environmental Analysis Laboratory, Inc.										
CLIENT: Souder, Miller and Associates	S		C	Client Sample ID: SC-10 SP-1 Mid							
Project: C-27			(Date: 11/	e: 11/7/2014 1:46:00 PM						
Lab ID: 1411328-010	Matrix: SOIL Received			Date: 11/8/2014 10:20:00 AM							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Analy	/st: JME				
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/10/2014 11:41:39	AM 16305				
Surr: DNOP	90.5	63.5-128		%REC	1	11/10/2014 11:41:39	AM 16305				
EPA METHOD 8015D: GASOLINE RAM	IGE					Analy	/st: NSB				
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	11/10/2014 10:42:52	AM R22439				
Surr: BFB	96.7	80-120		%REC	1	11/10/2014 10:42:52	AM R22439				
EPA METHOD 8021B: VOLATILES						Analy	yst: NSB				
Benzene	ND	0.041		mg/Kg	1	11/10/2014 10:42:52	AM R22439				
Toluene	ND	0.041		mg/Kg	1	11/10/2014 10:42:52	AM R22439				
Ethylbenzene	ND	0.041		mg/Kg	1	11/10/2014 10:42:52	AM R22439				
Xylenes, Total	ND	0.082		mg/Kg	1	11/10/2014 10:42:52	AM R22439				
Surr: 4-Bromofluorobenzene	122	80-120	S	%REC	1	11/10/2014 10:42:52	AM R22439				

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	hod Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analy-	sis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 10 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 10 01 15
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc

Analytical Report Lab Order 1411328

Hall Environmental Analys	is Labora	tory, In	ic.	and the state of the		Lab Order 1411328 Date Reported: 11/12	2/2014		
CLIENT: Souder, Miller and Associates	5		C	lient Sampl	e ID: SC	-11 SP-1 W			
Project: C-27				Collection I	Date: 11/	/7/2014 1:47:00 PM			
Lab ID: 1411328-011	Matrix: SOIL Receiv				ved Date: 11/8/2014 10:20:00 AM				
Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANGE	ORGANICS					Anal	yst: JME		
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/10/2014 12:03:34	PM 16305		
Surr: DNOP	91.6	63.5-128		%REC	1	11/10/2014 12:03:34	PM 16305		
EPA METHOD 8015D: GASOLINE RAN	IGE					Anal	yst: NSB		
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	11/10/2014 11:10:21	AM R22439		
Surr: BFB	97.0	80-120		%REC	1	11/10/2014 11:10:21	I AM R22439		
EPA METHOD 8021B: VOLATILES						Anal	yst: NSB		
Benzene	ND	0.040		mg/Kg	1	11/10/2014 11:10:21	I AM R22439		
Toluene	ND	0.040		mg/Kg	1	11/10/2014 11:10:21	AM R22439		
Ethylbenzene	ND	0.040		mg/Kg	1	11/10/2014 11:10:21	I AM R22439		
Xylenes, Total	ND	0.081		mg/Kg	1	11/10/2014 11:10:21	I AM R22439		
Surr: 4-Bromofluorobenzene	123	80-120	S	%REC	1	11/10/2014 11:10:21	I AM R22439		

Analytical Report

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Met	hod Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analyst	sis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 11 of 15
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Souder, Miller and AssociatesProject:C-27

Sample ID MB-16305	SampT	ype: ME	BLK	Tes	TestCode: EPA Method 8015D: Diesel Range Organic					
Client ID: PBS	Batch	1D: 16	305	F	RunNo: 2	2412				
Prep Date: 11/10/2014	Analysis Date: 11/10/2014			SeqNo: 660791			Units: mg/H	٢g		
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		77.7	63.5	128			
Sample ID LCS-16305	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics	
Sample ID LCS-16305 Client ID: LCSS	•	ype: LC			tCode: El RunNo: 2		8015D: Dies	el Range (Drganics	
• -	•	n ID: 16	305	F		2412	8015D: Dies Units: mg/F	-	Drganics	
Client ID: LCSS	Batch	n ID: 16	305 I/10/2014	F	RunNo: 2	2412		-	Drganics RPDLimit	Qual
Client ID: LCSS Prep Date: 11/10/2014	Batch Analysis D	n ID: 16 ate: 1 1	305 I/10/2014	F	RunNo: 2 SeqNo: 6	2412 60792	Units: mg/k	(g	-	Qual

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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12-Nov-14

1411328

WO#:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project:	C-27										
Sample ID	MB-16298 MK	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	PBS	Batch	ID: R2	2438	F	RunNo: 2 :	2438				
Prep Date:		Analysis Da	ate: 11	1/10/2014	S	SeqNo: 6	61481	Units: mg/ł	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 920	5.0	1000		92.3	80	120			
Sample ID	LCS-16298 MK	SampTy	/pe: LC	S	TestCode: EPA Method 8015D: Gasoline Range						
Client ID:	LCSS	Batch	ID: R2	2438	RunNo: 22438						
Prep Date:		Analysis Da	ate: 1 1	1/10/2014	5	SeqNo: 6	61482	Units: mg/ł	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	29 1000	5.0	25.00 1000	0	114 101	65.8 80	139 120			
Sample ID	1411328-001AMS	SampTy	/pe: MS	3	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SC-1 NE	Batch	Batch ID: R22438			RunNo: 2	2438				
Prep Date:		Analysis Date: 11/10/2014			SeqNo: 661504			Units: mg/Kg			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	25 870	4.3	21.41 856.2	0	115 101	71.8 80	132 120			
Sample ID	1411328-001AMS	D SampTy	/pe: MS	SD	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	SC-1 NE	Batch	ID: R2	2438	RunNo: 22438						
Prep Date:		Analysis Da	ate: 1 1	1/10/2014	S	SeqNo: 6	61506	Units: mg/l	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	je Organics (GRO)	24 870	4.3	21.41 856.2	0	114 102	71.8 80	132 120	0.981 0	20 0	
Sample ID	5ML RB	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	
Client ID:	PBS	Batch	ID: R2	2439	F	RunNo: 2	2439				
Prep Date:		Analysis Da	ate: 11	1/10/2014	5	SeqNo: 6	61771	Units: mg/l	٨g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	je Organics (GRO)	ND 880	5.0	1000		88.4	80	120			
Sample ID	2.5UG GRO LCS	SampTy	/pe: LC	s	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch	ID: R2	2439	F	RunNo: 2	2439				
Prep Date:		Analysis Da	ate: 1 1	1/10/2014	S	SeqNo: 6	61772	Units: mg/l	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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 15

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

1411328

WO#:

12-Nov-14

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:Souder, Miller and AssociatesProject:C-27

Sample ID 2.5UG GRO LCS	SampT	ype: LC	S	TestCode: EPA Method 8015D: Gasoline Range						
Client ID: LCSS	Batch	ID: R2	2439	R	lunNo: 2	2439				
Prep Date:	Analysis Date: 11/10/2014			SeqNo: 661772			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.4	65.8	139			
Surr: BFB	940		1000		94.1	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

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1411328 *12-Nov-14*

WO#:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: C-27

Sample ID MB-16298 MK		ype: ME					8021B: Volat	iles		
Client ID: PBS	Batcl	h ID: R2	2438	F	RunNo: 2	2438				
Prep Date:	Analysis E	Date: 11	/10/2014	5	SeqNo: 6	61523	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		97.8	80	120			
Sample ID LCS-16298 MK	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batcl	n ID: R2	2438	F	RunNo: 2	2438				
Prep Date:	Analysis E	Date: 11	1/10/2014	S	SeqNo: 6	61524	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.050	1.000	0	97.8	80	120			
Toluene	0.98	0.050	1.000	0	97.6	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.9	80	120			
Xylenes, Total	3.0	0.10	3.000	0	98.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			
					-					
Sample ID 5ML RB	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Sample ID 5ML RB Client ID: PBS		ype: ME h ID: R2			tCode: El RunNo: 2		8021B: Vola	tiles		
•		h ID: R2	2439	F		2439	Units: mg/k			
Client ID: PBS	Batc	h ID: R2	2439 1/10/2014	F	RunNo: 2	2439			RPDLimit	Qual
Client ID: PBS Prep Date:	Batc Analysis [h ID: R2 Date: 1 1	2439 1/10/2014	F	RunNo: 2 SeqNo: 6	2439 61844	Units: mg/k	٢g	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte	Batc Analysis I Result	h ID: R2 Date: 1 1 PQL	2439 1/10/2014	F	RunNo: 2 SeqNo: 6	2439 61844	Units: mg/k	٢g	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene	Batc Analysis [Result ND	h ID: R2 Date: 1 1 PQL 0.050	2439 1/10/2014	F	RunNo: 2 SeqNo: 6	2439 61844	Units: mg/k	٢g	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene Toluene	Batc Analysis I Result ND ND	h ID: R2 Date: 11 PQL 0.050 0.050	2439 1/10/2014	F	RunNo: 2 SeqNo: 6	2439 61844	Units: mg/k	٢g	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene	Batc Analysis E Result ND ND ND	h ID: R2 Date: 1 1 <u>PQL</u> 0.050 0.050 0.050	2439 1/10/2014	F	RunNo: 2 SeqNo: 6	2439 61844	Units: mg/k	٢g	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Batc Analysis I Result ND ND ND ND 1.1	h ID: R2 Date: 1 1 <u>PQL</u> 0.050 0.050 0.050	2439 1/10/2014 SPK value 1.000	F SPK Ref Val	RunNo: 2 SeqNo: 6 %REC 107	2439 61844 LowLimit 80	Units: mg/k HighLimit	(g %RPD	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	Batc Analysis I Result ND ND ND 1.1	h ID: R2 Date: 11 PQL 0.050 0.050 0.050 0.10	2439 1/10/2014 SPK value 1.000	F SPK Ref Val	RunNo: 2 SeqNo: 6 %REC 107	2439 61844 LowLimit 80 PA Method	Units: mg/k HighLimit 120	(g %RPD	RPDLimit	Qual
Client ID: PBS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene Sample ID 100NG BTEX LC	Batc Analysis I Result ND ND ND 1.1	h ID: R2 Date: 1 1 <u>PQL</u> 0.050 0.050 0.050 0.050 0.10 Fype: LC	2439 1/10/2014 SPK value 1.000 SS 2439	F SPK Ref Val	RunNo: 2 SeqNo: 6 %REC 107 ttCode: E	2439 61844 LowLimit 80 PA Method 2439	Units: mg/k HighLimit 120	(g %RPD tiles	RPDLimit	Qual
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Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits R
- S 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 Р Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1411328

12-Nov-14

Page 15 of 15

ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345	mental Analysis Laborat 4901 Hawkins Albuquerque, NM 87 5-3975 FAX: 505-345-4. www.hallenvironmental.c	NE 109 Sam 107	ple Log-In Check List
Client Name: SMA-FARM Work Order Nu	umber: 1411328		ReptNo: 1
Received by/date: 11/08/14			
Logged By: Anne Thorne 11/8/2014 10:20:	:00 AM	ame Am	
Completed By: Anne Thorne 11/10/2014		Am. A.	
Reviewed By: AS 100 K			
Chain of Custody			
1. Custody seals intact on sample bottles?	Yes 🗌	No 🗌	Not Present 🗹
2. Is Chain of Custody complete?	Yes 🗹	No 🗔	Not Present
3. How was the sample delivered?	Courier		
Log In			
4. Was an attempt made to cool the samples?	Yes 🔽	No 🗌	
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆
6. Sample(s) in proper container(s)?	Yes 🗹	No 🗌	
7. Sufficient sample volume for indicated test(s)?	Yes 🗹	No 🗌	
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗖	
9. Was preservative added to bottles?	Yes	No 🗹 .	NA 🗌
10. VOA vials have zero headspace?	Yes 🗌	No 🗌	No VOA Vials 🗹
11. Were any sample containers received broken?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	No 🗌	bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes 🗹	No 🗌	Adjusted?
14. Is it clear what analyses were requested?	Yes 🗹	No 🗌	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹	No 🗌	Checked by:
Special Handling (if applicable)			
16. Wee client potified of all discompanyies with this order?	Voc 🗌	No 🗍	

16.1	Was client notified of all d	liscrepancies with this order?	Yes 🗌	No . 🗖	NA 🗹
	Person Notified:		Date		
	By Whom:		• • • -	Phone 🗌 Fax 📋	In Person
	Regarding:				1.000.000.000.000.000.000.000.000.000
	Client Instructions:				

_ __ __

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.1	Good	Yes			

Page 1 of 1

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	f necessary,	samples sub	omitted to Hall Er	wironmental may be subo	contracted to othe	r accredited laborator	es. This serves as notice of this	s possil	oility. A	Any slib	o-calatr	acted	data w	ill be c	learly	notat	ted on	the ar	alytica	al repor	t.	

