3R-1012

Release Report/ General Correspondence

Enterprise RA

Date: Jul-Sep 2014

State of New Mexico Energy Minerals and Natural Resources

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

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

	ang pangan di kanang pang baha	F	Releas	e Notifica	atior	n and C	orrectiv	ve Ac	tion		
					OP	ERATO	٩		🛛 Initial	Report	Final Report
Name of C	ompany:	Enterprise F	ield Ser	vices LLC		Contact: T	nomas Long	<u>g</u>		CUD SEP 1	5'14
Address: 6	Address: 614 Relily Ave, Farmington, NW 87401					Telephone	<u>No. 505-59</u>	9-2286) 	UIL CUNS. L	<u></u>
Facility Na	Facility Name. Lateral K-59				racility Ty	be: Natural	Gas G	athering L	ine		
Surface O	wner: BLM			Mineral C	wner:	BLM			API No).	
				LOCA		OF REI	EASE			DIST. 3	
Unit Letter	Section	Township	Range	Feet from	North	n/Gouth	Feet from	Ea	stWest	County	
	12	25N	/ VV	the 554	Line		the 370		e	Rio Arriba	
	.	Latitude	<u> </u>	0848		_ Longitud	le <u>-107.</u>	<u>53378</u> _			
•	•			NAT	URE	OF RELI	EASE				
Type of Rel	ease: Natur	al Gas and N	latural Ga	s Liquids		Volume o	f Release Ur	nknown	Volume	Recovered: Ur	known
Source of R	elease: Inte	ernal Corrosic	n			Date and	Hour of Occ	urrence:	Date and	Hour of Disco	overy:
Was Immed	liate Notice	Given?				If YES. To	Whom? Co	urtesv i	notification to	NMOCD – Co	ory Smith: BLM
	•	☐ Yes	s 🗌 No	🛛 Not Req	uired	– Shari K	etchum on S	eptembe	er 9, 2014.		,
By Whom?						Date and	Hour				
Was a Watercourse Reached?			If YES, Vo	olume Impac	ting the	Watercourse)				
	<u> </u>	magetod Dea	oribo Full	.,*							
Describe-Ca	ause of Pro	blem and Re	medial Ac	<u>y.</u> ction: On Augu	ist 28. 1	2014 a pipe	line leak wa	s discov	ered while c	erforming und	eraround utility
locating on	the Latera	I K-39 ROW	. The En	terprise techni	ician in	itiated notif	ication proce	edures.	The pipeline	was isolated	l, blown down,
depressuriz	ed, locked	out and tagg	ed out. F	lepairs and rer	mediati	on began S	eptember 9,	2014. /	A third party	environmental	contractor will
oversee exc	avation act	ivities and co	liect closu	ire samples du	ring re	pair activitie	S.				
1997 <u>1</u>	· · · · ·										
Describe Ar	ea Affected	and Cleanup	Action T	aken: On Aug	ust 28,	2014 a pipe	eline leak wa	s discov	ered while p	erforming und	erground utility
locating on	the Lateral	K-39 ROW	. The Ent	terprise techni	cian in modiati	itiated notif	cation proce	edures.	The pipeline	e was isolated	, blown down,
oversee ex	eu, lockeu o	ivities and co	ollect clos	ure samples d	neulaii Iurina r	on began S epair activit	eptember 9, les A "final"	2014. A	vill be submi	tted upon rece	eipt of the third
party enviro	nmental cor	ntractor corre	ctive actic	on report.	.a.n.g .	opun uonn	00. /				
I hereby cer	tify that the	information g	jiven abov	ve is true and c	complet	e to the bes	t of my know	/ledge a	nd understa	nd that pursuar	nt to NMOCD
rules and re	gulations al	l operators a	re require	d to report and	/or file	certain relea	ase notification	ons and	perform cori	ective actions	for releases
which may e	endanger pu	ublic health o	r the envir 1 their one	ronment. The a	accepta	ance of a C-	141 report b	y the NN	NOCD marke	ed as "Final Re	port" does not
around wate	er. surface v	vater, human	health or	the environme	ent. In a	addition, NN	IOCD accep	tance of	a C-141 rep	ort does not re	lieve the
operator of	responsibilit	y for complia	nce with a	any other feder	al, stat	e, or local la	ws and/or re	gulatior	IS	A	
Cimpoturo	Sa	IF					<u>OIL CC</u>	<u>NSEF</u>	RVATION	DIVISIÓN	
Signature:	- y gn	1 J.U.	d ^o								· //
Printed Nan	e: Jon Field	ds				Approved by	<u>Environmer</u>	ntal Spe	<u>cialist:</u>	-X/e	
Title: Directo	or, Environn	nental				Approval Da	_{.te:} 9/18/	14	Expiration	Date:	
E-mail Addr	ess:jefields	@eprod.com			0	Conditions of	f Approval:				-1
	· · · · ·									Allached	لـ
Date: 9	11-11	14	Phon	e: (713)381-66	684					ł	
Attach Addi	tional She	ets If Neces	sary		للے نیست	HANG	1412 11	262	49	•	
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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division

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

1220 S. St. Fra	ancis Dr., Sa	nta Fe, NM 87	505	1220 Sar	South	St. Fran	cis Dr. 505					
		F	Releas	e Notifica	ation	and C	orrective	Acti	on			
		•	loiouo	0 110 1110	OP	FRATO	2	Г	⊂ ⊂ Initia:	Report		Final Report
Name of C	ompany:	Enterprise	Field Serv	vices LLC		Contact: T	homas Long			пероп		
Address: 6	14 Reilly A	Ave, Farmir	ngton, NM	87401	-	Felephone	No. 505-599-	2286			··· ···	
Facility Na	me: Lindr	ith Unit#23	}		F	acility Ty	be: Natural Ga	as Gat	hering l	Line		
Surface Ov	vner: Priv	ate		Mineral C)wner:	BLM			API N	lo.		
				LOCA	TION	OF REI	EASE	-	~	RCVD SE	P 18	'11
Unit Letter	Section a	Township	Range	Feet from	North	/South	Feet from	East	Vest	County	ha	
			511	1245	LINC		1945					1
		Latitude	36.32	1014		Longitud	le -107.164	4249		DIL VUI		* * u ` ``
										- 2151	. 0	
	aso: Natur	al Gas and M	Vatural Ga	NA I s Liquids	UKE		EASE	04	Volume	Recovered	d Non	Δ
			taturai Ga			MCF	T (Cloude: 12,0)	04	Volume		a. Non	•
Source of R rains and a	elease: Pip flood event	eline was se	vered as a	result of heav	'Y	Date and 8/5/2014	Hour of Occurre @ 2:15 p.m.	ence:	Date ar @ 3:30	nd Hour of I p.m.	Discov	ery: 8/5/2014
Was Immed	iate Notice	Given?	s 🗌 No	Not Req	uired	If YES, To – Cory Si	Whom? Notifi nith; USACE a	cation nd NMI	to NRC - ED	- Report #	10915	39; NMOCD
By Whom?	Thomas L	ong				Date and	Hour:8/6/2014 (@ 3:00	p.m.			
Was a Wate	rcourse Re	ached?				If YES, Volume Impacting the Watercourse						
			🖾 Yes	LI No								
If a Waterco	urse was Ir	npacted, De	scribe Full	y.* The pipelin	e was s	evered as	a result of heavy	y rains a	and a floo	od event. T	he rele	ease
discharged	nto Largo V	Wash. No vis	medial Act	tions of hydroc tion: A third pa	rtv repo	mpacts to t	ne wash were o ible line leak al	bserve ong the	d. Lindrith	Unit #23 pir	peline	Technicians
were dispate	ched to con	firm the leak	. Due to th	e recent rain e	event ar	nd the high	volume of water	r runnin	g in the v	vash, the ba	ank the	it was
supporting t	he pipeline	was eroded	causing it	to severe. The	pipelin	e was isola	ted, blown down	n, locke	d out and	d tagged ou	it. The	release
subsurface i	nvestigatio	n on 8/8/201	4.		sornyu		ipacis to the wa		iniu party	Contractor	conuc	
Decesibe Ar	Affe at a d	and Cleany	n Antion T	alcam, Athird m		orted a na	nihla lina laak d		o Lindrith	Linit #22 n	ingling	
Describe Ar Technicians	ea Affected were dispa	and Cleanu	p Action 1	aken: A third p ak. Due to the	recent	rain event a	and the high vol	along in ume of	water rui	nning in the	wash,	the bank
that was sup	porting the	pipeline wa	s eroded c	ausing it to sev	vere. Ti	ne pipeline	was isolated, bl	own do	wn, locke	ed out and t	agged	out. The
contractor c	harge into l onducted a	Largo wash. subsurface i	I here wer	e no visible inc on on 8/8/2014	dication	s of hydroc d party inve	arbon impacts to stigation report	o the wa	asn. A th ded with	ird party en this "final" d	vironm 2-141.	iental
		Cubcunaco										
I hereby cer	tify that the	information	given abov	ve is true and o	complet	e to the be	t of my knowled	dge and	underst	and that pu	rsuant	to NMOCD
rules and re	gulations a	Il operators a	are require	d to report and	l/or file	certain rele	ase notifications	s and pe	erform co	rrective act	ions fo	r releases
relieve the c	perator of l	iability shoul	d their ope	ronment. The erations have fa	accepta ailed to	adequately	investigate and	d remed	liate cont	amination t	hat po	se a threat to
ground wate	er, surface y	vater, humar	n health or	the environme	ent. In a	addition, N	IOCD acceptan	ice of a	C-141 re	eport does r	not relie	eve the
operator of	esponsibili	ty for complia	ance with a	any other feder	ral, stat	e, or local la	aws and/or regu	lations.				
Signature:		1 tu				OIL CONSERVATION DIVISION						
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Printed Nam	ne: Jon Fiel	ds	· · · · · · · · · · · · · · · · ·		/	Approved b	y Environmenta	I Specia	alist: U		N	
Title: Directo	or, Environr	nental			/	Approval Da	ate: 9/25/14	4	Expiratio	n Date:		
E-mail Addr	ess:jefields	@eprod.com	ו			Conditions	of Approval:			Attache	ed 🗖	
Data: 9	7/15/701	4	Dhor	e. (713)381_60	384							
Attach Addi	tional She	ets If Nece	ssary			HARS	1421.0	290	-00	l,		



August 28, 2014

SMA #5122855

Mr. Tom Long Enterprise Products Field Environmental-San Juan Basin 614 Reilly Avenue Farmington, NM 87401

RE: LETTER REPORT SUMMARIZING WATER AND SOIL SAMPLING ACTIVITIES AT THE LINDRITH UNIT #23 PIPELINE RELEASE SITE, RIO ARRIBA COUNTY, NEW MEXICO

Dear Mr. Long:

Souder, Miller & Associates (SMA) is pleased to submit this letter report summarizing the water and soil sampling event for the Lindrith Unit #23 pipeline release site. The site is located in the SE ¼ SW ¼ Section 9 T24N R3W, Rio Arriba County, New Mexico on privately owned land in Largo Canyon Wash. Figure 1 illustrates the location of the site. The release reportedly occurred on August 2, 2012 and is a result of the collapse of the northern bank of Largo Wash damaging the natural gas pipeline. The bank collapse was caused by a heavy rain event.