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

..... , «~ J

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

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

OIL CONS. DIV DIST. 3

Form C-141 Revised August 8, 2011 DEC 2 2 2014

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

				Release Noti	ficatio	n and Corre	ective Action					
						OPE	RATOR		🗖 Init	ial Report 🛛 🛛 Final Report		
Name of Co	mpany: En	terprise Field	d Services	LLC	0	Contact: Thomas Long						
		e. Farmingtor					lo. 505-599-22	86				
Facility Nam	ne: Lateral (6B-10 Pipeli	ne		F	Facility Type: Natural Gas Pipeline						
Surface Ow	ner: BLM			Mineral Ov	vner: B	LM			API No.			
	LOC						ASE					
Unit Letter	Section	Township	Range	Feet from	North	n/South	Feet from	East	West	County		
P/B	13/24	28N	12W	the	Line		the	Line		San Juan		
				454 (S) /468 (N)			1562/934					
· · · · · ·		Latitu		65657		Longitude				L		
		Latitu	de <u>36.</u>	<u>653590</u>		_ Longitude	e <u>-108.0592</u>	70				
				NA	TURE	OF RELEA	SE					
Type of Rel	ease: Natur	al Gas and N	Natural Ga				Release Unkr	nown	Volume	Recovered: None		
		ernal Corrosio				Date and	Hour of Occurr	ence:	Date and	d Hour of Discovery:		
				·			3:00 p.m.		8/13/201	3 @ 3:00 p.m.		
Was Immed	liate Notice		57	—		If YES, To	Whom?					
			s 🖾 No	Not Req	uired							
By Whom?						Date and	Hour					
Was a Wate	ercourse Re	ached?					olume Impacting	g the W	atercourse	•		
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If a Waterco	urso was Ir	nnacted Des	scribe Full	v * The southe	rn relea		ated within a tri	hutan <i>ı (</i>	of Horn Ca	nyon Wash. No impacts at		
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			medial Act	tion: On Augus	t 13, 20	013, two lea	ks were discov	ered on	the Latera	al 6B-10 pipeline. Initial		
										impacted soil was excavated		
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										ation activities were initiated		
										eadspace screening was k was witnessed by NMOCD		
										D remediation standard.		
										10 pipeline. Initial		
remediation	and repairs	s activities we	ere comple	eted on 9/9/20	13. Ap	proximately	244 cubic yard	s of hyd	Irocarbon	impacted soil was excavated		
										sis, contaminants of concern		
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										eadspace screening was k was witnessed by NMOCD		
										D remediation standard. A		
				with this Final								
										nd that pursuant to NMOCD		
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										ed as "Final Report" does not mination that pose a threat to		
										port does not relieve the		
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Title: Direct	or, Environr	mental				Approval Da	ite: /// <u>3/</u>	15	Expiration	Date:		
E-mail Addr	ess: jefields	@eprod.con	n			Conditions of	of Approval:			Attached		
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Enterprise Products Lateral 6B-10 Pipeline Release Northern: Latitude North 36.65657°, Longitude West -108.057310° Southern: Latitude North 36.653590°, Longitude West -108.059270° Northern: SE/SE (Unit P) Section 13, T 28N, R 12W Southern: NW/NE (Unit B) Section 24, T28N R12W San Juan County, New Mexico December 4, 2014 DEC 2 2 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

www.soudermiller.com



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2.0	Introduction	. 1
3.0	Site Ranking and Land Jurisdiction	. 2
4.0	Summary of Field Activities	. 2
5.0	Conclusions and Recommendations	. 2
6.0	Closure and Limitations	4

Figures:

Figure 1: Vicinity Map

Figure 2: Site Map Northern Release Figure 3: Site Map Southern Release Figure 4: Excavation and Soil Contaminant Concentration Map Northern Release Figure 5: Excavation and Soil Contaminant Concentration Map Southern Release

Figure 6: Soil Boring Location Map Southern Release

Tables:

Table 1: Release Information

Table 2: Site Ranking

Table 3: Summary of Field Screening Results Northern Release

Table 4: Summary of Field Screening Results Southern Release

Table 5: Summary of Laboratory Analysis Northern Release

Table 6: Summary of Laboratory Analysis Southern Release

Appendices:

Appendix A: Photographic Documentation

Appendix B: Soil Disposal Documentation

Appendix C: Laboratory Analytical Reports

1.0 Executive Summary

From August 16, 2013 to September 9, 2013, Souder, Miller & Associates (SMA) responded to oversee the excavation of the hydrocarbon release associated with the Lateral 6B-10 pipeline release. SMA returned to the site on November 11, 2014 to further delineate the southern excavated area and collected additional laboratory samples. The table below summarizes information about the pipeline remediation activities.

	TABLE 1: RELEASE INFORMATION								
Name		Lateral C-27	Pipeline F	Release					
	Latitude/Longitude Section, Township, Range								
South Location	36.653590°	-108.059270°	Unit B	Section 24	T 28N, R 12W				
North Location	36.65657°	-108.05731°	Unit P	Section 13	T 28N, R 12W				
Date Reported	August 15, 201	3							
Reported to	Aaron Dailey								
Land Owner	Bureau of Land	Management (BL	M)						
Reported To		vation Division (NM	10CD) an	d BLM					
Diameter of Pipeline	8 inches								
Source of Release	Internal Corros	ion			_				
Release Contents		quids/Condensate							
Release Volume	Unknown								
Nearest Waterway	Tributary to Ho	rn Canyon Wash							
Depth to Groundwater	Estimated to b	e less than 50 feet							
Nearest Domestic Water Source	Greater than 2	00 feet							
NMOCD Ranking	40								
SMA Response Dates	8/16/13, 8/19/1 11/11/2014	3, 8/27/13, 8/28/13	8, 8/30/13,	9/3/13 an	d 9/9/13;				
Subcontractors	West States E	nergy Contractors (WSEC)						
Disposal Facility	Envirotech Lar	dfarm							
Yd ³ Contaminated									
Soil Excavated and	244								
Disposed	L <u></u>								

2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of two hydrocarbon releases associated with the Lateral 6B-10 pipeline. The southern site is located in NW/NE (Unit B) Section 24, T28N, R12W, 36.653590°, -108.059270°. The northern site is located in SE/SE (Unit P) of Section 13, T 28N, R 12W, 36.65657, -108.057310°, San Juan County, New Mexico, on land owned by the BLM. Figure 1 illustrates the location of the sites.

3.0 Site Ranking and Land Jurisdiction

The release sites are located in a tributary of Horn Canyon Wash on land owned by BLM with an elevation of approximately 5,600 feet above sea level. After evaluation of the sites using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 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 wells were located in Sections 13, 18, 19 or 24. The physical location of this release is within the jurisdiction of BLM and NMOCD. Site Maps for the northern and southern releases are included as Figures 2 and 3, respectively.

These release locations have been assigned a NMOCD ranking of 40 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 100 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On August 16, 2013, SMA mobilized to the northern release site to delineate the release using a hand auger to advance soil borings and collect soil samples. A total of nine soil borings were advanced ranging from five to nine feet below ground surface (bgs). Soil samples were collected at one foot intervals for field screening with a calibrated photo ionization detector (PID).

On August 19, 2013, SMA mobilized to the southern release site to delineate the release using a hand auger to advance soil borings and collect soil samples. A total of eight soil borings were advanced ranging from three to five feet bgs. Auger holes did not stay open due to the loose sands and gravels. Hence, soil samples from depths more than five feet bgs could not be obtained. Soil samples were collected at one foot intervals for field screening with a calibrated PID.

A summary of the delineation activities, including diagrams illustrating the locations of soil borings, field sample results, proposed excavation areas and estimated volumes was supplied to field personnel to guide remediation activities for both release sites. Figures 4 and 5 are the diagrams for each release site.

From August 27, 2013 to September 9, 2013, under the supervision of SMA, WSEC excavated the hydrocarbon impacted soils associated with the two release sites. SMA personnel guided the excavation activities by collecting soil samples for field screening with a calibrated PID. After field screening results indicated that the hydrocarbon impacted soil had been removed, SMA collected five composite soil samples from the northern excavation and seven composite soil samples from the southern excavation for laboratory analysis. All laboratory soil samples

Engineering • Environmental • Surveying

were field screened with a calibrated PID and 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 4 and Figure 5 illustrates the extent of each excavation and composite soil sample locations and laboratory results.

The final excavation dimensions for the northern release site were 32 feet long by 13 feet wide by 7 feet deep. The final excavation dimensions for the southern release site were 43 feet long by 27 feet wide by 12 to 18 feet deep. A combined total of approximately 244 cubic yards of hydrocarbon contaminated soil were excavated from both excavations and transported by WSEC to Envirotech Land Farm near Bloomfield, New Mexico for proper disposal. Soil disposal documentation is included in Appendix C. The excavation was backfilled based on field screening results for SC-4 (101 ppm) and SC-5 (69 ppm) indicating contaminant of concentrations at or below the NMOCD field screening closure levels. PID results for the northern and southern excavations are included in Tables 3 and 4, respectively.

However, based on NMOCD Guidelines for Remediation of Leaks, Spills, and Releases action levels for contaminants of concern with a site ranking of 40 are 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH. Laboratory sample results for the samples collected from the final excavation were all below laboratory detection limits with the exceptions of SC-5 (Base @ 200 ppm DRO) from the northern excavation and SC-4 (South Wall @ 820 ppm DRO) from the southern excavation. SC-5 of the northern excavation does not impose an immediate threat to groundwater of the environment and is not of high concern.

NMOCD requested additional field work to be performed in the vicinity of SC-4 of the southern excavation. On November 11, 2014, SMA, along with Jonathan Kelly of the NMOCD, revisited the site in order to further delineate the location of SC-4, the south wall of the southern excavation. Using the GPS coordinates of the release point, SMA measured approximately 15 feet south/southeast and advanced a soil boring using a hand auger. SMA collected soil samples at 1 foot vertical intervals from approximately five feet bgs to a maximum of 14 feet bgs. SMA then stepped out approximately 5 feet to the south/southeast, along the pipeline, to complete a row of five soil borings with maximum distance of 35 feet from the original release point GPS location. This row of soil borings differentiated clean backfill material from the native, sandy and gravel, indicating that the borings straddled the boundary of the excavation. Using a calibrated PID and visual observation, none of the soil borings indicated the presence of contamination. Soil borings with any indication of contamination were sampled and submitted for laboratory analysis. Additionally, one area south of the last soil boring was observed to have dark colored soil on the surface. SMA collected a sample from the dark colored area and determined it to be dark colored sandstone. Further, field screening did not indicate contamination of the sandstone. For conformation, a sample was collected for laboratory conformation and labeled SC-1. PID results are included in Table 4. Soil contaminant concentrations and soil boring locations are illustrated in Figure 6.

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 40: 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH.

Based on laboratory analysis, all of the soil samples collected from the original excavation, except SC-5 (Base @ 200 ppm DRO) from the northern excavation and SC-4 (South Wall @ 820 ppm DRO) from the southern excavation, were below laboratory detection limits. Soil borings submitted for laboratory analysis were all below laboratory detection limits.

According to communication with Enterprise, NMOCD has determined that SC-5, the base of the northern excavation, is of little concern as a significant threat to groundwater or the environment.

Given the 820 ppm DRO concentration of SC-4, SMA suspects the original soil sample collected from the location may have been influenced by contaminated overburden that was likely hauled offsite for disposal.

Soil contaminant concentrations are illustrated in Figure 4 and Figure 5. A summary of laboratory analysis is included in Tables 5 and Table 6. Laboratory reports are 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, 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

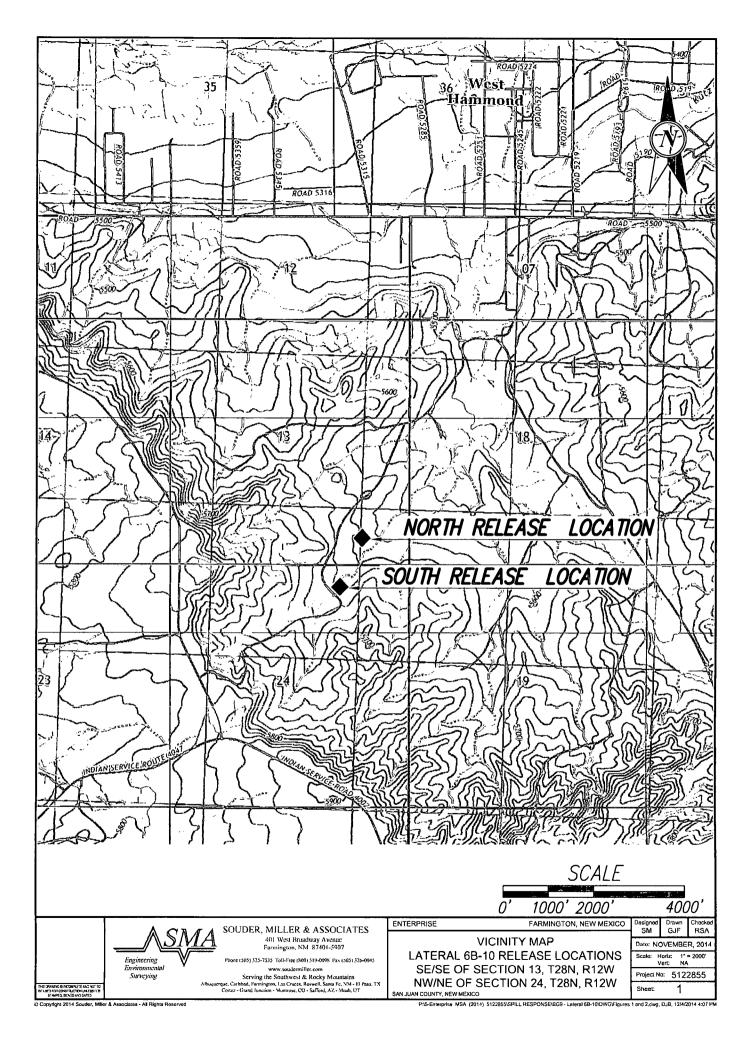
El.alle

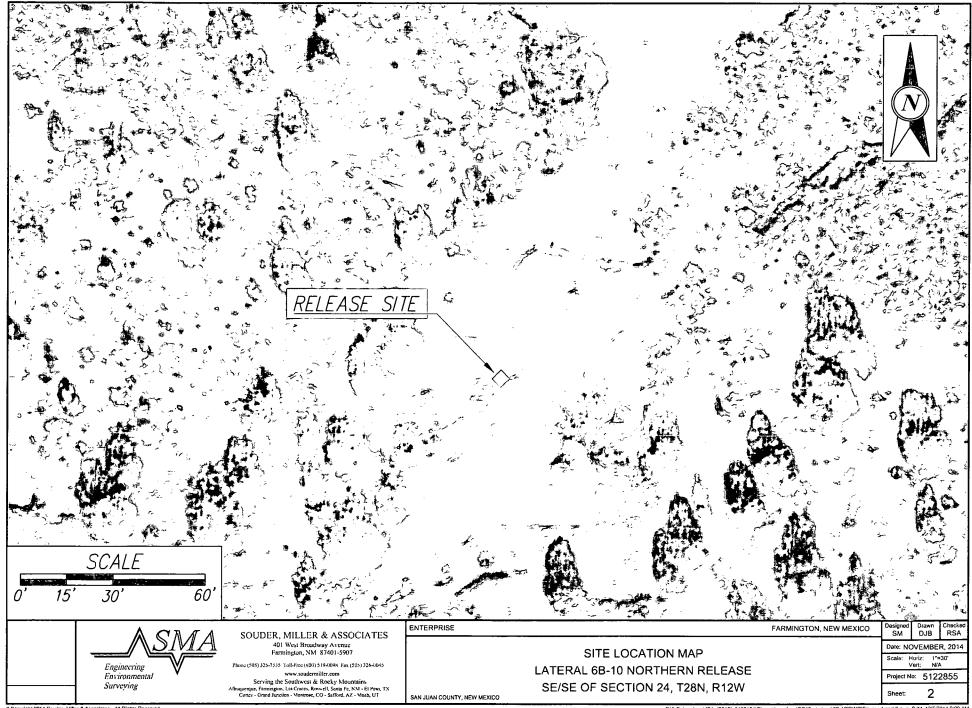
Reid Allan, P.G. Vice President/Principal Scientist