1.0 SITE RANKING AND RELEASE HISTORY

The release site is located on privately owned land. 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). The release is located in the flow path of Largo Wash.

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. One well with no available well log was located in Section 10. The physical location of this release is within the jurisdiction of New Mexico Oil Conservation Division (NM OCD). 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, ethyl-benzene, and total xylenes (BTEX), and 100 ppm total petroleum hydrocarbons (TPH).

2.0 SUMMARY OF QUARTERLY FIELD ACTIVITIES

On August 8, 2014, SMA mobilized to the site to conduct a release site assessment and collect samples for laboratory analysis. Using a hand auger, SMA determined the depth to ground water in Largo was approximately 2 to 3 feet below ground surface (bgs). SMA advanced the hand auger until reaching fully saturated soils. The soil collected above the ground water surface was field screened via headspace method using a calibrated photoionization detector (PID). Samples were collected in the immediate vicinity of the upstream and downstream

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Surveying

www.soudermiller.com

Activities Report Lindrith Unit #23 Pipeline Release

sections of the Lindrith Unit #23 lateral pipeline. Additional samples were collected downstream of the Largo Wash in areas most likely to contain release contents. Soil samples were collected in laboratory provided glassware and submitted to Hall Environmental Analysis Laboratory in Albuquerque, NM for analysis via EPA Methods 8015 for gasoline and diesel range organics (GRO/DRO) and 8021 for benzene, toluene, ethylbenzene and xylene (BTEX).

A composite ground water sample was collected from the open hand auger bore holes from locations SB-1 and SB-2. Neither one of the ground water sampling locations contained a sufficient amount of water to fulfill the required sample volume. The collected water was placed into a large laboratory provided sampling container to create a true composite sample. The water was then decanted into the appropriate laboratory sampling containers for analysis via EPA Method 8021 for BTEX and methyl tert-butyl ether (MTBE).

Field head space screening did not indicated significant contamination in the vicinity of the pipeline release nor downstream of the wash. A sample location and soil contaminant concentration map is attached to this report.

3.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the soil and water sampling event indicate that contaminant concentrations in all of the soil borings are below laboratory detection limits and below NMOCD remediation soil standards. Additionally, the ground water sample collected is below laboratory detection limits and New Mexico Ground Water Quality Bureau's standards. A summary of laboratory results is attached in Table 1.

SMA recommends no further action at the Lindrith Unit #23 pipeline release site.

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

Sincerely, Souder, Miller & Associates

Steve Moskal Project Scientist

.a.l.

Reid S. Allan, P.G. Principal Scientist

Figures: Figure 1 - Vicinity Map Figure 2 - Site Map Figure 3 – Sampling Location and Contaminant Concentration Map

Table 1: Summary of Laboratory Analysis

Appendix A: Laboratory Report

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FIGURES

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P:5-Enterprise MSA (2014) 5122855/SPILL RESPONSE/BG36 - Lindrein Unit #23/CADIL INDRETH UNIT #23-LOCATION MAP.dwg, SJM. 8/28/2014 4:16 PM

TABLE 1 SUMMARY OF LABORATORY ANALYSIS

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Enterprise Products Table 1: Summary of Laboratory Analysis Results in mg/Kg

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Lindrith Unit #23 Pipeline Release 8/28/2014

	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 Ran	king: 40	10	0 ppm	10 ppm	50 ppm			
8/8/2014	11:12	SB-1	2	<4.9	<9.9	<0.049	<0.099			
8/8/2014	11:19	SB-2	2	<4.9	<9.9	<0.048	<0.096			
8/8/2014	12:06	SB-3	2	<5.0	<9.8	<0.050	<0.099			
8/8/2014	12:09	SB-4	1	<4.9	<9.9	<0.049	<0.098			
8/8/2014	12:13	SB-5	1	<5.0	<9.9	<0.050	<0.099			
		G	iround Water Sa	mple						
Date	Time	Sample ID	Method 8021 Benzene	Method 8021 Toluene	Method 8021 Ethylbenzene	Method 8021 Xylene	Method 8021 MTBE			
N	IMWQCC S	tandards (<i>u</i> g/L)	10.0	750.0	750.0	620.0	100			
8/8/2014	12:00	Water Composite (WC-1)	<5.0	<5.0	<5.0	<10	<12			



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APPENDIX A LABORATORY REPORT

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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>

August 14, 2014

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

RE: Lindrith Unit #23

OrderNo.: 1408420

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 6 sample(s) on 8/9/2014 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 1408420						
Date Reported: 8/14/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lindrith Unit #23

1408420-001

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Lab ID:

Client Sample ID: SB-1 @ 2' Collection Date: 8/8/2014 11:12:00 AM Received Date: 8/9/2014 9:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE				Analyst	BCN	
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/14/2014 4:22:11 AM	14691
Surr: DNOP	107	57.9-140	%REC	1	8/14/2014 4:22:11 AM	14691
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/12/2014 4:22:30 PM	14697
Surr: BFB	95.1	80-120	%REC	1	8/12/2014 4:22:30 PM	14697
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.049	mg/Kg	1	8/12/2014 4:22:30 PM	14697
Toluene	ND	0.049	mg/Kg	1	8/12/2014 4:22:30 PM	14697
Ethylbenzene	ND	0.049	mg/Kg	1	8/12/2014 4:22:30 PM	14697
Xylenes, Total	ND	0.099	mg/Kg	1	8/12/2014 4:22:30 PM	14697
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	8/12/2014 4:22:30 PM	14697

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank		
	E	Value above quantitation range	Н	is 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.	ruge r or rr	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Analytical Report Lab Order 1408420 Date Reported: 8/14/2014

Hall Environmental Analysis Laboratory, Inc.

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CLIENT: Souder, Miller and Associate	s		Client Sampl	e ID: SE	3-2 @ 2'			
Project: Lindrith Unit #23			Collection l	Date: 8/8	3/2014 11:19:00 AM			
Lab ID: 1408420-002	Matrix:	SOIL	Received l	Received Date: 8/9/2014 9:00:00 AM				
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 8015D: DIESEL RANGE					Analysi	BCN		
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/14/2014 4:43:32 AM	14691		
Surr: DNOP	96.8	57.9-140	%REC	1	8/14/2014 4:43:32 AM	14691		
EPA METHOD 8015D: GASOLINE RAM	NGE				Analyst	: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	8/12/2014 4:51:14 PM	14697		
Surr: BFB	94.8	80-120	%REC	1	8/12/2014 4:51:14 PM	14697		
EPA METHOD 8021B: VOLATILES					Analyst	: NSB		
Benzene	ND	0.048	mg/Kg	1	8/12/2014 4:51:14 PM	14697		
Toluene	ND	0.048	mg/Kg	1	8/12/2014 4:51:14 PM	14697		
Ethylbenzene	ND	0.048	mg/Kg	1	8/12/2014 4:51:14 PM	14697		
Xylenes, Total	ND	0.096	mg/Kg	1	8/12/2014 4:51:14 PM	14697		
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/12/2014 4:51:14 PM	14697		

Qualifiers:	*	Value exceeds Maximum Contaminant Level.		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 11			
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 4ge 2 61 11			
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Analytical Report
Lab Order 1408420
Date Reported: 8/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lindrith Unit #23

1408420-003

Lab ID:

Client Sample ID: SB-3 @ 2' Collection Date: 8/8/2014 12:06:00 PM Received Date: 8/9/2014 9:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE				Analyst	BCN	
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	8/14/2014 5:04:57 AM	14691
Surr: DNOP	88.8	57.9-140	%REC	1	8/14/2014 5:04:57 AM	14691
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/12/2014 10:06:28 PM	14697
Surr: BFB	92.8	80-120	%REC	1	8/12/2014 10:06:28 PM	14697
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	8/12/2014 10:06:28 PM	14697
Toluene	ND	0.050	mg/Kg	1	8/12/2014 10:06:28 PM	14697
Ethylbenzene	ND	0.050	mg/Kg	1	8/12/2014 10:06:28 PM	14697
Xylenes, Total	ND	0.099	mg/Kg	1	8/12/2014 10:06:28 PM	14697
Surr: 4-Bromofluorobenzene	101	80-120	%REC	1	8/12/2014 10:06:28 PM	14697

Matrix: SOIL

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 3 of 11		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	luge 5 of 11		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
	S	Spike Recovery outside accepted recovery limits					

Analytical Report Lab Order 1408420 Date Reported: 8/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lindrith Unit #23

1408420-004

Lab ID:

Client Sample ID: SB-4 @ 1' Collection Date: 8/8/2014 12:09:00 PM Received Date: 8/9/2014 9:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGI	EORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/14/2014 5:26:13 AM	14691
Surr: DNOP	96.8	57.9-140	%REC	1	8/14/2014 5:26:13 AM	14691
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	8/12/2014 10:35:03 PM	14697
Surr: BFB	93.1	80-120	%REC	1	8/12/2014 10:35:03 PM	14697
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.049	mg/Kg	1	8/12/2014 10:35:03 PM	14697
Toluene	ND	0.049	mg/Kg	1	8/12/2014 10:35:03 PM	14697
Ethylbenzene	ND	0.049	mg/Kg	1	8/12/2014 10:35:03 PM	14697
Xylenes, Total	ND	0.098	mg/Kg	1	8/12/2014 10:35:03 PM	14697
Surr: 4-Bromofluorobenzene	102	80-120	%REC	1	8/12/2014 10:35:03 PM	14697

Matrix: SOIL

Qualifiers: * Value exceeds Maximum Contaminant I

- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 4 of 11
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report Lab Order 1408420

Date Reported: 8/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates **Project:** Lindrith Unit #23

1408420-005

Lab ID:

Client Sample ID: SB-5 @ 1' Collection Date: 8/8/2014 12:13:00 PM Received Date: 8/9/2014 9:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	8/14/2014 5:47:38 AM	14691
Surr: DNOP	92.3	57.9-140	%REC	1	8/14/2014 5:47:38 AM	14691
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	8/12/2014 11:03:41 PM	14697
Surr: BFB	93.7	80-120	%REC	1	8/12/2014 11:03:41 PM	14697
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.050	mg/Kg	1	8/12/2014 11:03:41 PM	14697
Toluene	ND	0.050	mg/Kg	1	8/12/2014 11:03:41 PM	14697
Ethylbenzene	ND	0.050	mg/Kg	1	8/12/2014 11:03:41 PM	14697
Xylenes, Total	ND	0.099	mg/Kg	1	8/12/2014 11:03:41 PM	14697
Surr: 4-Bromofluorobenzene	103	80-120	%REC	1	8/12/2014 11:03:41 PM	14697

Matrix: SOIL

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
	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
- 5 of 11

Analytical Report Lab Order 1408420 Date Reported: 8/14/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: WG-1 Lindrith Unit #23 **Project:** Collection Date: 8/8/2014 12:00:00 PM Lab ID: 1408420-006 Matrix: AQUEOUS Received Date: 8/9/2014 9:00:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch EPA METHOD 8021B: VOLATILES Analyst: DJF Methyl tert-butyl ether (MTBE) ND 12 µg/L 5 8/11/2014 4:23:26 PM R20504 Benzene ND 5.0 5 8/11/2014 4:23:26 PM R20504 µg/L Toluene ND 5.0 5 8/11/2014 4:23:26 PM R20504 μg/L Ethylbenzene ND 5.0 µg/L 5 8/11/2014 4:23:26 PM R20504 ND R20504 Xylenes, Total 10 µg/L 5 8/11/2014 4:23:26 PM 8/11/2014 4:23:26 PM Surr: 4-Bromofluorobenzene 101 82.9-139 %REC R20504 5

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

- 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

Page 6 of 11

- 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#: 1408420

14-Aug-14

Client: Project:	Souder, N Lindrith	Miller and Unit #23	Associa	ates							
Sample ID	MB-14690	SampT	ype: MI	BLK	Tes	tCode: Ei	PA Method	8015D: Dies	el Range (Organics	
Client ID:	PBS	Batch	h ID: 14	690	F	RunNo: 2	0514				
Prep Date:	8/11/2014	Analysis D)ate: 8 /	/12/2014	5	SeqNo: 5	96471	Units: %RE	c		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		9.4		10.00		94.2	57.9	140			
Sample ID	MB-14691	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Organics	
Client ID:	PBS	Batch	n ID: 14	691	F	RunNo: 2	0514				
Prep Date:	8/11/2014	Analysis D	ate: 8	12/2014	5	SeqNo: 5	96472	Units: mg/h	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Surr: DNOP	Organics (DRO)	ND 9.7	10	10.00		96.7	57.9	140			
Sample ID	LCS-14690	SamnT	vne: LC	· s	Tes		PA Mothod	8015D: Dios			
Client ID:	LCSS	Batch	D: 14	690	F	RunNo: 2	0514	OUTOD. Dies	ernange c	Jigames	
Prep Date:	8/11/2014	Analysis Date: 8/12/2014 SegNo: 596474 Units: %REC									
Analyte		Result	PQL	SPK value	SPK Ref Val	%RFC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	1	4.8		5.000		96.4	57.9	140			
Sample ID	LCS-14691	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range C	Drganics	
Client ID:	LCSS	Batch	n ID: 14	691	F	RunNo: 2	0514		-	-	i
Prep Date:	8/11/2014	Analysis D)ate: 8 /	12/2014	5	SeqNo: 5	96475	Units: mg/H	۲g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	48	10	50.00	0	96.4	68.6	130			
Surr: DNOP		4.8		5.000		96.7	57.9	140			
Sample ID	MB-14719	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Dies	el Range C	Organics	
Client ID:	PBS	Batch	1D: 14	719	F	RunNo: 2	0529				
Prep Date:	8/12/2014	Analysis D)ate: 8 /	13/2014	5	SeqNo: 5	97002	Units: %RE	с		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		9.7		10.00		96.9	57.9	140			
Sample ID	LCS-14719	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range C	Drganics	
Sample ID Client ID:	LCS-14719 LCSS	SampT Batch	ype: LC	:S 719	Tes F	tCode: El RunNo: 2	PA Method 0529	8015D: Dies	el Range C	Drganics	
Sample ID Client ID: Prep Date:	LCS-14719 LCSS 8/12/2014	SampT Batch Analysis D	ype: LC 1 ID: 14 ate: 8/	:S 719 /13/2014	Tes	tCode: El RunNo: 2 GeqNo: 5	PA Method 0529 97313	8015D: Dies Units: %RE	el Range C C	Organics	
Sample ID Client ID: Prep Date: Analyte	LCS-14719 LCSS 8/12/2014	SampT Batch Analysis D Result	ÿpe: LC n ID: 14 Date: 8/ PQL	3 719 13/2014 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 2 SeqNo: 5 %REC	PA Method 0529 97313 LowLimit	8015D: Dies Units: %RE HighLimit	el Range C C %RPD	Drganics 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
 - Not Detected at the Reporting Limit

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P Sample pH greater than 2.

ND

RL Reporting Detection Limit

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Client: Souder, 1 Project: Lindrith	, Miller and Associates h Unit #23										
Sample ID MB-14697	SampType	MBLK	Test	Code: EF	PA Method	8015D: Gaso	oline Rang	e			
Client ID: PBS	Batch ID:	14697	R	unNo: 20)517						
Prep Date: 8/11/2014	Analysis Date:	8/12/2014	S	eqNo: 5 9	97172	Units: mg/k	٢g				
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	910	1000		90.6	80	120					
Sample ID LCS-14697	SampType	LCS	Test	Code: EF	PA Method	8015D: Gase	oline Rang	e			
Client ID: LCSS	Batch ID:	14697	R	unNo: 20)517						
Prep Date: 8/11/2014	Analysis Date:	8/12/2014	S	eqNo: 59	97173	Units: mg/k	٢g				
Analyte	Result P	QL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	29	5.0 25.00	0	116	65.8	139					
Surr: BFB	1000	1000		99.9	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
 - Not Detected at the Reporting Limit
- P Sample pH greater than 2.

ND

RL Reporting Detection Limit

WO#: 1408420

14-Aug-14

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WO#: 1408420

14-Aug-14

Client: Souce Project: Lind	ler, Miller and rith Unit #23	Associa	ites							
Sample ID MB-14697	SampT	Type: MI	3LK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 14	697	F	RunNo: 2	0517				
Prep Date: 8/11/2014	Analysis E	Date: 8 /	12/2014	S	SeqNo: 5	97233	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	1.0		1.000		101	80	120			
Sample ID LCS-14697	SampT	Type: LC	s	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 14	697	F	RunNo: 2	0517				
Prep Date: 8/11/2014	Analysis [Date: 8/	12/2014	5	SeqNo: 5	97234	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.050	1.000	0	93.3	80	120			
Toluene	0.91	0.050	1.000	0	91.4	80	120			
Ethylbenzene	0.95	0.050	1.000	0	94.8	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
 - Not Detected at the Reporting Limit Page 9 of 11
- P Sample pH greater than 2.

ND

RL Reporting Detection Limit

QC SUMMARY REPORT

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Hall Environmental Analysis Laboratory, Inc.											
Client: Project:	Souder, N Lindrith	Ailler and	Associa	ites							
Sample ID	5ML RB	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	PBW	Batc	h ID: R2	0504	F	RunNo: 2	0504				
Prep Date:		Analysis [Date: 8 /	11/2014	S	SeqNo: 5	96071	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-but	yl ether (ΜΤβΕ)	ND	2.5								
Benzene		ND	1.0								
Toluene		ND	1.0								
Ethylbenzene		ND	1.0								
Xylenes, Total		ND	2.0								
Surr: 4-Bron	nofluorobenzene	21		20.00		107	82.9	139			
Sample ID 100NG BTEX LCS SampType: LCS TestCode: EPA Method 8021B: Volatiles											
Client ID: LCSW Batch ID: R20504 RunNo: 20504											
Prep Date:		Analysis (Date: 8 /	11/2014	S	SeqNo: 5	96072	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	yl ether (MTBE)	18	2.5	20.00	0	87.6	67.4	147			
Benzene		20	1.0	20.00	0	98.8	80	120			
Toluene		20	1.0	20.00	0	97.6	80	120			
Ethylbenzene		20	1.0	20.00	0	100	80	120			
Xylenes, Total		62	2.0	60.00	0	103	80	120			
Surr: 4-Brom	nofluorobenzene	22		20.00		112	82.9	139			
Sample ID	1408420-006AMS	Samp	Гуре: МS		Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	WG-1	Batc	h ID: R2	0504	F	RunNo: 2	0504				
Prep Date:		Analysis [Date: 8 /	11/2014	S	eqNo: 5	96074	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	yl ether (MTBE)	84	12	100.0	0	83.8	45.4	143			
Benzene		91	5.0	100.0	0	91.0	80	120			
Toluene		91	5.0	100.0	0	91.5	80	120			
Ethylbenzene		94	5.0	100.0	0	94.1	79.7	126			
Xylenes, Total		300	10	300.0	0	101	80	120			
Surr: 4-Brom	nofluorobenzene	110		100.0		110	82.9	139			
Sample ID	1408420-006AMS) Samp	Type: MS	5D	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID:	WG-1	Batc	h ID: R2	0504	F	lunNo: 2	0504				
Prep Date:		Analysis [Date: 8/	11/2014	S	eqNo: 5	96075	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	vl ether (MTBE)	85	12	100.0	0	85.1	45.4	143	1.61	20	
Benzene		95	5.0	100.0	0	94.5	80	120	3.85	20	
Toluene		93	5.0	100.0	0	93.5	80	120	2.14	20	
Ethylbenzene		96	5.0	100.0	0	96.4	79.7	126	2.49	20	

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
- 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

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Р Sample pH greater than 2.

RL Reporting Detection Limit

WO#: 1408420

Client: Souder, Miller and Associates

Project: Lindrith Unit #23

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Sample ID 1	1408420-006AMSD SampType: MSD TestCode: EPA Method 8021B: Volatiles										
Client ID: V	NG-1	Batch I	D: R2	0504	R	RunNo: 2	0504				
Prep Date:		Analysis Dat	te: 8 /	11/2014	S	eqNo: 5	96075	Units: µg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total		300	10	300.0	0	101	80	120	0.266	20	
Surr: 4-Bromof	fluorobenzene	110		100.0		112	82.9	139	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#: 1408420

14-Aug-14

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Alb TEL: 505-345-3975 Website: www.ha	Analysis Labo 4901 Hawk uquerque, NM 5 FAX: 505-34 allenvironmen	oratory kins NE 187109 S 5-4107 tal.com	amj	ple Log-In C	heck List
Client Name: SMA-FARM Wo	ork Order Number	: 1408420			RcptNo:	1
Received by/date: 08	loglut					
ogged By: Lindsay Mangin 8/9/2	014 9:00:00 AM		Freedree	Harpo		
Completed By: Lindsay Mangin 8/9/2	014 10:31:58 AM		(tember	Hunos		
	Julani	u	05	-0-		
hain of Custody		1				· ·
1 Custody seals intact on sample bottles?		Yes	No	Į į	Not Present	
2 Is Chain of Custody complete?		Yes 🗸	No		Not Present	
3. How was the sample delivered?		Courier				
$\frac{1}{2}$. When an estimate mode to each the complete $\frac{1}{2}$		Yoo M	No	: :	ΝΔ	
		tes ⊧♥:			NA NA	
5. Were all samples received at a temperature of >	0° C to 6.0°C	Yes 🖌	No	П	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 pre	served?	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	V	· · · · · ·	• • •
					# of preserved bottles checked	
12. Does paperwork match bottle labels?		Yes 🖌	No	•	for pH:	v >12 unless not
(Note discrepancies on chain of custody)	ndu?	Ver V	No	1	Adjusted?	n >12 uness not
13. Are mainles conectly identified on chain or cust	uy :	Yes V	No	• •	:	
15. Were all holding times able to be met?		Yes 🖌	No	; .	Checked by:	
(If no, notify customer for authorization.)						
pecial Handling (if applicable)						
16. Was client notified of all discrepancies with this o	rder?	Yes	No		NA 🗸	
Person Notified:	Date:					
By Whom:	Via:	eMail	Phone	Fax	In Person	
Client Instructions:			Such an			
a / . Aquidonal femarks:						
18. <u>Cooler Information</u>	tact Seal No	Seal Date	Signed	Bv	1	
1 2.4 Good Yes	USAL USALINU		I Orgried		1	
• • • • • • • • • • • • • • • • • • •					• 	. .
Page 1 of 1						

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C	hain	-of-Cu	ustody Record	num-Alouna	rime.									/ T E	<u>~</u>				
Client:		SMA		Standard	🗆 Rusł	ı				П А	ali Na		IN N Ste	5 8 7 8		חרי 20	ICI DA'	TO	N N N
	·			Project Name	e:				2	-		allon:	Jironi	weni	tal or				
Mailing	Address	401	West 2n Am	Lindri	th unit	+ # 23		490)1 Ha	awkin	s NE	- All	onan	erau	e. N	лп M 87	109		
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Phone	******	505	325 7535	512	Z855		 					Anal	ysis	Req	ues	, ∰°) 1640 (5-2			1.5 - ⁴⁰ 31. A
email o	r Fax#:		Stevennoskal @ South Thill 2. com	Project Mana	ger:		^	(yľ					04)						
QA/QC I E Stan	^D ackage: dard		Level 4 (Full Validation)	Sta	se Mosk	ial	s (8021	(Gas of			SIMS)		PO4.SC	PCB's					
Accredi	tation			Sampler:	SJM/	JES		Hd		.	(1.020		N02	8082					Î
				On Ice	Yes		+ V + V	-	R S	418	504 204	<u>s</u>	ş,	es /		(YO			orl
	(Type)	l						ATBI	¥.	thod		Meta	C,	ticid	(YO	-<			es O
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO	STEX ⁺	3TEX + N	FPH 801	ГРН (Me	aub (Me	SCRA 81	Anions (F	3081 Pes	3260B (V	3270 (Se			Air Bubbl
8/8/4	1172	50:1	5B-1 @ 2'	1 402		-001	X		×					~		\square		-	\square
2/8/14	1119	501	58-2021	1 402		-002-	X		X										
8/8/14	1726	Soil	58-3 E Z'	1 402		-003	X		\times			1							
3/8/1	1209	5011	8-401	1 402		-004	X		X			-						-	
3/8/14	1213	501	5B-5 C 1	1 for		-005	X		X			1						-	
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Date:	Time:		esse E Spragre	Received by:	Wall	0 = 8/8/14 1655	Ren	narks	I.	Īnu	oic	s †	5	Er	te	-pr:	5C_		
Date:	Time:	Relinguish	Mothe hhada	Received by	K-r	Vale Time					·								
	f necessary,	samples sub	mitted to Hall Environmental may be subc	ontracted to other ad	credited laboratori	es. This serves as notice of this	s possit	oility. A	ny sub	-contra	cted dat	a will b	e clearl	y nota	ted on	the an	alytical r	eport.	
		$\overline{\mathcal{U}}$		17															

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

	t	R	elease	Notificat	tior	n and Co	rrective	Acti	on	_					
					OF	ERATOR		Г	Initial Re	eport	\boxtimes	Final Report			
Name of C	ompany:	Enterprise F	ield Servic	ces LLC		Contact: Th	omas Long			<u> </u>					
Address: 6	614 Reilly	Ave, Farmin	gton, NM	87401		Telephone N	lo. 505-599-2	2286							
Facility Na	me: Later	al 2C-107		•		Facility Type	: Natural Ga	s Gat	hering Line						
Surface Ov	wner: Priv	vate		Mineral Ow	/ner:	BLM			API No.						
							ASE	RC	UD SEI	- <u>18</u> ,	11				
Unit Letter	Section	Township	Range	Feet from		orth South	Feet from	Eas	twestLine	Cou	inty				
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			30.3015	54			-107.1103	24		[–] DIST	. 3	·			
Tune of Dal	accor Note			NAIU	RE	OF RELE	ASE	105	Velue De		4 . NI				
Source of R	ease: Natu	rai gas and co	ndensate i	iquias		Volume of F	Kelease: 450 M		Volume Re	covered	1: Nor	10			
	elease. Int					12/30/2013	@ 8:30 a.m	ice.	12/30/2013	@ 8:3	0 a.m	ery.			
Was Immed	liate Notice	Given?				If YES, To V	Whom?								
Required		L	」Yes ∟	INO 🖾 NOT											
By Whom?	Thomas Lo	ong	· · · ·			Date and H	0.ur.					· · · · · · · · · · · · · · · · · · ·			
Was a Wate	ercourse Re	ached?				If YES, Volu	ime Impacting	the W	atercourse.						
		Ľ]Yes 🛛	No											
If a Waterco	ourse was Ir	npacted, Desc	ribe Fully.	r											
Describe Ca	ause of Prol	olem and Rem	edial Actio	n Taken.* A th	ird pa	arty reported a	a possible leak	on the	e Lateral 2C-	107 pipe	eline.	Technicians			
were dispate	ched and co	onfirmed the le	eak. The pi	ipeline was iso	lated	, blown down	, locked out an	d tagg	ed out. A thi	ird party	enviro	onmental			
	3363360 m		on January	0, 2014.											
Describe Ar	ea Affected	and Cleanup	Action Tak	en.* A third p	artv	environmenta	I contractor as	sessed	d the release	site on	Janua	rv 8, 2014.			
Due to the in	nclement w	eather and res	stricted acc	ess to the site,	rem	ediation activi	ties were postp	oned	until weather	r conditi	ons we	ere more			
favorablè.	On August	5, 2014, reme	diation acti	vities were cor	nplet	ed. The final	excavation dim	iensio	ns measured	l approx	imatel	y eighty (80)			
and transpo	rted a NMC	CD approved	land farm	facility. A third	part	y corrective a	ction report is in	nclude	ed with this "F	Final C-1	141."	excavaleu			
I hereby cer	tify that the	information gi	ven above	is true and cor	mplet	e to the best	of my knowled	ge and	l understand	that pu	rsuant	to NMOCD			
rules and re	gulations al	l operators are	e required t	to report and/o	r file	certain releas	e notifications and the second s	and pe	erform correct	tive acti	ions fo	r releases			
relieve the c	perator of l	iability should	their opera	tions have faile	ed to	adequately in	vestigate and	remed	liate contami	nation th	nat pos	se a threat to			
ground wate	er, surface v	vater, human	health or th	e environment	. In	addition, NMC	CD acceptanc	e of a	C-141 report	t does n	ot relie	eve the			
operator of I	responsibili	y for complian	iee with an	y other federal	, stat	e, or local law					<u></u> N				
	$\langle \rangle$		11									\square			
Signature:	/	1 hu	\swarrow		_				an	~/~~					
Printed Nam	ne: Jon Fiel	ds				Approved by E	Environmental	Specia	alist:	X.	\mathcal{M}	\sim			
Title: Directo	or, Environn	nental				Approval Date	9/25/14			iration Date:					
E-mail Addr	ess: iefields	@eprod.com				Conditions of	Approval:								
	/				Attached										
Date:	9/15/2	14	Phone [.]	(713)381-6684											
* Attach Addi	tional She	ets If Necess	sary		ב	4NCS 141	269417	0/	·····						
			-		1	11		78	$\delta \varphi$						

Enterprise Products Lateral 2C-107 Pipeline Release Latitude North 36.381594°, Longitude West -107.116924° NE/SW (Unit K) Section 23 T25N R3W Rio Arriba County, New Mexico August 25, 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 January 8, 2014 Souder, Miller & Associates (SMA) responded to oversee the excavation of soil contamination resulting from a hydrocarbon release associated with the Lateral 2C-107 pipeline. The release was initially reported on December 31, 2013. However, due to impending severe winter weather and restricted private property access, the pipeline was temporarily repaired and backfilled until safe and permissible access could be obtained. The excavation and repairs resumed on July 29, 2014. The table below summarizes information about the pipeline repair and remediation activities.