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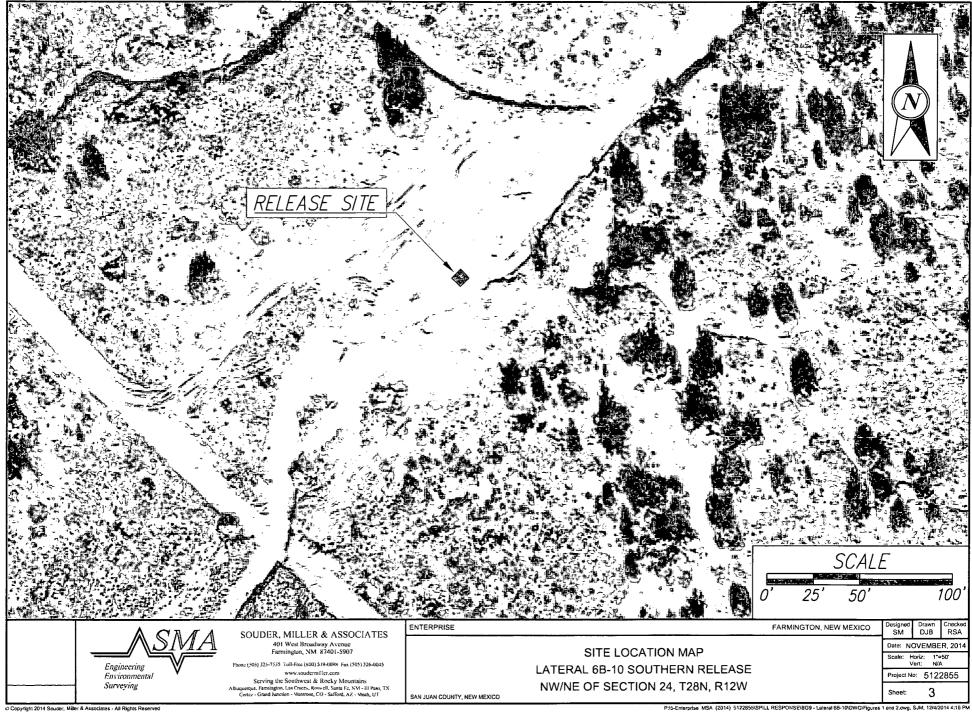
Figures

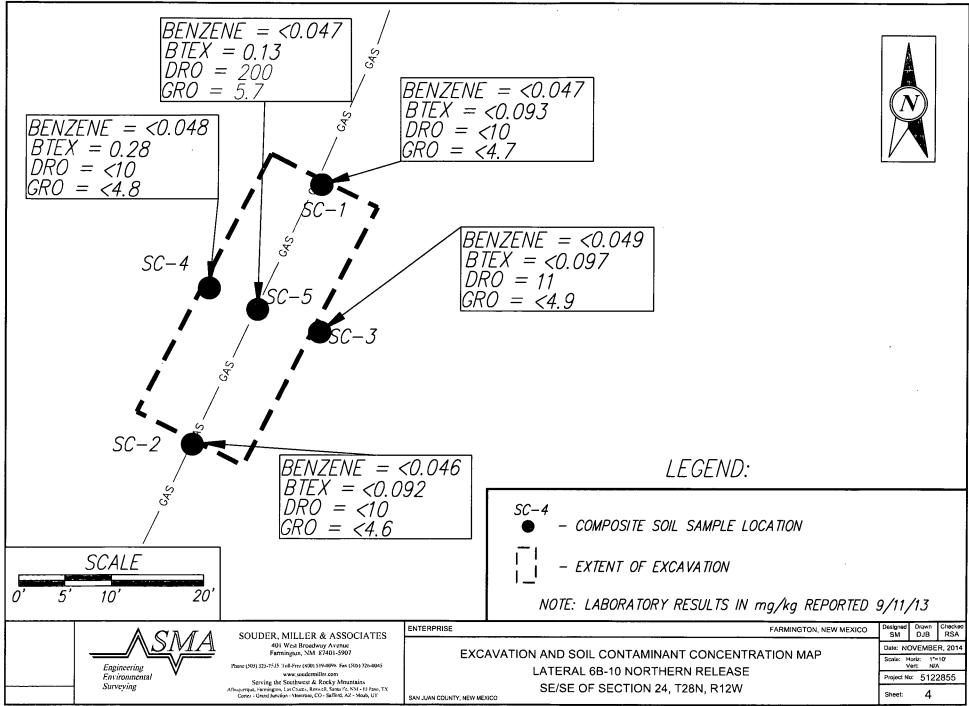




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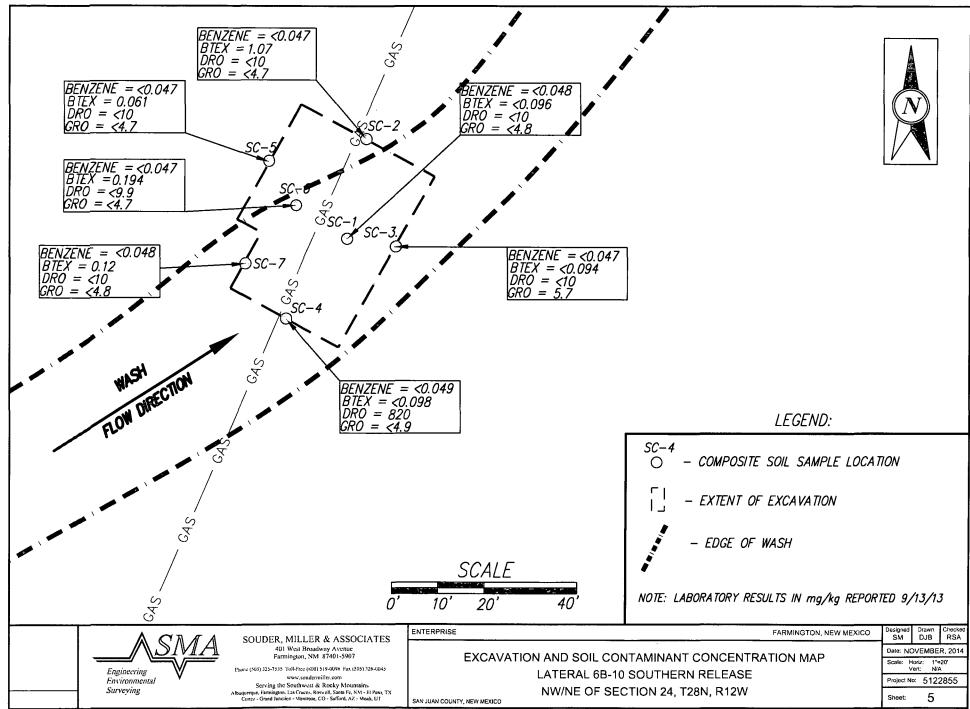
P:S-Enterprise MSA (2013) 5122104\Closed Locations\BG16 - Lateral 6B-10\DWG\Figures 1 and 2.owg, SJM, 12/5/2014 9:00 AM





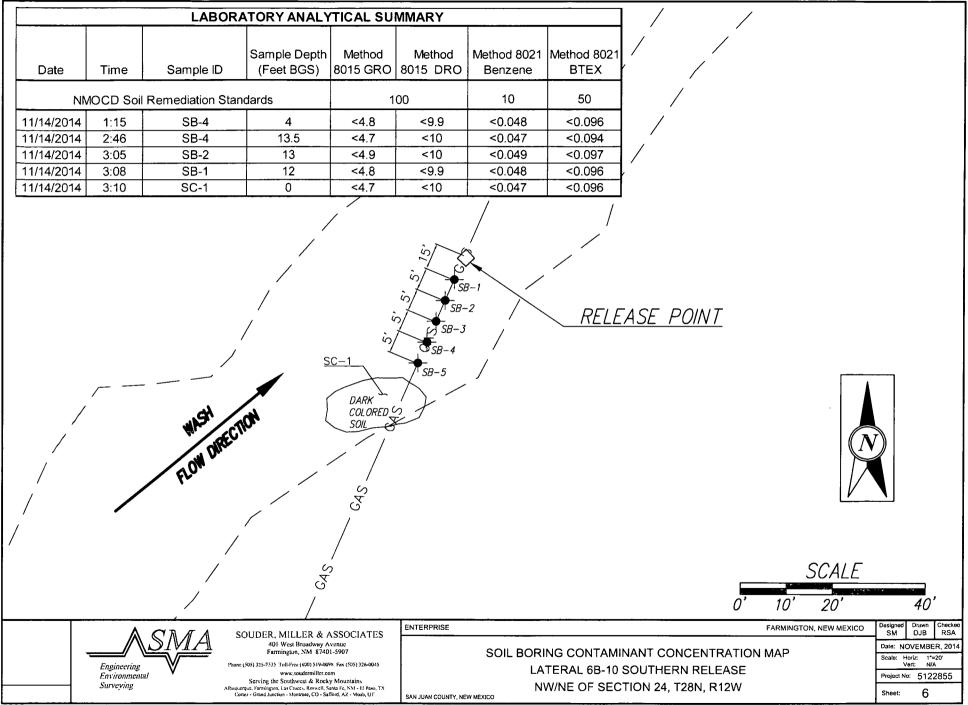
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P15-Enterprise MSA (2013) 5122104\Closed Locations\BG16 - Lateral 68-10\DWGIFigures 1 and 2.dwg, SJM, 12/5/2014 9:04 AM



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P:15-Enterprise MSA (2013) 5122104/Closed Locations/BG16 - Lateral 68-10/DWG/Figures 1 and 2.dwg, SJM, 12/5/2014 9:12 AM



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P:5-Enterprise MSA (2014) 5122855\SPILL RESPONSE\BG9 - Lateral 68-101DWG\Figures 1 and 2.owg, SJM, 12/4/2014 4:19 PM

Tables

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Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20	20	USGS Topo Maps; Google	Release location in
50' to 99' = 10		Earth	within a wash
>100' = 0			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20	20	USGS Topo Maps; Google	
200'-1000' = 10		Earth ; PRCC Mapping	Release location in within a wash
>1000'			
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	0		
water source? YES OR NO to BOTH. YES = 20, NO = 0		NM State Engineer Water Well Database	No Wells in Sections 24, 13, 18 or 19
Total Site Ranking	40		
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 Products Table 3: Summary of Field Screening Results (PPM)

Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Results	Comments
8/16/2013	15:17	SB-1	2	1847.0	
8/16/2013	15:18	SB-1	3	736.0	
8/16/2013	15:19	SB-1	4	547.0	
8/16/2013	15:20	SB-1	5	516.0	
8/16/2013	15:22	SB-2	2	87.0	
8/16/2013	15:23	SB-2	3	47.0	
8/16/2013	15:24	SB-2	4	41.0	
8/16/2013	15:25	SB-2	5	50.0	
8/16/2013	15:29	SB-3	2	92.0	Heavy Staining
8/16/2013	15:30	SB-3	3	80.0	Heavy Staining
8/16/2013	15:31	SB-3	4	44.0	Heavy Staining
8/16/2013	15:32	SB-3	5	74.0	Heavy Staining
8/16/2013	15:36	SB-4	2	87.0	Heavy Staining
8/16/2013	15:37	\$B-4	3	116.0	Heavy Staining
8/16/2013	15:38	SB-4	4	181.0	Heavy Staining
8/16/2013	15:39	SB-4	5	56.0	Heavy Staining
8/16/2013	15:43	SB-5	2	143.0	Heavy Staining
8/16/2013	15:44	SB-5	3	92.0	Heavy Staining
8/16/2013	15:46	SB-5	4	49.0	Heavy Staining
8/16/2013	15:47	SB-5	5	39.0	Heavy Staining
8/16/2013	16:40	SB-5	6	29.0	Heavy Staining
8/16/2013	16:41	SB-5	7	28.0	Heavy Staining
8/16/2013	16:42	SB-5	8	52.0	Heavy Staining
8/16/2013	16:43		9	35.0	Heavy Staining
8/16/2013	15:54	SB-5	2	89.0	Heavy Staining
8/16/2013	15:55		3	89.0	
8/16/2013	15:56		4	49.0	Heavy Staining
8/16/2013	15:57		5	23.0	Heavy Staining Heavy Staining
8/16/2013	16:03		2	74.0	Heavy Staining
8/16/2013	16:04		3	61.0	Heavy Staining
8/16/2013	16:04		4	28.0	
					Heavy Staining
8/16/2013	16:07	SB-7	5	20.0	Heavy Staining
8/16/2013	16:11	SB-8	2	63.0	Heavy Staining
8/16/2013	16:12	SB-8	3	52.0	Heavy Staining
8/16/2013	16:13	SB-8	4	41.0	Heavy Staining
8/16/2013	16:14	SB-8	5	42.0	Heavy Staining
8/16/2013	16:23	SB-9	2	53.0	Heavy Staining
8/16/2013	16:27	SB-9	3	28.0	Heavy Staining
8/16/2013	16:28	SB-9	4	24.0	Heavy Staining
8/16/2013	16:29	SB-9	5	43.0	Heavy Staining
8/27/2013	11:25	S-1 (North Wall)	2 to 5	123.0	
8/27/2013	11:27	S-2 (South Wall)	2 to 5	1126.0	·
8/27/2013	11:29	S-3 (East Wall)	2 to 5	985.0	
8/27/2013	11:31	S-4 (West Wall)	2 to 5	1293.0	
8/27/2013	11:33	S-5 (Base)	5	882.0	
8/28/2013	13:35	S-1 (North Wall)	2 to 6	95.0	
8/28/2013	13:37	S-2 (South Wall)	2 to 6	436.0	
8/28/2013	13:39	S-3 (East Wall)	2 to 6	537.0	
8/28/2013	13:41	S-4 (West Wall)	2 to 6	387.0	
8/28/2013	13:43	S-5 (Base)	6	684.0	······································
9/3/2013	10:27	SC-1 (North Wall)	1 to 7	3.8	Lab Sample Collected
		· · · · · · ·			
9/3/2013	10:29	SC-2 (South Wall)	1 to 7	12.9	Lab Sample Collected
01010040					
9/3/2013 9/3/2013	10:30 10:31	SC-3 (East Wall) SC-4 (West Wall)	1 to 7 1 to 7	104.0 107.0	Lab Sample Collected Lab Sample Collected