TABLE 1: RELEASE INFORMATION								
Name	Lateral 2C-107 Pipeline Release							
	Latitude/Longitude		Section, Township, Range					
Location	36.381594°	-107.116924°	Unit K	Section 23	T 25N, R 3W			
Date Reported December 31, 2013								
Reported to	Tom Long							
Land Owner	Private							
Reported To	NM Oil Conservation Division (NMOCD)							
Diameter of Pipeline	6 inches							
Source of Release	Internal Corrosion							
Release Contents	Natural Gas Liquids/Condensate							
Release Volume	Unknown							
Nearest Waterway	Unnamed Tributary Wash to Largo Canyon Wash							
Depth to Groundwater	Assumed to be less than 50 feet							
Nearest Domestic Water Source	Greater than 1,000 feet							
NMOCD Ranking	40							
SMA Response Dates	1/8/2014; 7/29/14-8/5/2014							
Subcontractors	West States Energy Contractors (WSEC)							
Disposal Facility	T-N-T Landfarm							
Yd ³ Contaminated Soil Excavated and Disposed	600 Reported on Completed Form C-138							

2.0 Introduction

On behalf of Enterprise Products Operating, LLC. (Enterprise), SMA has prepared this report that describes remediation of a hydrocarbon release associated with the Lateral 2C-107 pipeline. The Lateral 2C-107 pipeline release was a result of internal corrosion of the 6-inch, steel pipeline. The release was initially reported on December 30, 2013. The pipeline is located in Unit K, Section 23, Township 25 North, Range 3 West; 36.381594°, -107.116924°, Rio Arriba 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 in an unnamed tributary wash of Largo Canyon Wash on privately owned land with an elevation of approximately 7,300 feet above sea level. After evaluation of

Engineering • Environmental • Surveying

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

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

This release location has been assigned a NMOCD ranking of 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 January 8, 2014 and July 29 through August 5, 2014, SMA mobilized to the release site to oversee excavation activities during the repair of the pipeline and remediation activities. SMA guided the excavation activities by collecting soil samples for field screening with a calibrated photo-ionization detector (PID). Photographic documentation is included in the attached photo log in the attached Appendix A.

Soil samples were initially field screened with a calibrated PID. Samples expected to be below regulatory standards were submitted for confirmation 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 Analytical Laboratory in Albuquerque, New Mexico. Figure 3 illustrates the extent of the excavation and composite soil sample locations and laboratory results.

The final excavation dimensions were approximately 80 feet long by a maximum of 28 feet wide and up to 13 feet deep, covering an area of approximately 1,860 square feet. In total, approximately 600 cubic yards of material were excavated and hauled to T-N-T Landfarm near Dulce, New Mexico for proper disposal and replaced with clean backfill material. Soil disposal documentation is included in Appendix B.

5.0 Conclusions and Recommendations

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 40: 10 ppm benzene, 50 ppm total BTEX, and 100 ppm TPH.

Soil samples collected during the excavation on July 30 and 31, 2014 focused on the southern half of the release. Laboratory analytical results for these samples indicated concentrations above NMOCD Guidelines with the exception of those collected from the east wall (SC-9) and the south wall (SC-10) at 0-8 feet bgs. These areas with elevated concentrations were further excavated on August 5, 2014, and additional samples were collected and submitted for laboratory analysis. Specifically, the base of the excavation was further excavated to 13 feet bgs and the west wall was excavated approximately 4 feet further to the west. Similarly, the northern portion of the excavation was advanced to a maximum depth of 10 feet bgs and

continued approximately 6 feet to the north and west. The subsequent samples collected from continued excavation were submitted for laboratory analysis on August 5, 2014. The subsequent sample results were below NMOCD Guidelines for benzene, BTEX and TPH.

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 activities at the Lateral 2C-107 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:

SOUDER, MILLER & ASSOCIATES

Steve Moskal Project Scientist

Reviewed by:

Reid S. Allan, PG Principal Scientist

www.soudermiller.com

Figures





P15-Enterprise MSA (2014) 5122855ISPILL RESPONSEIBG1 - Lateral 2C-107/CADICIvitLOCATION MAP.ovg, SJM, 8/19/2014 2:28 PM



4) Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P:15-Enterprise MSA (2014) 51228551SPILL RESPONSEIBG1 - Lateral 2C-107/CAD/CMILDCATION MAP.dwg, SJM, 8/19/2014 2:32 PM
Tables

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Enterprise Products Table 2: Site Ranking

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 50 BGS = 20	20	Field verification that	Groundwater is assumed	
50' to 99' = 10		release is located near an unnamed wash.	to be less than 50 feet below ground surface.	
>100' = 0	· · · · · · · · · · · · · · · · · · ·			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes	
< 200' = 20	20	Field verification that	Release is located within	
200'-1000' = 10		release is located 175 feet to the west of an	an unnamed tributary wash of Largo Canyon Wash.	
>1000' = 0		unnamed 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	0	NM State Engineer Water	No recorded water wells located with 1000', 6	
BOTH. YES = 20, NO = 0		Well Database	wells located within a 1 mile radius.	
	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 Laboratory Analysis Results in mg/Kg

Lateral 2C-107 Pipeline Release 8/20/2014

	LABORATORY ANALYTICAL SUMMARY							
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 Ran	king: 40	100	ppm	10 ppm	50 ppm	
7/30/2014	12:03	SC-4 N. Base	4	<49	790	<0.24	<0.97	
7/30/2014	13:12	SC-5 N Wall	0-4	<23	530	<0.23	<0.46	
7/30/2014	13:13	SC-6 NW Wall	0-4	<24	510	<0.24	<0.48	
7/30/2014	13:14	SC-7 NE Wall	0-4	<24	780	<0.12	<0.47	
7/31/2014	11:40	SC-9 E Wall	0-8	<4.0	43	<0.040	<0.080	
7/31/2014	11:42	SC-8 W Wall	0-9	<4.6	170	< 0.046	<0.093	
7/31/2014	11:45	SC-10 S Wall	0-8	<3.6	11	< 0.036	<0.071	
7/31/2014	11:47	SC-11 South Base	9	<4.7	280	<0.047	<0.093	
7/31/2014	12:40	SC-13 N Wall (Southern Excavation)	8	<4.0	63	<0.040	<0.079	
8/5/2014	13:55	SW Base	13	<3.9	49	< 0.039	<0.079	
8/5/2014	13:57	SW Wall	0-13	<4.3	10	<0.043	<0.086	
8/5/2014	14:55	N Wall	0-10	<4.1	<10	<0.041	<0.083	
8/5/2014	15:00	NE Wall	0-10	<3.9	17	<0.039	<0.078	
8/5/2014	15:05	SE Base	12	<4.1	88	<0.041	<0.082	
8/5/2014	15:10	NW Wall	0-10	<4.2	14	<0.042	<0.084	
8/5/2014	15:12	N Base	10	<4.0	34	<0.040	<0.080	



Appendix A Photographic Documentation

Site Photographs Enterprise Products Lateral 2C-107 Pipeline Release



Photo 1: View of the pipeline release during the month of January, 2014.



Photo 2: View of the repair activities of the Lateral 2C-107 Pipeline.

Site Photographs Enterprise Products Lateral 2C-107 Pipeline Release



Photo 3: View of the excavation ending on July 31, 2014. facing northeast.



Photo 4: View of the final excavation activities on the northern half conatianing stormwater.

Appendix B Soil Disposal Documentation

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Lateral 2C-107 Gathering Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter K, Section 23, T 25N, R 3W, 36.380978, -107.117019, San Juan County, NM
4. Source and Description of Waste: Hydrocarbon Impacted Soils Source: Natural Gas Liquids (oil and condensate) from a pipeline release Description:Exempt petroleum affected soil from clean-up efforts at well site
Estimated Volume _50 vor bbis Known Volume (to be entered by the operator at the end of the haul) _ (ydy bbis
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
Them Lag I, Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988
regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. <u>Operator Use Only: Waste Acceptance Frequency</u> <u>Monthly</u> <u>Weekly</u> <u>Per Load</u>
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, 7-29-14, representative for Enterprise Field Services, LLC authorize T-N-T to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.
I. do hereby certify that
Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
5. Transporter: To Be Determined
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 Address of Facility: 70 CR 405, Lindrith NM
Method of Treatment and/or Disposal:
Waste Acceptance Status:
PRINT NAME: bytisha Schmitz SIGNATURE: Struce Waste Management Facility Authorized Agent 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>

August 04, 2014

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

OrderNo.: 1407E59

Dear Steve Moskal:

RE: Lateral 2G 107

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/31/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <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 1407E59 Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2G 107

1407E59-001

Lab ID:

Client Sample ID: SC-4 N Base @ 4' Collection Date: 7/30/2014 12:03:00 PM Received Date: 7/31/2014 7:55:00 AM

Analyses	Result	RL C	Jual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS		_		Analyst	BCN
Diesel Range Organics (DRO)	790	9.8	mg/Kg	1	8/1/2014 8:27:30 AM	14526
Surr: DNOP	127	57.9-140	%REC	1	8/1/2014 8:27:30 AM	14526
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	49	mg/Kg	10	8/1/2014 11:10:47 AM	14534
Surr: BFB	101	80-120	%REC	10	8/1/2014 11:10:47 AM	14534
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.24	mg/Kg	10	8/1/2014 11:10:47 AM	14534
Toluene	ND	0.49	mg/Kg	10	8/1/2014 11:10:47 AM	14534
Ethylbenzene	ND	0.49	mg/Kg	10	8/1/2014 11:10:47 AM	14534
Xylenes, Total	ND	0.97	mg/Kg	10	8/1/2014 11:10:47 AM	14534
Surr: 4-Bromofluorobenzene	111	80-120	%REC	10	8/1/2014 11:10:47 AM	14534

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	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	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report	
Lab Order 1407E59	

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2G 107

1407E59-002

Lab ID:

Client Sample ID: SC-5 N Wall 0-4' Collection Date: 7/30/2014 1:12:00 PM Received Date: 7/31/2014 7:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	530	10	mg/Kg	1	8/1/2014 12:02:30 PM	14526
Surr: DNOP	112	57.9-140	%REC	1	8/1/2014 12:02:30 PM	14526
EPA METHOD 8015D: GASOLINE RANGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	23	mg/Kg	5	8/1/2014 5:43:05 PM	14534
Surr: BFB	105	80-120	%REC	5	8/1/2014 5:43:05 PM	14534
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.23	mg/Kg	5	8/1/2014 5:43:05 PM	14534
Toluene	ND	0.23	mg/Kg	5	8/1/2014 5:43:05 PM	14534
Ethylbenzene	ND	0.23	mg/Kg	5	8/1/2014 5:43:05 PM	14534
Xylenes, Total	ND	0.46	mg/Kg	5	8/1/2014 5:43:05 PM	14534
Surr: 4-Bromofluorobenzene	91.6	80-120	%REC	5	8/1/2014 5:43:05 PM	14534

Matrix: SOIL

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 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 4 9 0 2 01 0		
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit			
	S	Spike Recovery outside accepted recovery limits					

Analytical Report Lab Order 1407E59 Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2G 107

1407E59-003

Lab ID:

Client Sample ID: SC-6 NW Wall 0-4' Collection Date: 7/30/2014 1:13:00 PM Received Date: 7/31/2014 7:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	510	9.9	mg/Kg	1	8/1/2014 12:24:00 PM	14526
Surr: DNOP	113	57.9-140	%REC	1	8/1/2014 12:24:00 PM	14526
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	24	mg/Kg	5	8/1/2014 11:40:44 AM	14534
Surr: BFB	85.0	80-120	%REC	5	8/1/2014 11:40:44 AM	14534
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.24	mg/Kg	5	8/1/2014 11:40:44 AM	14534
Toluene	ND	0.24	mg/Kg	5	8/1/2014 11:40:44 AM	14534
Ethylbenzene	ND	0.24	mg/Kg	5	8/1/2014 11:40:44 AM	14534
Xylenes, Total	ND	0.48	mg/Kg	5	8/1/2014 11:40:44 AM	14534
Surr: 4-Bromofluorobenzene	93.9	80-120	%REC	5	8/1/2014 11:40:44 AM	14534

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.
	Е	Value above quantitation range
	J	Analyte detected below quantitation limits
	0	DCD is supplied they DCD limit

- 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
- nit Page 3 of 8
- pie pri greater than 2.

Analytical Report Lab Order 1407E59

Date Reported: 8/4/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2G 107

1407E59-004

Lab ID:

Client Sample ID: SC-7 NE Wall 0-4' Collection Date: 7/30/2014 1:14:00 PM Received Date: 7/31/2014 7:55:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	780	9.9	mg/Kg	1	8/1/2014 12:45:28 PM	14526
Surr: DNOP	127	57.9-140	%REC	1	8/1/2014 12:45:28 PM	14526
EPA METHOD 8015D: GASOLINE RAI	NGE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	24	mg/Kg	5	8/1/2014 12:10:53 PM	14534
Surr: BFB	100	80-120	%REC	5	8/1/2014 12:10:53 PM	14534
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.12	mg/Kg	5	8/1/2014 12:10:53 PM	14534
Toluene	ND	0.24	mg/Kg	5	8/1/2014 12:10:53 PM	14534
Ethylbenzene	ND	0.24	mg/Kg	5	8/1/2014 12:10:53 PM	14534
Xylenes, Total	ND	0.47	mg/Kg	5	8/1/2014 12:10:53 PM	14534
Surr: 4-Bromofluorobenzene	111	80-120	%REC	5	8/1/2014 12:10:53 PM	14534

Matrix: SOIL

Qualifiare	*	Value exceeds Maximum Contaminant Level	в	Analyte detected in the associated Metho	d Blank				
Quanners.	-	Value exceeds maximum containmant Level.							
	E	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 4 of 8				
	0	RSD is greater than RSDlimit	· P	Sample pH greater than 2.	1460 1010				
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit					
	S	Spike Recovery outside accepted recovery limits							

Client: Souder, Miller and Associates

Project: Lateral 2G 107

Sample ID MB-14526	SampT	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics								
Client ID: PBS	Batch	ID: 14	526	F	RunNo: 2	0268				
Prep Date: 7/31/2014	Analysis D	ate: 7/	31/2014	S	eqNo: 5	89335	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.3		10.00		92.7	57.9	140			
Sample ID LCS-14526	SampT	ype: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range G)rganics	
Client ID: LCSS	Batch	ID: 14	526	· F	RunNo: 2	0268				
Prep Date: 7/31/2014	Analysis D	ate: 7/	31/2014	S	SeqNo: 5	89336	Units: mg/M	(g		
Prep Date: 7/31/2014 Analyte	Analysis D Result	ate: 7/ PQL	31/2014 SPK value	SPK Ref Val	eqNo: 5 %REC	89336 LowLimit	Units: mg/k HighLimit	(g %R <u>PD</u>	RPDLimit	Qual
Prep Date: 7/31/2014 Analyte Diesel Range Organics (DRO)	Analysis D Result 47	ate: 7/ PQL 10	31/2014 SPK value 50.00	SPK Ref Val	eqNo: 5 %REC 94.5	89336 LowLimit 68.6	Units: mg/k HighLimit 130	(g %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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 5 of 8

1407E59

WO#:

04-Aug-14

WO#: 1407E59

04-Aug-14

Client:	Souder,	Miller and	Associa	ates							
Sample ID	MB-14534 MK	SampT	ype: M	BLK	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID:	PBS	Batch	n ID: R 2	20318	F	RunNo: 2	0318				
Prep Date:		Analysis D)ate: 8	/1/2014	S	SeqNo: 5	90802	Units: %RE	C		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		890		1000		88.5	80	120			
Sample ID	LCS-14534 MK	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch	n ID: R 2	20318	F	RunNo: 2	0318				
Prep Date:		Analysis D	ate: 8 ,	/1/2014	5	SeqNo: 5	90803	Units: %RE	C		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		910		1000		91.5	80	120			
Committee UD		SampType: MBLK TestCode: EPA Method 8015D: Gasoline Bange									
Sample ID	MB-14534	SampT	ype: MI	BLK	Tes	tCode: E	PA Method	8015D: Gase	oline Rang	e	
Client ID:	MB-14534 PBS	SampT Batch	ype: M I 1D: 14	BLK 534	Tes F	tCode: E RunNo: 2	PA Method 0318	8015D: Gaso	oline Rang	e	
Client ID: Prep Date:	MB-14534 PBS 7/31/2014	SampT Batch Analysis D	ÿpe: Mi n ID: 14 9ate: 8	BLK 534 /1/2014	Tes F	tCode: E RunNo: 2 SeqNo: 5	PA Method 0318 90808	8015D: Gaso Units: mg/F	oline Rang Kg	e	
Client ID: Prep Date: Analyte	MB-14534 PBS	SampT Batch Analysis D Result	ype: Mil 1 ID: 14 Pate: 8 PQL	BLK 534 /1/2014 SPK value	Tes F SPK Ref Val	tCode: E RunNo: 2 SeqNo: 5 %REC	PA Method 0318 90808 LowLimit	8015D: Gaso Units: mg/F HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang	MB-14534 PBS 7/31/2014 re Organics (GRO)	SampT Batch Analysis D Result ND	ype: Mil n ID: 14 pate: 8 PQL 5.0	BLK 534 /1/2014 SPK value	Tes F SPK Ref Val	tCode: E RunNo: 2 SeqNo: 5 %REC	PA Method 0318 90808 LowLimit	8015D: Gaso Units: mg/F HighLimit	oline Rang (g %RPD	e RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	MB-14534 PBS ; 7/31/2014 ge Organics (GRO)	SampT Batch Analysis D Result ND 890	ype: Mil n ID: 14 pate: 8 PQL 5.0	BLK 534 /1/2014 SPK value 1000	Tes F SPK Ref Val	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5	PA Method 0318 990808 LowLimit 80	8015D: Gaso Units: mg/k HighLimit 120	oline Rang (g %RPD	e RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	MB-14534 PBS 7/31/2014 e Organics (GRO)	SampT Batch Analysis D Result ND 890 SampT	ype: Mil 1 ID: 14 Pate: 8 PQL 5.0	BLK 534 /1/2014 SPK value 1000	Tes F SPK Ref Val Tes	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5 tCode: E	PA Method 0318 990808 LowLimit 80 PA Method	8015D: Gaso Units: mg/F HighLimit 120 8015D: Gaso	vine Rang %RPD vine Rang	e RPDLimit e	Qual
Client ID: Prep Date: Analyte Gasoline Rang Sur: BFB Sample ID Client ID:	MB-14534 PBS ; 7/31/2014 je Organics (GRO) LCS-14534 LCSS	SampT Batch Analysis D Result ND 890 SampT Batch	ype: MI n ID: 14 pate: 8 PQL 5.0 Type: LC n ID: 14	BLK 534 /1/2014 SPK value 1000 CS 534	Tes F SPK Ref Val Tes F	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5 tCode: E RunNo: 2	PA Method 10318 190808 LowLimit 80 PA Method 10318	8015D: Gaso Units: mg/k HighLimit 120 8015D: Gaso	vline Rang %RPD vRPD	e RPDLimit e	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date:	MB-14534 PBS 7/31/2014 e Organics (GRO) LCS-14534 LCSS 7/31/2014	SampT Batch Analysis D Result ND 890 SampT Batch Analysis D	ype: Mi n ID: 14 Pate: 8 PQL 5.0 Sype: LC n ID: 14 Vate: 8	BLK 534 /1/2014 SPK value 1000 CS 534 /1/2014	Tes F SPK Ref Val Tes F S	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5 tCode: E RunNo: 2 SeqNo: 5	PA Method 0318 99808 LowLimit 80 PA Method 0318 99809	8015D: Gaso Units: mg/k HighLimit 120 8015D: Gaso Units: mg/k	vine Rang %RPD vine Rang	e RPDLimit e	Qual
Client ID: Prep Date: Analyte Gasoline Rang Sur: BFB Sample ID Client ID: Prep Date: Analyte	MB-14534 PBS 7/31/2014 ge Organics (GRO) LCS-14534 LCSS 7/31/2014	SampT Batch Analysis D Result ND 890 SampT Batch Analysis D Result	ype: Mi n ID: 14 pate: 8, PQL 5.0 ype: LC n ID: 14 pate: 8, PQL	BLK 534 /1/2014 SPK value 1000 CS 534 /1/2014 SPK value	Tes F SPK Ref Val Tes F SPK Ref Val	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5 tCode: E RunNo: 2 SeqNo: 5 %REC	PA Method 0318 90808 LowLimit 80 PA Method 0318 90809 LowLimit	8015D: Gaso Units: mg/F HighLimit 120 8015D: Gaso Units: mg/F HighLimit	vine Rang % %RPD vine Rang % %RPD	e RPDLimit e RPDLimit	Qual
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte Gasoline Rang	MB-14534 PBS 7/31/2014 e Organics (GRO) LCS-14534 LCSS 7/31/2014 e Organics (GRO)	SampT Batch Analysis D Result ND 890 SampT Batch Analysis D Result 25	ype: Mi n ID: 14 bate: 8, PQL 5.0 ype: LC n ID: 14 bate: 8, PQL 5.0	BLK 534 /1/2014 SPK value 1000 CS 534 /1/2014 SPK value 25.00	Tes F SPK Ref Val Tes F SPK Ref Val 0	tCode: E RunNo: 2 SeqNo: 5 %REC 88.5 tCode: E RunNo: 2 SeqNo: 5 %REC 101	PA Method 0318 99808 LowLimit 80 PA Method 0318 99809 LowLimit 71.7	8015D: Gaso Units: mg// HighLimit 120 8015D: Gaso Units: mg// HighLimit 134	vine Rang % %RPD vine Rang % %RPD	e RPDLimit e 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 6 of 8