* Denotes Lab Sample that Exceeds TPH remediation standards



Enterprise Products Table 4: Summary of Field Screeing Results (PPM)

Date	Time [.]	Field Screening Reference	Sample Depth (Feet BGS)	PID Results	Comments
8/19/2013	9:55	SB-1	1	123.0	Heavy Staining
8/19/2013	9:56	SB-1	2	1718.0	Heavy Staining
8/19/2013	9:57	SB-1	3	4337.0	Heavy Staining - Auger Refusal
8/19/2013	10:04	SB-2	1	1399.0	Heavy Staining
8/19/2013	10:05	SB-2	2	954.0	Heavy Staining
8/19/2013	10:06	SB-2	3	982.0	Heavy Staining - Auger Refusal
8/19/2013	10:14	SB-3	1	1907.0	Heavy Staining
8/19/2013	10:15	SB-3	2	1301.0	Heavy Staining
8/19/2013	10:16	SB-3	3	1267.0	Heavy Staining
8/19/2013	10:16	SB-3	4	758.0	Heavy Staining
8/19/2013	10:17	SB-3	5	537.0	Heavy Staining
8/19/2013	10:28	SB-4	1	899.0	Heavy Staining
8/19/2013	10:29	SB-4	2	543.0	Heavy Staining
8/19/2013	10:30	SB-4	3	285.0	Heavy Staining
8/19/2013	10:47	SB-4	4	125.0	Heavy Staining
8/19/2013	NA	SB-5	1	NA	
8/19/2013	10:55	SB-5	2	467.0	Heavy Staining - Auger Refusal
8/19/2013	11:07	SB-6	1	252.0	
8/19/2013	11:08	SB-6	2	32.0	
8/19/2013	11:09	SB-6	3	17.6	
8/19/2013	11:10	SB-6	4	23.2	
8/19/2013	11:27	SB-7	1	6.6	
8/19/2013	11:28	SB-7	2	2.6	
8/19/2013	11:29	SB-7	3	8.8	•
8/19/2013	11:30	SB-7	4	14.3	
8/19/2013	11:31	SB-7	5	17.6	
8/19/2013	11:33	SB-8	1	39.2	Heavy Staining
8/19/2013	11:34	SB-8	2	132.0	Heavy Staining
8/19/2013	11:35	SB-8	3	83.2	Heavy Staining
8/19/2013	11:36	SB-8	4	64.2	Heavy Staining Auger Refusal
8/27/2013	10:37	S-1 (North Wall)	2 to 6	3840.0	
8/27/2013	10:39	S-2 (West Wall)	2 to 6	409.0	North Side of Excavation
8/27/2013	10:41	S-3 (West Wall)	2 to 6	681.0	South Side of Excavation
8/27/2013	10:43	S-4 (South Wall)	2 to 6	705.0	
8/27/2013	10:45	S-5 (East Wall)	2 to 6	964.0	North Side of Excavation
8/27/2013	10:47	S-6 (East Wall)	2 to 6	914.0	South Side of Excavation
8/27/2013	10:49	S-7 (Base)	6	3849.0	North Side of Excavation
8/27/2013	10:51	S-8 (Base)	6	>10,000	South Side of Excavation

Enterprise Products Table 4: Summary of Field Screeing Results (PPM)

,

Lateral 6B-10 Southern Pipeline Release 12/4/2014

8/28/2013	13:35	S-1 (North Wall)	2 to 6	95.0	
8/28/2013	13:37	S-2 (South Wall)	2 to 6	436.0	<u> </u>
8/28/2013	13:39	S-3 (East Wall)	2 to 6	537.0	
8/28/2013	13:41	S-4 (West Wall)	2 to 6	387.0	
8/28/2013	13:43	S-5 (Base)	6	684.0	
8/30/2013	13:45	S-1 (North Wall)	2 to 6	413.0	
8/30/2013	13:47	S-2 (South Wall)	2 to 6	12.0	
8/30/2013	13:46	S-3 (East Wall)	2 to 6	53.0	
8/30/2013	13:48	S-4 (West Wall)	2 to 6	548.0	
8/30/2013	13:50	S-5 (Base)	6	667.0	
9/3/2013	11:19	S-1 (South Wall)	2 to 9	51.0	
9/3/2013	11:21	S-2 (East Wall)	2 to 9	63.0	North Side of Excavation
9/3/2013	11:23	S-3 (East Wall)	2 to 9	41.0	South Side of Excavation
9/3/2013	11:25	S-4 (West Wall)	2 to 9	3223.0	South Side of Excavation
9/3/2013	11:31	S-5 (West Wall)	2 to 9	2664.0	North Side of Excavation
9/3/2013	11:33	S-6 (North Wall)	2 to 9	146.0	
9/3/2013	11:35	S-7 (Base)	10	4032.0	North Side of Excavation
9/3/2013	11:37	S-8 (Base)	10	153.0	South Side of Excavation
9/3/2013	12:13	S-9 (Base)	11	1323.0	North Side of Excavation
9/3/2013	12:14	S-10 N. W. Wall	2 to 10	3823.0	
9/9/2013	11:00	SC-1 (East Base)	12	3.0	Lab Sample Collected
9/9/2013	11:03	SC-2 (North Wall)	0 to 12	6.0	Lab Sample Collected
9/9/2013	11:08	SC-3 (East Wall)	0 to 12	9.0	Lab Sample Collected
9/9/2013	11:12	SC-4 (South Wall)	0 to 12	69*	Lab Sample Collected
9/9/2013	11:20	SC-5 (West Wall)	0 to 12	123.0	Lab Sample Collected
9/9/2013	11:33	SC-6 (West Base)	18	114.0	Lab Sample Collected
9/9/2013	11:35	SC-7 (S.W. Wall)	0 to 18	79.0	Lab Sample Collected
11/14/2014	15:15	SB-4 30' from GPS Point	4	0.5	Lab Sample Collected
11/14/2014	15:16	SB-4 30' from GPS Point	14	0.5	Lab Sample Collected
11/14/2014	15:17	SB-2 20' from GPS Point	13	0.5	Lab Sample Collected
11/14/2014	15:18	SB-1 15' S of GPS Point	12	0.9	Lab Sample Collected
11/14/2014	15:19	SC-1 Surface E. of GPS Point	0	0.5	Lab Sample Collected

* Denotes Lab Sample that Exceeds TPH remediation standards

Enterprise Products Table 5: Summary of Laboratory Analysis Results in mg/Kg (ppm)

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	Northern Release Site						
	LABORATORY ANALYTICAL RESULTS						
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
9/3/2013	10:27	SC-1 N. Wall	1 to 7	<4.7	<10	< 0.047	<0.093
9/3/2013	10:29	SC-2 S. Wall	1 to 7	<4.6	<10	< 0.046	<0.092
9/3/2013	10:30	SC-3 E. Wall	1 to 7	<4.9	11	<0.049	<0.097
9/3/2013	10:31	SC-4 W. Wall	1 to 7	<4.8	<9.9	<0.048	0.28
9/3/2013	10:33	SC-5 Base	7	5.7	200	<0.047	0.13

•



Enterprise Products Table 6: Summary of Laboratory Analysis Results in mg/Kg (ppm)

	Southern Release Site							
	LABORATORY ANALYTICAL RESULTS							
Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX	
9/9/2013	11:00	SC-1 (East Base)	12	<4.8	<10	<0.048	<0.096	
9/9/2013	11:03	SC-2 (North Wall)	0 to 12	<4.7	<10	<0.047	1.07	
9/9/2013	11:08	SC-3 (East Wall)	0 to 12	5.7	<10	<0.047	<0.094	
9/9/2013	11:12	SC-4 (South Wall)	0 to 12	<4.9	820	<0.049	<0.098	
9/9/2013	11:20	SC-5 (West Wall)	0 to 12	<4.7	<10	<0.047	0.061	
9/9/2013	11:33	SC-6 (West Base)	18	<4.7	<9.9	<0.047	0.194	
9/9/2013	11:35	SC-7 (S.W. Wall)	0 to 12	<4.8	<10	<0.048	0.12	
11/14/2014	1:15	SB-4	4	<4.8	<9.9	<0.048	< 0.096	
11/14/2014	2:46	SB-4	13.5	<4.7	<10	<0.047	< 0.094	
11/14/2014	3:05	SB-2	13	<4.9	<10	< 0.049	< 0.097	
11/14/2014	3:08	SB-1	12	<4.8	<9.9	<0.048	< 0.096	
11/14/2014	3:10	SC-1	0	<4.7	<10	<0.047	< 0.096	





Appendix A Photographic Documentation

Site Photographs Enterprise Products 6B-10 Pipeline Release



Photo 1: View of the pipeline and excavation for the northern release.

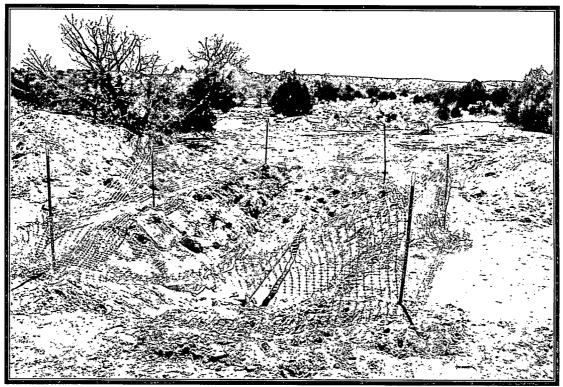


Photo 2: View of the excavation for the northern release.

Site Photographs Enterprise Products 6B-10 Pipeline Release

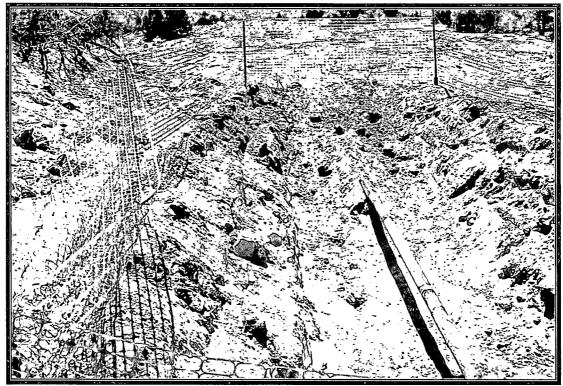


Photo 3: View of the excavation for the northern release.

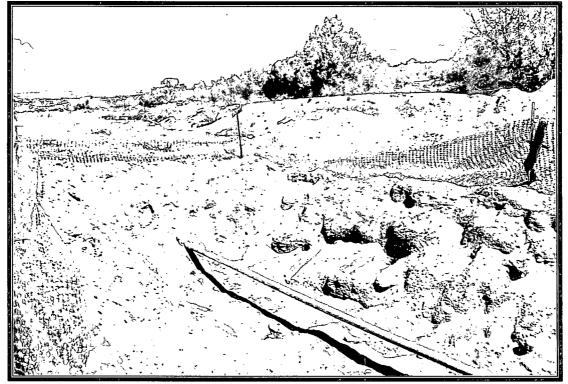


Photo 4: View of the excavation for the southern release.

Site Photographs Enterprise Products 6B-10 Pipeline Release

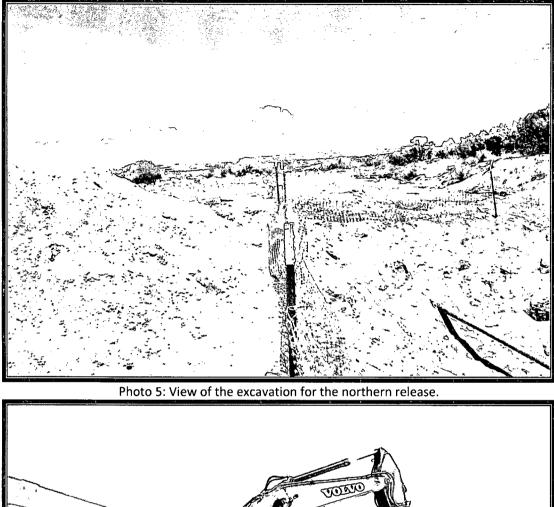




Photo 6: View of the excavation and loading of hydrocarbon impacted soils at the southern release.