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

QC SUMMARY REPORT

Client:

Hall Environmental Analysis Laborator	v. Inc.
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Souder, Miller and Associates

Project: Lateral 2G 107 Sample ID MB-14534 MK SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: PBS Batch ID: R20318 RunNo: 20318 Prep Date: Analysis Date: 8/1/2014 SeqNo: 590821 Units: %REC Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual LowLimit Surr: 4-Bromofluorobenzene 1.0 1.000 101 80 120 Sample ID LCS-14534 MK SampType: LCS TestCode: EPA Method 8021B: Volatiles Client ID: LCSS Batch ID: R20318 RunNo: 20318 Prep Date: Analysis Date: 8/1/2014 SeqNo: 590822 Units: %REC Analyte Result PQL SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit LowLimit Qual Surr: 4-Bromofluorobenzene 1.0 1.000 104 80 120 Sample ID MB-14534 SampType: MBLK TestCode: EPA Method 8021B: Volatiles Client ID: P8S Batch ID: 14534 RunNo: 20318 Prep Date: 7/31/2014 Analysis Date: 8/1/2014 SeqNo: 590827 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Analyte ND 0.050 Benzene ND 0.050 Toluene Ethylbenzene ND 0.050 Xylenes, Total ND 0.10 Surr: 4-Bromofluorobenzene 1.0 1.000 101 80 120 TestCode: EPA Method 8021B: Volatiles Sample ID LCS-14534 SampType: LCS Batch ID: 14534 Client ID: LCSS RunNo: 20318 Prep Date: 7/31/2014 Analysis Date: 8/1/2014 SeqNo: 590828 Units: mg/Kg SPK value PQL SPK Ref Val %REC HighLimit %RPD RPDLimit Qual Analyte Result LowLimit Benzene 0.84 0.050 1.000 0 83.7 80 120 Toluene 0.83 0.050 1.000 0 82.8 80 120 0 Ethylbenzene 0.85 0.050 1.000 84.6 80 120 0 Xylenes, Total 2.8 0.10 3.000 94 1 80 120 Surr: 4-Bromofluorobenzene 1.0 1.000 104 80 120 TestCode: EPA Method 8021B: Volatiles Sample ID MB-14511 MK SampType: MBLK Client ID: PBS Batch ID: R20318 RunNo: 20318 Analysis Date: 8/1/2014 SeqNo: 590838 Units: %REC Prep Date: SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual Result PQL LowLimit Analyte

Surr: 4-Bromofluorobenzene

Qualifiers:

Value exceeds Maximum Contaminant Level.

0.99

1.000

Ē Value above quantitation range

- 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
- Analyte detected in the associated Method Blank В

80

120

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

99.0

Р Sample pH greater than 2.

Reporting Detection Limit RL

1407E59

WO#:

04-Aug-14

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QC SUMMARY REPORT

Hall	Environmental	Analysis	Laboratory,	Inc.

Client:	Souder, Miller and Associates
Project:	Lateral 2G 107

Sample ID LCS-14511 MK	SampT	SampType: LCS TestCode: EPA Method 8021B: Volatiles									
Client ID: LCSS	Batch	n ID: R2	20318	F	RunNo: 2	0318					
Prep Date:	Analysis D	ate: 8 /	/1/2014	S	SeqNo: 5	90839	Units: %RE	с			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	1.0		1.000		104	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#: 1407E59

04-Aug-14

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HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu Albu TEL: 505-345-3975 A Website: www.hal	Analysis Labor 4901 Hawkin querque, NM & FAX: 505-345- lenvironmenta	ratory ns NE 87109 Sam -4107 I.com	Sample Log-In Check List						
Client Name: SMA-FARM	Work Order Number:	1407E59	•	RcptNo:	1					
Received by/date: AT 07/3///	(
Logged By: Anne Thorne	7/31/2014 7:55:00 AM		anne Hom	-						
Completed By: Anne Thorne	7/31/2014		anne Im							
Reviewed By: IO	57/0/2014									
Chain of Custody	1 10-00									
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗀	Not Present 🗹						
2. Is Chain of Custody complete?		Yes 🗹	No 🗔	Not Present 🗌						
3. How was the sample delivered?		Courier ·								
Log In										
4. Was an attempt made to cool the samples?	,	Yes 🗹	No 🗔	NA 🗆						
5. Were all samples received at a temperature	of >0° C to 6.0°C	Yes 🗹	No 🗌							
6. Sample(s) in proper container(s)?		Yes 🗹	No 🖸							
7. Sufficient sample volume for indicated test(s	3)?	Yes 🗹	No 🗌		•					
8. Are samples (except VOA and ONG) proper	ly preserved?	Yes 🗹	No 🗌							
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗖						
10.VOA vials have zero headspace?	ł	Yes 🗌	No 🗌	No VOA Vials 🗹						
11. Were any sample containers received broke	en?	Yes 🗌	No 🗹	# of preserved						
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌	bottles checked for pH: (<2 o	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)

Person Notified:	Date		
By Whom:	Via: 🗌 eMail 📋	Phone 🗌 Fax 🗌	In Person
Regarding:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

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Page 1 of 1

Client: Sou de Mille	(Associates	Standard	Rush	48 by TA			ł			E V	NV Sta				EN'	T/
ONALY THINK		Project Name	ə:	<u></u>					w ha	llenv	/iron	ment	alco	m		
Mailing Address: 4011	1. Proved La 1	Late	al 2G	107		490)1 Hav	vkins	NE -	Alt	ouqu	erqu	e, NN	// 8710	9	
Frink	104 ANN 89401	Project #:			1	Te	I. 505-	345-3	3975	Ŧ	-ax	505-	345-4	4107		
Phone #: 505 2159	812	5	122855	B6-1						nal	ysis	Req	uest		• . 4	1 49
email or Fax#: stuen me	stal Soudermiller.	Project Mana	iger:			2	<u>ع</u>				٦ آ					
QA/QC Package:		61		<u>, </u>	302	as ol	₹		6		04,S(CB'S				
⊈ Standard □	Level 4 (Full Validation)	Ste	re Mbi	jkel	 	Ü			SIM		۲ ۵	2 P(
		Sampler:		secondary discovery	₹	H		: : -	270		NO N	808				
		On Ice:	X Yes	⊡ No		+ 11		204	or 8,	<u>s</u>	ş	es /		A		
		Sample Iem	perature:	<u> </u>	Ē	I BI) E		10	/leta	ธิ์	icid	(A)	-i-i-		
Date Time Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO	TEX	TEX + N	PH 8015	DB (Met	AH's (83	CRA 8 N	nions (F,	081 Pest	260B (V(270 (Ser		
1201111203 801	SC-U QUB & QU	40787	cont	-71)				- <u> Ш</u>			◄	~	8			
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Date: Time: Relinquished	by:	Received by:	1.1 .	Date Time	Rer	narks	;; 	Γ				10-1	oric	e Pr	rd .	5
39N 1620 6000	nue 1	Wisth	Hall	z 130/14/1420	YI	ha	<u>5</u> -	fur	1010	λ (1.005 (-0~	~!
Bolit 1847 Minuth	whatter (Received by	hun !	07/3/1/4 07/55												
If necessary samples submitt	ed to Hall Environmental may be subc	ontracted to other a	ccredited laboratorie	es. This serves as notice of this	s possi	bility. A	Iny sub-	ontracte	ed data	will be	e clear	ly nota	ted on	the analy	tical rep	ort.