Appendix B Soil Disposal Documentation



Bill of Lading

MANIFEST # _44621 DATE 9-9-13 JOB # 97057-0585

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

LOAD		COMF	MPLETE DESCRIPTION OF SHIPMENT					TRANSPORTING COMPANY			
NO.	POINT OF ORIGI	N	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
	Enternist Latera UB-10 Pipelm		LFI	Cont	0-24	12	-	Moss Excavation	47	1445	Las Mass
2	Galleyos 203		ji li	11	10-24	12	-	M859	47	1600	Lee Mars
3	10 10		11 (1	1 L	13-24	10		Mos	15	1409	Tol. FAC
					_	34					
)					
	• • • • • • • • • • • • • • • • • • •										
RESULT	SULTS: LANDFARM				NOTES:	L					
2292	CHLORIDE TEST	1	EMPLOYEE:	- Ken-	Bal	1	Um-				
	PAINT FILTER TEST	1	Certific	ation of above red	ceival & pla	cement					
	g as the driver/transpor d Generator/Point of Or								with. I ce	-	material is from the above

TRANSPORTER CO. MOSS EXCOVATION NAME Lee MOSS COMPANY CONTACT GOLV MARSTES PHONE 215-2744

_____ SIGNATURE Lee Mass

Signatures required prior to distribution of the legal document.

envirotech

Bill of Lading

MANIFEST # 44619 MANIFEST # 44619 DATE 9-9-13 JOB # 97057-0585

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

LOAD	(COMPLETE DESCRIPTION OF SHIPMENT							TRANSPORTING COMPANY			
NO.	POINT OF ORIGIN	1	DEST	INATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Enterprise Later LB-10 Pipeline	a 1	LF	T	Cont	C-24	12	~		47	9.10	Lee Mos
2	Gallegos 203		N	11	11	C-24	12		M099	17	915	2 in i
3	1. 1	I	1L	4(Ц	C-24	12		moss	47	IIÓD	Lee mas
4	1()	١	11	١١	11	C-24	10	-	MOS S	15	1105	Matterne
5	12 1	<u>ر</u>	I.	11	۱ <u>د</u>	C-24	12		MOSS	17	1119	2:00
4	81. 8	1	К	1(N	C-24	12.	_	M055	47	1210	Las Mos
7	<u>, , t</u>	11	11	١١	1 \	(-24	10		M055	15	1230	MorL B.M.L
8	11	11	11	11	11	C-24	12		moss	17	1245	march
9	N	IV	N	11	١١	C-24	12		MOSS	47	1385	Lee mas
10	IV. I	11	k		11	C-24	10	-	Moss	15	1345	Mothe BMP
11	1 1	1	٨	11	J (C-24	12		M.053	17	1405	Zart
12	11	′(4	"	11	C-24	12		MIS	15	1449	YALBING,
RESULTS			LAND	FARM	\wedge		138		NOTES:	/		
1292	CHLORIDE TEST	4	EMPL	OYEE:	Fon te	Salt	BG	w				/
	PAINT FILTER TEST	4		Certification of above receival & placement					•			/

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. ٨

TRANSPORTER CO. Moss Excountion COMPANY CONTACT George Macshas Signatures required prior to distribution of the legal document.

NAME Lee Moss	SIGNATURE Top Mas
PHONE 216-2744	DATE

envirotech

Bill of Lading

MANIFEST # _____44583

DATE 9-3-13 JOB # 97057-0585

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

LOAD	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY				
NO.	POINT OF ORIG		DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
2	ENHEPL.SL. Lat 6 10 PiPLL'26 "Gollegos		LFI	cont Soil	BR-3	12		MOSS	47	9:30	Les Mas
2	20	11	11 12	11 11	BR-3	12	-	M 045	41	1100	La Mas
3	<i></i>		" ")	RR-3	12	-	m053	47	1234	Leo mass
4		șt	h 11	A 11	B8:3	12	-	moss	47	1406	Le mas
5	e.	л		e y	BB-3	12	~	ANOSS	47	15:20	Lee Mara
4	CP	U	1 и	c1 Ø.	<i>BB-3</i>	12	_	MOSS	47	10:50	La moss
					1	72					
	an a										
								· · · · · · · · · · · · · · · · · · ·			
RESULT	5: 		LANDFARM			9	BGW	NOTES:	1 1		
K292	CHLORIDE TEST	2	EMPLOYEE:	Leve	- Lo		2				
	PAINT FILTER TEST	a		cation of above re	•						
By signing	g as the driver/transport Generator/Point of O	rter, I c rigin a	ertify the material nd that no additior	hauled from the a al material has be	bove locatio	r mixed into	n the loa	d.			material is from the above
	rentioned Generator/Point of Origin and that no additional material has been added or mixed into the load. RANSPORTER CO. MOSS Excountion NAME Lee MOSS SIGNATURE Leo Moss RDC										

COMPANY CONTACT BUCK PHONE 215-9934 DATE 9-3-13

Signatures required prior to distribution of the legal document.

san juan reproduction 578-126

Appendix C Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

September 11, 2013

Thomas Long Souder, Miller and Associates 2101 San Juan Boulevard Farmington, NM 87401 TEL: (505) 325-7535 FAX (505) 327-1496

RE: Lateral 6B-10 North Release

OrderNo.: 1309128

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 5 sample(s) on 9/4/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1309128 Date Reported: 9/11/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: SC-1 **Project:** Lateral 6B-10 North Release Collection Date: 9/3/2013 10:27:00 AM 1309128-001 Lab ID: Matrix: SOIL Received Date: 9/4/2013 10:00:00 AM **RL** Qual Units Result **DF** Date Analyzed Batch Analyses **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) ND 9/6/2013 11:07:22 AM 10 mg/Kg 1 9188 Motor Oil Range Organics (MRO) ND 50 mg/Kg 9/6/2013 11:07:22 AM 9188 1 Surr: DNOP %REC 93.0 63-147 9/6/2013 11:07:22 AM 9188 1 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 9/6/2013 7:04:59 PM 9190 4.7 mg/Kg 1

			5 5			
Surr: BFB	97.9	80-120	%REC	1	9/6/2013 7:04:59 PM	9190
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	9/6/2013 7:04:59 PM	9190
Toluene	ND	0.047	mg/Kg	1	9/6/2013 7:04:59 PM	9190
Ethylbenzene	ND	0.047	mg/Kg	1	9/6/2013 7:04:59 PM	9190
Xylenes, Total	ND	0.093	mg/Kg	1	9/6/2013 7:04:59 PM	9190
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	9/6/2013 7:04:59 PM	9190

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		
				·

Analytical Report Lab Order 1309128 Date Reported: 9/11/2013

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and AssociatesProject:Lateral 6B-10 North ReleaseLab ID:1309128-002Matrix: SOIL

Client Sample ID: SC-2 Collection Date: 9/3/2013 10:29:00 AM

Received Date: 9/4/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/6/2013 11:38:28 AM	9188
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/6/2013 11:38:28 AM	9188
Surr: DNOP	94.3	63-147	%REC	1	9/6/2013 11:38:28 AM	9188
EPA METHOD 8015D: GASOLINE RAM	NGE				Analys	II NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	9/6/2013 10:25:22 PM	9190
Surr: BFB	93.0	80-120	%REC	1	9/6/2013 10:25:22 PM	9190
EPA METHOD 8021B: VOLATILES					Analys	I: NSB
Benzene	ND	0.046	mg/Kg	1	9/6/2013 10:25:22 PM	9190
Toluene	ND	0.046	mg/Kg	1	9/6/2013 10:25:22 PM	9190
Ethylbenzene	NĎ	0.046	mg/Kg	1	9/6/2013 10:25:22 PM	9190
Xylenes, Total	ND	0.092	mg/Kg	1	9/6/2013 10:25:22 PM	9190
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	9/6/2013 10:25:22 PM	9190

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank				
	Ē	Value above quantitation range	Н	Holding times for preparation or analysis exceeded				
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 2 of 8				
	0	RSD is greater than RSDlimit	P Sample pH greater than 2 for VOA and TOC					
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

9/6/2013 10:53:59 PM

9190

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: SC-3 Lateral 6B-10 North Release **Project:** Collection Date: 9/3/2013 10:30:00 AM 1309128-003 Lab ID: Matrix: SOIL Received Date: 9/4/2013 10:00:00 AM Result **RL** Qual Units Analyses **DF** Date Analyzed Batch EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: JME Diesel Range Organics (DRO) 11 10 mg/Kg 1 9/6/2013 12:09:33 PM 9188 Motor Oil Range Organics (MRO) ND mg/Kg 9/6/2013 12:09:33 PM 50 1 9188 Surr: DNOP 90.2 63-147 %REC 9/6/2013 12:09:33 PM 1 9188 EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB Gasoline Range Organics (GRO) ND 9/6/2013 10:53:59 PM 4.9 mg/Kg 1 9190 Surr: BFB 115 80-120 %REC 1 9/6/2013 10:53:59 PM 9190 EPA METHOD 8021B: VOLATILES Analyst: NSB ND 9/6/2013 10:53:59 PM Benzene 0.049 9190 mg/Kg 1 ND Toluene 0.049 mg/Kg 1 9/6/2013 10:53:59 PM 9190 Ethylbenzene ND 0.049 mg/Kg 1 9/6/2013 10:53:59 PM 9190 Xylenes, Total ND 0.097 mg/Kg 9/6/2013 10:53:59 PM 9190 1 Surr: 4-Bromofluorobenzene

80-120

%REC

1

105

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 3 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT:Souder, Miller and AssociatesProject:Lateral 6B-10 North ReleaseLab ID:1309128-004	Client Sample ID: SC-4Collection Date: 9/3/2013 10:31:00 AMMatrix: SOILReceived Date: 9/4/2013 10:00:00 AM										
Analyses	Result	RL Qua	Units	DF	Date Analyzed	Batch					
EPA METHOD 8015D: DIESEL RANGE C	RGANICS	- i	<u></u>		Analyst	JME					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/6/2013 12:40:38 PM	9188					
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/6/2013 12:40:38 PM	9188					
Surr: DNOP	86.0	63-147	%REC	1	9/6/2013 12:40:38 PM	9188					
EPA METHOD 8015D: GASOLINE RANG	E				Analyst	NSB					
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/6/2013 11:51:04 PM	9190					
Surr: BFB	115	80-120	%REC	1	9/6/2013 11:51:04 PM	9190					
EPA METHOD 8021B: VOLATILES					Analyst	NSB					
Benzene	ND	0.048	mg/Kg	1	9/6/2013 11:51:04 PM	9190					
Toluene	ND	0.048	mg/Kg	1	9/6/2013 11:51:04 PM	9190					
Ethylbenzene	ND	0.048	mg/Kg	1	9/6/2013 11:51:04 PM	9190					
Xylenes, Total	0.28	0.096	mg/Kg	1	9/6/2013 11:51:04 PM	9190					
Surr: 4-Bromofluorobenzene	108	80-120	%REC	1	9/6/2013 11:51:04 PM	9190					

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 4 of 8
	0	RSD is greater than RSDlimit	Р	Not Detected at the Reporting Limit Page 4 of 8 Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates **Client Sample ID: SC-5** Lateral 6B-10 North Release **Project:** Collection Date: 9/3/2013 10:33:00 AM Lab ID: 1309128-005 Matrix: SOIL Received Date: 9/4/2013 10:00:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: JME Diesel Range Organics (DRO) 200 9.9 mg/Kg 9/6/2013 1:11:34 PM 9188 1 Motor Oil Range Organics (MRO) 330 mg/Kg 50 9/6/2013 1:11:34 PM 9188 1 Surr: DNOP 97.2 63-147 %REC 1 9/6/2013 1:11:34 PM 9188 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 5.7 4.7 mg/Kg 1 9/7/2013 12:19:41 AM 9190 Surr: BFB 131 80-120 S %REC 9/7/2013 12:19:41 AM 9190 1 EPA METHOD 8021B: VOLATILES Analyst: NSB Benzene ND 0.047 mg/Kg 1 9/7/2013 12:19:41 AM 9190 Toluene ND 0.047 9/7/2013 12:19:41 AM mg/Kg 1 9190 ND 0.047 Ethylbenzene 9/7/2013 12:19:41 AM 9190 mg/Kg 1 Xylenes, Total 0.13 0.094 mg/Kg 9/7/2013 12:19:41 AM 9190 1 Surr: 4-Bromofluorobenzene 107 80-120 %REC 1 9/7/2013 12:19:41 AM 9190

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 5 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1309128

11-Sep-13

	ler, Miller and ral 6B-10 Nort										
Sample ID MB-9188	SampT	ype: ME	3LK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics		
Client ID: PBS	Batcl	n ID: 91	88	F	RunNo: 13093						
Prep Date: 9/5/2013	Analysis D)ate: 9/	5/2013	5	SeqNo: 3	73977	Units: mg/k	٩			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRC)) ND	50									
Surr: DNOP	8.6		10.00		85.6	63	147				
Sample ID LCS-9188	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics		
Client ID: LCSS	Batcl	n ID: 91	88	F	RunNo: 1	3132					
Prep Date: 9/5/2013	Analysis D)ate: 9/	6/2013	S	SeqNo: 3	74988	Units: mg/ł	۲g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	61	10	50.00	0	122	77.1	128				
Surr: DNOP	4.8		5.000		95.7	63	147				

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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 6 of 8

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Surr: BFB

,	Miller and As 6B-10 North I									
Sample ID MB-9190	SampTyp	be: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch II	D: 91	90	R	lunNo: 1	3161				
Prep Date: 9/5/2013	Analysis Dat	ie: 9/	6/2013	s	eqNo: 3	75487	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				•				
Surr: BFB	940		1000		94.0	80	120			
Sample ID LCS-9190	SampTyp	be: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch I	D: 91	90	F	RunNo: 1	3161				
Prep Date: 9/5/2013	Analysis Dat	te: 9/	6/2013	s	eqNo: 3	75488	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	74.5	126		• •	

104

80

120

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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 for VOA and TOC only.
- RL Reporting Detection Limit

Page 7 of 8

WO#: 1309128

11-Sep-13

3.2

1.1

0.10

3.000

1.000

Client: Souder	, Miller and	Associa	tes							
Project: Lateral	6B-10 Nort	h Releas	se							
Sample ID MB-9190	SampT	Гуре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batcl	h ID: 919	90	F	RunNo: 1	3161				
Prep Date: 9/5/2013	Analysis [Date: 9/	6/2013	S	eqNo: 3	75522	Units: mg/k	٢g		
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		107	80	120			
Sample ID LCS-9190	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 91	90	F	RunNo: 1	3161				
Prep Date: 9/5/2013	Analysis [Date: 9/	6/2013	5	SeqNo: 3	75523	Units: mg/k	<g< td=""><td></td><td></td></g<>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	106	80	120			
Toluene	1.0	0.050	1.000	0	105	80	120			
Ethylbenzene	1.0	0.050	1.000	0	104	80	120			

0

105

113

Qualifiers:

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

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120

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 8 of 8

WO#: 1309128

11-Sep-13

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

,

Client Name: SMA-FARM	Work Order Number:	1309128		RcptNo: 1
Received by/date: AG Logged By: Lindsay Mangin	09/04/13 9/4/2013 10:00:00 AM		Juneby Hologo	
Completed By: Lindsay Mangin	9/5/2013 9;10:21 AM		Jonesky Harpo	
Reviewed By:	09/05/13			
<u>Chain of Custody</u> / V V		Yes	No	Not Present 🗸
 Custody seals intact on sample bottles? Is Chain of Custody complete? 		Yes 🗸	No	Not Present
		•	140	
3. 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 temperation	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 ter	st(s)?	Yes 🗸	No	
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🖌	No	
9. Was preservative added to bottles?		Yes	No 🔽	NA
10.voA vials have zero headspace?		Yes	No	No VOA Vials 🗸
11. Were any sample containers received br	oken?	Yes	No 🗸	# of preserved
				bottles checked
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗸	No	for pH: (<2 or >12 unless noted)
13 Are matrices correctly identified on Chain		Yes 🗸	No 1	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 w	ith this order?	Yes	No	NA 🗹
Person Notified:	Date:		ian itali mala kanza ana ang kaling t	
By Whom:	Via:	eMail	Phone Fax	In Person
Regarding:	an a		n. 1999 - Landard State (1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1	and the second state of th

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

Page 1 of 1

.

		of-Cu	stody Record	Turn-Around	Time:										***	20			817		
Client:	SMA	:		Standard C Rush															'AL DR'		
				Project Name	: Lators	1 6B-10				1.74		<i>,</i>	•								
Mailing	Address	2101	San Juan Blud.	1	Nor	1 6B-10 th Release		49	01 H									109			
-			M 87401	Project #:	_		4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107														
Phone	#: 50	5 31	5-7535	-	5122104		1 - 2 - 2017 - 1 - 1 - 1 - 2 - 1 -				Contraction of the					ues					
			ong Soudorniller.com	Project Mana	ger:			(Yl	() SO)					O₄)					-		
	Package:		-7		The	/	202	as of	/ MF			ŝ		04,S(CB's						
🖬 Stan	dard	1	Level 4 (Full Validation)	Sampler:	(VIDMa	s Long		Ő	8			SIMS)		² ,PC	2 P(
Accredi			_	Sampler:	Thoras L	eng		TPH		.	504.1)	270		Ň,	808						Î
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) (Type) _					A CONTRACTOR OF A CONTRACTOR A		ATB	5B (thod	thod	310	Meta	σ́	ticic	(A)	-ju				es (
Date	Time	Matrix	Sample Request ID	Container	Preservative	HEALNO	+ + 	- + ×	801	(Me	(Method	s (8	A 8	IS (F	Pes	B	(Se				lddu
Dato				Type and #	Турө	YA GIR	BTEX + MTDE + TMB's (802 1)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method	EDB	PAH's (8310 or 8270	RCRA 8 Metals	Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
1-373	1027	Sóil	Sc-1	402 Jar	Cool	-001	λ		$\overline{\lambda}$		<u> </u>	<u>.u.</u>								-	Ť
1	1029		56-2			-007	12		X												Τ
	1030		SC-3			-003	Y		\mathbf{x}												1
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9-3-13 Date:	1100 Time:	Relinquishe	ad hy:	Received by:	alle	<u>' 3 3</u> 700 Date Time //	ha	<u>(</u>	Ð	1 11			4		~ 5	C					
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13/13	1721	1 M	Mitted to Hall Environmental may be sub-			This serves as pation of this			Anv e::	h.con*	ador	Idata	will be	alead	v noto	tod or	the cr	oolution		•	
1	r necessary,		miles to clair chyrionmentar may be subi				5 P0981	onity. 7	any su	o-contr	acter	udid	wa D8	Jean	y nota	ieu on	ne al	anytica	пероп	•	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

September 13, 2013

Tom Long Souder, Miller and Associates 2101 San Juan Boulevard Farmington, NM 87401 TEL: (505) 330-0868 FAX

RE: Enterprise Lateral 6B-10

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

Hall Environmental Analysis Laboratory

OrderNo.: 1309326

Dear Tom Long:

Hall Environmental Analysis Laboratory received 7 sample(s) on 9/10/2013 for the analyses presented in the following report.

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

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Enterprise Lateral 6B-10

Client Sample ID: SC-1 Collection Date: 9/9/2013 11:00:00 AM Received Date: 9/10/2013 10:00:00 AM

Lab ID: 1309326-001	Matrix: S	SOIL	Received Date: 9/10/2013 10:00:00 AM								
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch					
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analy	st: JME					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/13/2013 11:42:51 A	M 9273					
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/13/2013 11:42:51 A	M 9273					
Surr: DNOP	111	63-147	%REC	1	9/13/2013 11:42:51 A	M 9273					
EPA METHOD 8015D: GASOLINE R	ANGE				Analy	st: NSB					
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	9/11/2013 4:27:50 PM	1 9242					
Surr: BFB	98.2	80-120	%REC	1	9/11/2013 4:27:50 PM	9242					
EPA METHOD 8021B: VOLATILES					Analy	st: NSB					
Benzene	ND	0.048	mg/Kg	1	9/11/2013 4:27:50 PM	1 9242					
Toluene	ND	0.048	mg/Kg	1	9/11/2013 4:27:50 PM	1 9242					
Ethylbenzene	ND	0.048	mg/Kg	1	9/11/2013 4:27:50 PM	9242					
Xylenes, Total	ND	0.096	mg/Kg	1	9/11/2013 4:27:50 PM	1 9242					
Surr: 4-Bromofluorobenzene	109	80-120	%REC	1	9/11/2013 4:27:50 PM	1 9242					

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 1 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL.	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates **Project:** Enterprise Lateral 6B-10

1309326-002

Lab ID:

Analyses

Client Sample ID: SC-2 Collection Date: 9/9/2013 11:03:00 AM

Matrix: SOIL Received Date: 9/10/2013 10:00:00 AM **RL** Qual Units Result **DF** Date Analyzed Batch EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: JME

Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/13/2013 12:04:44 PM	9273
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/13/2013 12:04:44 PM	9273
Surr: DNOP	89.8	63-147	%REC	1	9/13/2013 12:04:44 PM	9273
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/11/2013 4:56:26 PM	9242
Surr: BFB	113	80-120	%REC	1	9/11/2013 4:56:26 PM	9242
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	9/11/2013 4:56:26 PM	9242
Toluene	0.29	0.047	mg/Kg	1	9/11/2013 4:56:26 PM	9242
Ethylbenzene	0.10	0.047	mg/Kg	1	9/11/2013 4:56:26 PM	9242
Xylenes, Total	0.68	0.094	mg/Kg	1	9/11/2013 4:56:26 PM	9242
Surr: 4-Bromofluorobenzene	113	80-120	%REC	1	9/11/2013 4:56:26 PM	9242

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 2 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Enterprise Lateral 6B-10

Client Sample ID: SC-3 Collection Date: 9/9/2013 11:08:00 AM Received Date: 9/10/2013 10:00:00 AM

Lab ID: 1309326-003 Matrix: SOIL **RL** Qual Units Result Analyses **DF** Date Analyzed Batch **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: JME 9/13/2013 12:26:50 PM 9273 Diesel Range Organics (DRO) ND 10 mg/Kg 1 Motor Oil Range Organics (MRO) ND 9/13/2013 12:26:50 PM 9273 50 mg/Kg 1 Surr: DNOP 95.6 63-147 %REC 1 9/13/2013 12:26:50 PM 9273 EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB Gasoline Range Organics (GRO) 9/11/2013 5:25:10 PM 5.7 4.7 mg/Kg 1 9242 Surr: BFB 125 %REC 9/11/2013 5:25:10 PM 80-120 s 1 9242 EPA METHOD 8021B: VOLATILES Analyst: NSB 9/11/2013 5:25:10 PM Benzene ND 0.047 mg/Kg 1 9242 Toluene ND 0.047 9/11/2013 5:25:10 PM 9242 mg/Kg 1 Ethylbenzene ND 0.047 mg/Kg 9/11/2013 5:25:10 PM 9242 1 Xylenes, Total ND 0.094 mg/Kg 9/11/2013 5:25:10 PM 9242 1 Surr: 4-Bromofluorobenzene 9/11/2013 5:25:10 PM 9242 114 80-120 %REC 1

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 3 of 9
	0	RSD is greater than RSDlimit	Р	Not Detected at the Reporting Limit Page 3 of 9 Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		

Batch

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: SC-4 Enterprise Lateral 6B-10 **Project:** Collection Date: 9/9/2013 11:12:00 AM 1309326-004 Lab ID: Received Date: 9/10/2013 10:00:00 AM Matrix: SOIL Analyses Result **RL** Qual Units **DF** Date Analyzed EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: JME Diesel Range Organics (DRO) 9/13/2013 12:48:50 PM 9273 820 10 mg/Kg 1

Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/13/2013 12:48:50 PM	9273
Surr: DNOP	82.7	63-147	%REC	1	9/13/2013 12:48:50 PM	9273
EPA METHOD 8015D: GASOLINE RANG	E				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/11/2013 5:53:54 PM	9242
Surr: BFB	117	80-120	%REC	1	9/11/2013 5:53:54 PM	9242
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.049	mg/Kg	1	9/11/2013 5:53:54 PM	9242
Toluene	ND	0.049	mg/Kg	1	9/11/2013 5:53:54 PM	9242
Ethylbenzene	ND	0.049	mg/Kg	1	9/11/2013 5:53:54 PM	9242
Xylenes, Total	ND	0.098	mg/Kg	1	9/11/2013 5:53:54 PM	9242
Surr: 4-Bromofluorobenzene	110	80-120	%REC	1	9/11/2013 5:53:54 PM	9242

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank	
	E	Value above quantitation range	Н	Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 4 of	fQ
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.	. /
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Enterprise Lateral 6B-10	5		Client Sampl		C-5 D/2013 11:20:00 AM	
Lab ID: 1309326-005	Matrix: S	SOIL			10/2013 10:00:00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	9/13/2013 1:10:57 PM	9273
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/13/2013 1:10:57 PM	9273
Surr: DNOP	65.6	63-147	%REC	1	9/13/2013 1:10:57 PM	9273
EPA METHOD 8015D: GASOLINE RAM	IGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/11/2013 6:22:33 PM	9242
Surr: BFB	101	80-120	%REC	1	9/11/2013 6:22:33 PM	9242
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	9/11/2013 6:22:33 PM	9242
Toluene	0.061	0.047	mg/Kg	1	9/11/2013 6:22:33 PM	9242
Ethylbenzene	ND	0.047	mg/Kg	1	9/11/2013 6:22:33 PM	9242
Xylenes, Total	ND	0.094	mg/Kg	1	9/11/2013 6:22:33 PM	9242
Surr: 4-Bromofluorobenzene	110	80-120	%REC	1	9/11/2013 6:22:33 PM	9242

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

Qualifiers:

*

- Value exceeds Maximum Contaminant Level. Е Value above quantitation range
- J Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Sample pH greater than 2 for VOA and TOC only. Р
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Enterprise Lateral 6B-10

Client Sample ID: SC-6 Collection Date: 9/9/2013 11:33:00 AM Received Date: 9/10/2013 10:00:00 AM

Lab ID: 1309326-006	Matrix: S	SOIL	Received I	Date: 9/1	0/2013 10:00:00 AM	
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	GE ORGANICS				Analys	t: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	9/13/2013 1:32:50 PM	9273
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	9/13/2013 1:32:50 PM	9273
Surr: DNOP	94.8	63-147	%REC	1	9/13/2013 1:32:50 PM	9273
EPA METHOD 8015D: GASOLINE R	ANGE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	9/11/2013 6:51:12 PM	9242
Surr: BFB	99.4	80-120	%REC	1	9/11/2013 6:51:12 PM	9242
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.047	mg/Kg	1	9/11/2013 6:51:12 PM	9242
Toluene	0.084	0.047	mg/Kg	1	9/11/2013 6:51:12 PM	9242
Ethylbenzene	ND	0.047	mg/Kg	1	9/11/2013 6:51:12 PM	9242
Xylenes, Total	0.11	0.094	mg/Kg	1	9/11/2013 6:51:12 PM	9242
Surr: 4-Bromofluorobenzene	106	80-120	%REC	1	9/11/2013 6:51:12 PM	9242

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 6 of 9
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	Spike Recovery outside accepted recovery limits		
	5	spike Recovery cuside decepted recovery minis		

Hall Environmental Analysis Laboratory, Inc.

CLIENT:Souder, Miller and AssociatesProject:Enterprise Lateral 6B-10Lab ID:1309326-007	s Matrix: S			le ID: SC-7 Date: 9/9/2013 11:35:00 AM Date: 9/10/2013 10:00:00 AM
Analyses	Result	RL Qual	Units	DF Date Analyzed Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS			Analyst: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1 9/13/2013 1:55:01 PM 9273
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1 9/13/2013 1:55:01 PM 9273
Surr: DNOP	76.6	63-147	%REC	1 9/13/2013 1:55:01 PM 9273
EPA METHOD 8015D: GASOLINE RAM	IGE			Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1 9/12/2013 3:13:48 PM 9242
Surr: BFB	106	80-120	%REC	1 9/12/2013 3:13:48 PM 9242
EPA METHOD 8021B: VOLATILES				Analyst: NSB
Benzene	ND	0.048	mg/Kg	1 9/12/2013 3:13:48 PM 9242
Toluene	0.12	0.048	mg/Kg	1 9/12/2013 3:13:48 PM 9242
Ethylbenzene	ND	0.048	mg/Kg	1 9/12/2013 3:13:48 PM 9242
Xylenes, Total	ND	0.096	mg/Kg	1 9/12/2013 3:13:48 PM 9242
Surr: 4-Bromofluorobenzene	109	80-120	%REC	1 9/12/2013 3:13:48 PM 9242

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit Page 7 of 9
	0	RSD is greater than RSDlimit	Р	Not Detected at the Reporting Limit Page 7 of 9 Sample pH greater than 2 for VOA and TOC only.
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	['] S	Spike Recovery outside accepted recovery limits		

Souder, Miller and Associates Enterprise Lateral 6B-10

SampT	ype: ME	3LK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e
Batch	n ID: 92	42	F	RunNo: 1	3292			
Analysis D	ate: 9/	11/2013	S	SeqNo: 3	78524	Units: mg/K	g	
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit
ND	5.0			·				
920		1000		92.1	80	120		
SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e

Sample ID LCS-9242	SampType: LCS	;	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch ID: 9242	2	R	unNo: 13	3292				
Prep Date: 9/10/2013	Analysis Date: 9/11	1/2013	S	eqNo: 37	78525	Units: mg/K	g		
Analyte	Result PQL	SPK value S	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24 5.0	25.00	0	95.1	74.5	126			
Surr: BFB	990	1000		99.1	80	120			
Sample ID MB-9268 MK	SampType: MBL	_K	Test	Code: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: R13	320	R	unNo: 1:	3320				
Prep Date:	Analysis Date: 9/12	2/2013	S	eqNo: 37	79411	Units: %RE	C		
Analyte	Result PQL	SPK value S	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	950	1000		95.4	80	120			
Surr: BFB	950 SampType: L CS		Test			120 8015D: Gaso	line Rang	e	
		;			PA Method		line Rang	e	<u></u>
Sample ID LCS-9268 MK	SampType: LCS	6 320	R	Code: EF	PA Method 3320			e	
Sample ID LCS-9268 MK Client ID: LCSS	SampType: LCS Batch ID: R13 Analysis Date: 9/1;	6 320	R	Code: EF	PA Method 3320	8015D: Gaso		e RPDLimit	Qual

Qualifiers:

Client:

Project:

Analyte

Surr: BFB

Sample ID MB-9242

Gasoline Range Organics (GRO)

Client ID: PBS Prep Date: 9/10/2013

- Value exceeds Maximum Contaminant Level. *
- Е Value above quantitation range
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

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WO#: 1309326

Qual

13-Sep-13

											15 500
Client:		Miller and		tes							
Project:	Enterpri	se Lateral 6	B-10								
Sample ID	MB-9242	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: F	PBS	Batch	n ID: 92	42	F	RunNo: 1	3292				
Prep Date:	9/10/2013	Analysis D)ate: 9/	11/2013	S	SeqNo: 3	78545	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.050								
oluene		ND	0.050							٥	
Ethylbenzene		ND	0.050								
Kylenes, Total		ND	0.10								
Surr: 4-Bromo	ofluorobenzene	1.0		1.000		103	80	120			
Sample ID	LCS-9242	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: L	LCSS	Batch	n ID: 92	42	F	RunNo: 1	3292				
Prep Date:	9/10/2013	Analysis [)ate: 9/	11/2013	S	SeqNo: 3	78546	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.98	0.050	1.000	0	97.7	80	120			
oluene		0.99	0.050	1.000	0	98.7	80	120			
Ethylbenzene		0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total		3.0	0.10	3.000	0	98.7	80	120			
Surr: 4-Bromo	ofluorobenzene	1.1		1.000		110	80	120			
Sample ID	MB-9268 MK	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: I	PBS	Batcl	n ID: R1	3320	F	RunNo: 1	3320				
Prep Date:		Analysis E)ate: 9/	12/2013	S	SeqNo: 3	79491	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromo	ofluorobenzene	1.1		1.000		107	80	120			
Sample ID	LCS-9268 MK	SampT	ype: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: 1	LCSS	Batcl	h ID: R1	3320	F	RunNo: 1	3320				
Prep Date:		Analysis D	Date: 9/	12/2013	S	SeqNo: 3	7 94 92	Units: %RE	С		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromo	ofluorobenzene	1.1		1.000		114	80	120			

Qualifiers:

J

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
 - Analyte detected below quantitation limits
- RSD is greater than RSDlimit 0
- R RPD outside accepted recovery limits
- S 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
- Sample pH greater than 2 for VOA and TOC only. Р
- RL **Reporting Detection Limit**

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1309326

WO#:

13-Sep-13

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

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inter aven in costice, analytic,	nanenvii onnemai			
Client Name: SMA-FARM Work Order Numb	er: 1309326		RcptNo:	1
Received by/date: 69/10/13				
Logged By: Lindsay/Mangin 9/10/2013 10:00:00	AM	Junity Hlypp		
Completed By: Lindsay Mangin 9/10/2013 10:48:38	AM	tracky Hogo		
Reviewed By: MG 09/10/13				
Chain of Custody				
1. Custody seals intact on sample bottles?	Yes	No	Not Present 🗸	
2. Is Chain of Custody complete?	Yes 🗸	No	Not Present	
3. How was the sample delivered?	Courier			
Log In				
4. Was an attempt made to cool the samples?	Yes 🖌	No	NA	
5. Were all samples received at a temperature of $>0^{\circ}$ C to 6.0°C	Yes 🖌	No : i	NA	
6. Sample(s) in proper container(s)?	Yes 🗸	No 🗄 :		
7. Sufficient sample volume for indicated test(s)?	Yes 🗸	No		
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗸	No		
9. Was preservative added to bottles?	Yes	No 🖌	NA	
10.VOA vials have zero headspace?	Yes	No	No VOA Vials 🗸	
11, Were any sample containers received broken?	Yes	No 🗸	# of oppopulat	
			# of preserved bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗸	No	for pH: (<2	or >12 unless noted
13 Are matrices correctly identified on Chain of Custody?	Yes 🗸	No	Adjusted?	
14. Is it clear what analyses were requested?	Yes 🗸	No		
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗸	No	Checked by:	
Special Handling (if applicable)				
16. Was client notified of all discrepancies with this order?	Yes	No	NA 🗸	
Person Notified: Date	a: [adalian dalam dan dara daga wasar ya		
By Whom: Via:	1	Phone Fax	In Person	
Regarding:		Carlos and a second	and the second state of the second	
Client Instructions:				:
17. Additional remarks:				
18. Cooler Information				
Cooler No Temp °C Condition Seal Intact Seal No	Seal Date	Signed By		
1 1.0 Good Yes				

Page 1 of I

C	hain	of-Cu	istody Record	Turn-Around	Time:	1				Ъ			Fħ	JV	TC		MR	1 EI		A I	
Client:	SMA	<i>f</i>		Standard															ТО		
<u></u>				Project Name	Entripo	ĵĴe	1 •	4			www.										
Mailing	Address	8101	San Juan Blud.	Lateral	6B-i0			490)1 H								M 87	109			
			NM 87401	Project #:	S / 20			Te	I. 50	5-34	5-397	'5	Fa	ax 5	505-:	345-	4107	,			
			5.75.35		Slazion	1	÷		2.5			An	alys	sis I	Requ	uest	2. 1940 1940 - 1940				
			ng e Souchermither, com	Project Mana	iger:	,	⊊	only)	б Ю					(⁴)	s						
QA/QC	Package:)		Thomas	Long	AB's (8021)	as o	Σ			2		O4,S	PCB'						
G Stan			Level 4 (Full Validation)					<u>ଓ</u> ୮	8			SIMS)		2, P(82 P						
Accredi		□ Othe	ar .	Sampler:	TJL Xives			+ TPH (Gas	5	8.1)	4.1)	220		N N N	/ 8082						ź
				Sample Tem				+ 1	GR	141	d 50	δ.	als	2	des		_ VO			5	ē ≻
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALINO HEALINO	BTEX + MTE	BTEX + MTBE	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH'S (8310 OF 8270	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides	8260B (VOA)	8270 (Semi-VOA)			Air Bubbloc /V or NI	AIL KUNNIRS I
7-9-13	1100	Soil	56-1	Moz Jur	Cool	-001	X		x												-
]	1103		SC-2	1		-002	X		x												-
	1108		SC-3			-003	X		×												-
-	11/2		SC-4			-00H	X		x				1								-
	1120		SC-S			-005	X		X										+	++	-
	1/33		SC-6			- 00,6	t X		x												-
	1135		5677			-007	Y		¥					-						++	-
<u>~</u>	-																				-
																					-
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<u></u>			· · · · · · · · · · · · · · · · · · ·			**************************************															-
						· ·															-
Date: 1-9-13 Date:	1540	Relinquishe	home Ling	Received by:	Walter	Date Time 1/9/13 1540 Date Time	Ren	arks	:	B; 1	}	То		E	n-te	e p	rise	 			-
9/9/13	1740	Th	vustin Jaeles	V A	- 091	10/13 1000															_

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



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

November 19, 2014

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

RE: Lateral 6B-10

OrderNo.: 1411595

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 11/15/2014 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates . Project: Lateral 6B-10

Client Sample ID: SB-4 @ 4' Collection Date: 11/14/2014 1:15:00 PM Received Date: 11/15/2014 10:00:00 AM

Lab ID: 1411595-001	Matrix:	SOIL	Received I	Date: 11	/15/2014 10:00:00 AN	M
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	GE ORGANICS				Analys	st: JME
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/19/2014 2:40:35 AI	M 16408
Surr: DNOP	98.2	63.5-128	%REC	1	11/19/2014 2:40:35 Al	M 16408
EPA METHOD 8015D: GASOLINE RA	ANGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/18/2014 2:13:29 PI	M 16419
Surr: BFB	91.2	80-120	%REC	1	11/18/2014 2:13:29 PI	M 16419
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.048	mg/Kg	1	11/18/2014 2:13:29 PI	M 16419
Toluene	ND	0.048	mg/Kg	1	11/18/2014 2:13:29 PI	M 16419
Ethylbenzene	ND	0.048	mg/Kg	1	11/18/2014 2:13:29 Pl	M 16419
Xylenes, Total	ND	0.096	mg/Kg	1	11/18/2014 2:13:29 Pl	VI 16419
Surr: 4-Bromofluorobenzene	100	80-120	%REC	1	11/18/2014 2:13:29 PI	M 16419

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	r age r or o
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 6B-10

1411595-002

Lab ID:

Client Sample ID: SB-4 @ 13.5' Collection Date: 11/14/2014 2:46:00 PM Received Date: 11/15/2014 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	st: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/19/2014 3:10:29 Al	M 16408
Surr: DNOP	94.9	63.5-128	%REC	1	11/19/2014 3:10:29 A	VI 16408
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	st: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/18/2014 3:39:19 PI	M 16419
Surr: BFB	90.4	80-120	%REC	1	11/18/2014 3:39:19 P	VI 16419
EPA METHOD 8021B: VOLATILES					Analys	st: NSB
Benzene	ND	0.047	mg/Kg	1	11/18/2014 3:39:19 P	M 16419
Toluene	ND	0.047	mg/Kg	1	11/18/2014 3:39:19 P	M 16419
Ethylbenzene	ND	0.047	mg/Kg	1	11/18/2014 3:39:19 P	M 16419
Xylenes, Total	ND	0.094	mg/Kg	1	11/18/2014 3:39:19 P	M 16419
Surr: 4-Bromofluorobenzene	99.6	80-120	%REC	1	11/18/2014 3:39:19 P	M 16419

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	d Blank
	Е	Value above quantitation range	Н	Holding times for preparation or analysis	exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 age 2 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 6B-10

1411595-003

Lab ID:

Client Sample ID: SB-2 @ 13' Collection Date: 11/14/2014 3:05:00 PM Received Date: 11/15/2014 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE					Analy	st: JME
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	11/19/2014 3:40:00 A	M 16408
Surr: DNOP	89.8	63.5-128	%REC	1	11/19/2014 3:40:00 A	M 16408
EPA METHOD 8015D: GASOLINE RAI	NGE				Analy	st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	11/18/2014 5:05:20 P	M 16419
Surr: BFB	90.4	80-120	%REC	1	11/18/2014 5:05:20 F	M 16419
EPA METHOD 8021B: VOLATILES					Analy	st: NSB
Benzene	ND	0.049	mg/Kg	1	11/18/2014 5:05:20 F	M 16419
Toluene	ND	0.049	mg/Kg	1	11/18/2014 5:05:20 F	M 16419
Ethylbenzene	ND	0.049	mg/Kg	1	11/18/2014 5:05:20 F	M 16419
Xylenes, Total	ND	0.097	mg/Kg	1	11/18/2014 5:05:20 F	M 16419
Surr: 4-Bromofluorobenzene	99.3	80-120	%REC	1	11/18/2014 5:05:20 F	M 16419

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank		
	Е	Value above quantitation range	Н	Holding times for preparation or analysis exceeded			
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 3 of 8		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	r age 5 or 6		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
	S	Spike Recovery outside accepted recovery limits					

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: SB-1 @ 12' **CLIENT:** Souder, Miller and Associates Lateral 6B-10 Collection Date: 11/14/2014 3:08:00 PM Project: Lab ID: 1411595-004 Matrix: SOIL Received Date: 11/15/2014 10:00:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: JME

EPA METHOD 6015D: DIESEL KANGE	JRGANICS				Analyst. JW	E
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	11/19/2014 4:09:27 AM 164	80
Surr: DNOP	102	63.5-128	%REC	1	11/19/2014 4:09:27 AM 164	80
EPA METHOD 8015D: GASOLINE RANG	θE				Analyst: NS	в
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/18/2014 5:33:57 PM 164	19
Surr: BFB	91.1	80-120	%REC	1	11/18/2014 5:33:57 PM 164	19
						-
EPA METHOD 8021B: VOLATILES					Analyst: NS I	в
EPA METHOD 8021B: VOLATILES Benzene	ND	0.048	mg/Kg	1	Analyst: NS 11/18/2014 5:33:57 PM 164	
	ND ND	0.048 0.048	mg/Kg mg/Kg	1 1	,	19
Benzene			0 0	1 1 1	11/18/2014 5:33:57 PM 164	19 19
Benzene Toluene	ND	0.048	mg/Kg	1 1 1	11/18/2014 5:33:57 PM 164 11/18/2014 5:33:57 PM 164	19 19 19
Benzene Toluene Ethylbenzene	ND ND	0.048 0.048	mg/Kg mg/Kg	1 1 1 1	11/18/2014 5:33:57 PM 164 11/18/2014 5:33:57 PM 164 11/18/2014 5:33:57 PM 164 11/18/2014 5:33:57 PM 164	19 19 19 19

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	RSD is greater than RSDlimit
	R	RPD outside accepted recovery limits
	S	Spike Recovery outside accepted recovery limits

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2. Р
- RL Reporting Detection Limit
- Page 4 of 8

11/18/2014 7:56:59 PM 16419

11/18/2014 7:56:59 PM 16419

11/18/2014 7:56:59 PM 16419

Hall Environmental Analysis Laboratory, Inc.

Ethylbenzene

Xylenes, Total

Surr: 4-Bromofluorobenzene

CLIENT: Souder, Miller and Associates Client Sample ID: SC-1 Surface **Project:** Lateral 6B-10 Collection Date: 11/14/2014 3:10:00 PM Lab ID: 1411595-005 Matrix: SOIL Received Date: 11/15/2014 10:00:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: JME Diesel Range Organics (DRO) ND 10 11/19/2014 4:39:09 AM 16408 mg/Kg 1 Surr: DNOP 101 %REC 11/19/2014 4:39:09 AM 16408 63.5-128 1 **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 4.7 11/18/2014 7:56:59 PM 16419 mg/Kg 1 Surr: BFB 88.7 80-120 %REC 1 11/18/2014 7:56:59 PM 16419 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene 11/18/2014 7:56:59 PM 16419 ND 0.047 mg/Kg 1 Toluene ND 0.047 mg/Kg 1 11/18/2014 7:56:59 PM 16419

0.047

0.095

80-120

mg/Kg

mg/Kg

%REC

1

1

1

ND

ND

97.0

- Qualifiers: * Value exceeds Maximum Contaminant Level. Ē Value above quantitation range J Analyte detected below quantitation limits
 - 0 RSD is greater than RSDlimit
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- Р Sample pH greater than 2.
- RL Reporting Detection Limit
- Page 5 of 8

- ND

	er, Miller and Associates Il 6B-10			
Sample ID MB-16408	SampType: MBLK	TestCode: EPA Me	lethod 8015D: Diesel Range Organics	
Client ID: PBS	Batch ID: 16408	RunNo: 22596		
Prep Date: 11/17/2014	Analysis Date: 11/17/2014	SeqNo: 666118	8 Units: mg/Kg	
Analyte	Result PQL SPK va	ue SPK Ref Val %REC Low	wLimit HighLimit %RPD RPDLimit Qual	I
Diesel Range Organics (DRO)	ND 10			
Surr: DNOP	9.7 10	00 96.7	63.5 128	
Sample ID LCS-16408	SampType: LCS	TestCode: EPA Me	lethod 8015D: Diesel Range Organics	
Client ID: LCSS	Batch ID: 16408	RunNo: 22596	i	
Prep Date: 11/17/2014	Analysis Date: 11/17/2014	SeqNo: 666119	9 Units: mg/Kg	
Analyte	Result PQL SPK va	ue SPK Ref Val %REC Low	wLimit HighLimit %RPD RPDLimit Qual	I
Diesel Range Organics (DRO)	56 10 50	00 0 112	68.6 130	
Surr: DNOP	4.6 5.0	00 92.7	63.5 128	

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

WO#: 1411595

19-Nov-14

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Client: Project:	Souder, N Lateral 6	Ailler and A B-10	Associa	ites										
Sample ID	MB-16419	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e							
Client ID:	PBS	Batch	ID: 16	419	F	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis Date: 11/18/2014			S	SeqNo: 6	67008	Units: mg/l	٢g					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 910	5.0	1000		90.8	80	120						
Sample ID LCS-16419 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range														
Client ID:	LCSS Batch ID: 1641			419	F	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis D	ate: 11	1/18/2014	S	SeqNo: 6	67009	Únits: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
	e Organics (GRO)	24	5.0	25.00	0	95. 9	65.8	139						
Surr: BFB		970		1000		97.5	80	120						
Sample ID	1411595-002AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e				
Client ID:	SB-4 @ 13.5'	Batch	ID: 16	419	RunNo: 22604									
Prep Date:	11/17/2014	Analysis D	ate: 11	1/18/2014	S	BeqNo: 6	67016	Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Rang	e Organics (GRO)	25	4.7	23.43	0	106	71.8	132						
Surr: BFB		950		937.2		101	80	120						
Sample ID	1411595-002AMS	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e				
Client ID:	SB-4 @ 13.5'	Batch	ID: 16	419	F	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis D	ate: 11	1/18/2014	S	SeqNo: 6	67017	Units: mg/Kg						
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Gasoline Rang	e Organics (GRO)	25	4.7	23.43	0	106	71.8	132	0.0755	20				
Surr: BFB		940		937.2		100	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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

WO#: 1411595

19-Nov-14

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QC SUMMARY REPORT

	rironmental Analysis Laboratory, Inc.
Client:	Souder, Miller and Associates

Project:	Lateral 6	B-10			w.s									
Sample ID	MB-16419	Samp	Гуре: МЕ	BLK	Tes	TestCode: EPA Method 8021B: Volatiles								
Client ID:	PBS	Batc	h ID: 164	419	я	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis [Date: 11	1/18/2014	S	SeqNo: 667037 U		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-Bron	nofluorobenzene	1.0		1.000		101	80	120						
Sample ID	LCS-16419	Samp	Гуре: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles					
Client ID:	LCSS	Batc	h ID: 16	419	F	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis [Date: 11	1/18/2014	S	SeqNo: 6	67038	Units: mg/k	(g					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene		1.1	0.050	1.000	0	105	80	120						
Toluene		1.0	0.050	1.000	0	102	80	120						
Ethylbenzene		1.1	0.050	1.000	0	106	80	120						
Xylenes, Total		3.1	0.10	3.000	0	105	80	120						
Surr: 4-Bron	nofluorobenzene	1.1		1.000		108	80	120						
Sample ID	1411595-001AMS	Samp	Type: MS	6	TestCode: EPA Method 8021B: Volatiles									
Client ID:	SB-4 @ 4'	Batc	h ID: 16	419	RunNo: 22604									
Prep Date:	11/17/2014	Analysis [Date: 11	1/18/2014	S	GegNo: 6	67044	Units: mg/k	(g					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene		0.94	0.048	0.9551	0	98.6	77.4	142						
Toluene		0.92	0.048	0.9551	0.008994	95.8	77	132						
Ethylbenzene		0.96	0.048	0.9551	0	100	77.6	134						
Xylenes, Total		2.9	0.096	2.865	0	101	77.4	132						
Surr: 4-Bron	nofluorobenzene	1.0		0.9551		105	80	120						
Sample ID	1411595-001AMS	D Samp	Type: MS	SD	Tes	tCode: E	PA Method	8021B: Vola	tiles					
Client ID:	SB-4 @ 4'	Batc	h ID: 16	419	F	RunNo: 2	2604							
Prep Date:	11/17/2014	Analysis (Date: 1	1/18/2014	S	SeqNo: 6	67045	Units: mg/ł	٢g					
Analyte		Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual			
Benzene		0.93	0.048	0.9551	0	97.1	77.4	142	1.55	20				
Toluene		0.93	0.048	0.9551	0.008994	96.1	77	132	0.268	20				
Ethylbenzene		0.98	0.048	0.9551	0	103	77.6	134	2.89	20				
Xylenes, Total		2.9	0.096	2.865	0	101	77.4	132	0.866	20				

Qualifiers:

* Value exceeds Maximum Contaminant Level.

1.0

0.9551

E Value above quantitation range

Surr: 4-Bromofluorobenzene

- 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

0

0

Page 8 of 8

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

105

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

WO#: 1411595

19-Nov-14

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name:	SMA-FARM	Work Order Number:	1411595		RcptNo:	1
Received by/dat	e:AF	11/15/12				
Logged By:	Lindsay Mangin	11/15/2014 10:00:00 A	м	Junky Holes		
Completed By:	Completed By: Lindsay Mangin 11/17/2014 9:29:53 Al			Andy Hogo		
Reviewed By:	<u> </u>	11/11/14				
<u>Chain of Cus</u>	tody					
1. Custody sea	als intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🕢	
2. Is Chain of C	Custody complete?		Yes 🛃	No 🗔	Not Present	
3. How was the	e sample delivered?		<u>Courier</u>			
<u>Log In</u>						
4. Was an atte	empt made to cool the sampl	es?	Yes 🛃	No []	NA 🗆	
5. Were all sar	mples received at a temperai	ure of >0° C to 6.0°C	Yes 🖈	No 🗌		
6. Sample(s) i	n proper container(s)?		Yes 🛃	No 🗋		
7. Sufficient sa	ample volume for indicated te	est(s)?	Yes 🛃	No 🗌		
8. Are samples	s (except VOA and ONG) pro	perly preserved?	Yes 🛃	No 🗔		
9. Was preserv	vative added to bottles?		Yes 🗌	No 🛃	NA 🗌	
10.VOA vials h	ave zero headspace?		Yes 🗌	No 🗋	No VOA Vials 🛃	
11. Were any s	ample containers received b	roken?	Yes 🗌	No 🗷 [# of preserved	· ····································
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)			Yes 🛃	No 🗔	bottles checked for pH: (<2 c	or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?			Yes 🛃	No 🗖	Adjusted?	
14. Is it clear wh	nat analyses were requested	?	Yes 🛃	No 🗌		
	ding times able to be met?		Yes 🛃	No 🗌	Checked by:	
(II 110, 11 0(II)	customer for authorization.)					

Special Handling (if applicable)

6. Was client notified of	all discrepancies with this order?	Yes 🗌	No 🗔	NA 🛃
Person Notified	1	Date:		······································
By Whom:		Via: 📋 eMail 🔲 P	hone 🗌 Fax 📋	
Regarding:		a an an an an ann an an an an an an an a		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1
Client Instructio	ns:			

17. Additional remarks:

18. Cooler Information

Cooler No Temp		n Seal Inte	ct Seal No S	
1 4.5	Good	Yes		

Page 1 of 1

Chain-of-Custody Record			Turn-Around Time:				HALL ENVIRONMENTAL													
Client:	SM	114		Standard Rush				ANALYSIS LABORATORY												
·····				Project Name																
Mailing	Address	401	W Brondusel		Loal	60-10	www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109													
<u> </u>					<u> </u>		Tel. 505-345-3975 Fax 505-345-4107													
	tarminton UM 87401				22855	BGg	Analysis Request													
Phone #	+: <u> </u>	595	325 7635					5	<u>.</u>				~~. ·					<u></u>		
email or Fax#: Storn. moskal @ sandinillor QA/QC Package:				- Die Charles	se Mo	skel		+ TPH (Gas only)			SIMS)		04,SO	CB's						
□ Stan			Level 4 (Full Validation)		- <u>\</u>		- A	\mathbb{S}					2,P(32 F						
Accredi		□ Othe	r	Sampler: On Ice:	<u>ل ک</u> Ves	raque Not	Ŧ	t I	~ II 🖵	504.1)	8270		0 ^{3,} NO	/ 808		F				N)
	(Type)				Serature: 4		l la	Щ.	5 5	d 5(ŏ	tals	NC NC	des	2	Ş				Σ
Date	Time	Matrix	Sample Request ID		Preservative Type		BTEXA MIREA	BTEX + MTBE	TPH (Method 418.	EDB (Method	PAH's (8310 or	RCRA 8 Metals	Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)				Air Bubbles (Y or N)
1/14/14	1315	soil	5B-4 @ 4'	1 402		-001	X		<											
1	1946	1	5B-4 @ 13.5'	(-002	X	D	<[
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, , ((necessary	samples subr	mitted to Hall Environmental may be subc	ontracted to other a	credited laboratorie	es. This serves as notice of thi	s possib	vility. Ang	/ sub-co	ntracte	d data	will be	e cleari	y nota	ited or	i the ar	alytical	report.		