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

August 05, 2014

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

RE: Lateral 2C-107

OrderNo.: 1408005

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/1/2014 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

Han Environmental Analy		<u></u>	•	Date Reported: 8/5/2014								
CLIENT: Souder, Miller and Associate Project: Lateral 2C-107 Lab ID: 1408005-001	es Matrix:	SOIL	Client Sampl Collection Received	le ID: SC Date: 7/: Date: 8/	e ID: SC-9 E Wall 0-8' Date: 7/31/2014 11:40:00 AM Date: 8/1/2014 7:45:00 AM							
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch						
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analys	t: BCN						
Diesel Range Organics (DRO)	43	10	mg/Kg	1	8/1/2014 3:13:27 PM	14544						
Surr: DNOP	112	57.9-140	%REC	1	8/1/2014 3:13:27 PM	14544						
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB						
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	8/4/2014 11:10:21 AM	R20336						
Surr: BFB	83.8	80-120	%REC	1	8/4/2014 11:10:21 AM	R20336						
EPA METHOD 8021B: VOLATILES					Analys	t: NSB						
Benzene	ND	0.040	mg/Kg	1	8/4/2014 11:10:21 AM	R20336						
Toluene	ND	0.040	mg/Kg	1	8/4/2014 11:10:21 AM	R20336						
Ethylbenzene	ND	0.040	mg/Kg	1	8/4/2014 11:10:21 AM	R20336						
Xylenes, Total	· ND	0.080	mg/Kg	1	8/4/2014 11:10:21 AM	R20336						

80-120

%REC

93.9

Hall Environmental Analysis Laboratory Inc

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	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.	. ugo r or o
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1408005

1 8/4/2014 11:10:21 AM R20336

Surr: 4-Bromofluorobenzene

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						_
CLIENT: Souder, Miller and Associates			Client Sampl	e ID: SC	C-8 W Wall 0-9'	
Project: Lateral 2C-107			Collection	Date: 7/3	31/2014 11:42:00 AM	
Lab ID: 1408005-002	Matrix:	SOIL	Received	Date: 8/1	/2014 7:45:00 AM	
Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	170	10	mg/Kg	1	8/1/2014 3:35:01 PM	14544
Surr: DNOP	120	57.9-140	%REC	1	8/1/2014 3:35:01 PM	14544
EPA METHOD 8015D: GASOLINE RANG	GE				Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	8/4/2014 11:40:22 AM	R20336
Surr: BFB	97.8	80-120	%REC	1	8/4/2014 11:40:22 AM	R20336
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.046	mg/Kg	1	8/4/2014 11:40:22 AM	R20336
Toluene	ND	0.046	mg/Kg	1	8/4/2014 11:40:22 AM	R20336
Ethylbenzene	ND	0.046	mg/Kg	1	8/4/2014 11:40:22 AM	R20336
Xylenes, Total	ND	0.093	mg/Kg	1	8/4/2014 11:40:22 AM	R20336
Surr: 4-Bromofluorobenzene	105	80-120	%REC	1	8/4/2014 11:40:22 AM	R20336

Hall Environmental Analysis Laboratory, Inc.

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
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.

- 0 R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- porting Limit
 - Sample pH greater than 2. Р
 - RL Reporting Detection Limit

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Analytical Report Lab Order 1408005

Date Reported: 8/5/2014

Analytical Report	
Lab Order 1408005	

Date Reported: 8/5/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2C-107

1408005-003

Lab ID:

Client Sample ID: SC-10 S Wall 0-8' Collection Date: 7/31/2014 11:45:00 AM Received Date: 8/1/2014 7:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analysi	: BCN
Diesel Range Organics (DRO)	11	9.8	mg/Kg	1	8/1/2014 3:56:29 PM	14544
Surr: DNOP	117	57.9-140	%REC	1	8/1/2014 3:56:29 PM	14544
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	t: NSB
Gasoline Range Organics (GRO)	ND	3.6	mg/Kg	1	8/4/2014 12:08:17 PM	R20336
Surr: BFB	80.6	80-120	%REC	1	8/4/2014 12:08:17 PM	R20336
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.036	mg/Kg	1	8/4/2014 12:08:17 PM	R20336
Toluene	ND	0.036	mg/Kg	1	8/4/2014 12:08:17 PM	R20336
Ethylbenzene	ND	0.036	mg/Kg	1	8/4/2014 12:08:17 PM	R20336
Xylenes, Total	ND	0.071	mg/Kg	1	8/4/2014 12:08:17 PM	R20336
Surr: 4-Bromofluorobenzene	91.2	80-120	%REC	1	8/4/2014 12:08:17 PM	R20336

Matrix: SOIL

	_				And the second sec
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.	1 460 5 61 6
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1408005

Date Reported: 8/5/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2C-107

1408005-004

Lab ID:

Client Sample ID: SC-11 South Base 9' Collection Date: 7/31/2014 11:47:00 AM Received Date: 8/1/2014 7:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE					Analyst	BCN
Diesel Range Organics (DRO)	280	10	mg/Kg	1	8/1/2014 4:17:59 PM	14544
Surr: DNOP	117	57.9-140	%REC	1	8/1/2014 4:17:59 PM	14544
EPA METHOD 8015D: GASOLINE RAI	NGE	•			Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	8/4/2014 12:35:43 PM	R20336
Surr: BFB	112	80-120	%REC	1	8/4/2014 12:35:43 PM	R20336
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.047	mg/Kg	1	8/4/2014 12:35:43 PM	R20336
Toluene	ND	0.047	mg/Kg	1	8/4/2014 12:35:43 PM	R20336
Ethylbenzene	ND	0.047	mg/Kg	1	8/4/2014 12:35:43 PM	R20336
Xylenes, Total	ND	0.093	mg/Kg	1	8/4/2014 12:35:43 PM	R20336
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	8/4/2014 12:35:43 PM	R20336

Matrix: SOIL

				and the second sec	
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 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	ruge i or o
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1408005 Date Reported: 8/5/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2C-107

1408005-005

Lab ID:

Client Sample ID: SC-13 N wall (s exc) 8' Collection Date: 7/31/2014 12:40:00 PM Received Date: 8/1/2014 7:45:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE					Analys	t: BCN
Diesel Range Organics (DRO)	63	10	mg/Kg	1	8/1/2014 4:39:28 PM	14544
Surr: DNOP	116	57.9-140	%REC	1	8/1/2014 4:39:28 PM	14544
EPA METHOD 8015D: GASOLINE RAI	NGE			•	Analys	t: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	8/4/2014 1:03:08 PM	R20336
Surr: BFB	94.4	80-120	%REC	1	8/4/2014 1:03:08 PM	R20336
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.040	mg/Kg	1	8/4/2014 1:03:08 PM	R20336
Toluene	ND	0.040	mg/Kg	1	8/4/2014 1:03:08 PM	R20336
Ethylbenzene	ND	0.040	mg/Kg	1	8/4/2014 1:03:08 PM	R20336
Xylenes, Total	ND	0.079	mg/Kg	1	8/4/2014 1:03:08 PM	R20336
Surr: 4-Bromofluorobenzene	104	80-120	%REC	1	8/4/2014 1:03:08 PM	R20336

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	sexceeded
	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.	1 420 5 01 0
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

WO#:	1408005

Client: Soud Project: Later	er, Miller and As al 2C-107	ssocia	ites							
Sample ID MB-14544	SampTyp Batch II	De: ME		Tes	tCode: E	PA Method	8015D: Dies	el Range (Drganics	
Prep Date: 8/1/2014	Analysis Dat	Analysis Date: 8/1/2014		SeqNo: 590108			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.6		10.00		96.4	57.9	140			
Sample ID LCS-14544	SampTyp	be: LC	s	Tes	tCode: E	PA Method	8015D: Dies	el Range (Drganics	
Client ID: LCSS	Batch I	D: 14	544	F	RunNo: 2	0301				
Prep Date: 8/1/2014	Analysis Dat	e: 8/	1/2014	S	GeqNo: 5	90111	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	86.0	68.6	130			
Surr: DNOP	4.6		5.000		91.3	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Value above quantitation range Ε
- 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
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - Sample pH greater than 2.
- RL Reporting Detection Limit

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- Page 6 of 8

WO#:	1408005

Client: Souder Project: Lateral	, Miller and 2C-107	Associa	ites							
Sample ID MB-14556 MK Client ID: PBS	Samp1 Batcl	Type: MI h ID: R2	BLK 20336	 Tes F	tCode: El RunNo: 2	PA Method 0336	8015D: Gaso	oline Rang	e	
Prep Date:	Analysis [Date: 8 /	4/2014	5	GegNo: 5	91818	Units: mg/k	Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	900		1000		89.7	80	120			
Sample ID LCS-14556 MK	Samp1	ype: LC	:s	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	je	
Client ID: LCSS	Batc	h ID: R2	20336	F	RunNo: 2	0336				
Prep Date:	Analysis [Date: 8 /	4/2014	S	GegNo: 5	91819	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	102	65.8	139			
Surr: BFB	970		1000		97.4	80	120			

Qualifiers:

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

Page 7 of 8

Client: Souder, Miller and Associates

Project: Lateral 2C-107

Sample ID MB-14556 MK	Samp	iype: Mi	BLK	les	SICODE: EPA Method 8021B: Volatiles					
Client ID: PBS	Batc	h ID: R2	0336	F	RunNo: 2	0336				
Prep Date:	Analysis [Date: 8 /	4/2014	S	SeqNo: 5	91852	Units: mg/k	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			
Sample ID LCS-14556 MK	 Samp1	Type: LC	s	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID: LCSS	Batc	h ID: R2	0336	F	RunNo: 2	0336				
Prep Date:	Analysis [Date: 8/	4/2014	S	SeqNo: 5	91853	Units: mg/M	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0	90.4	80	120			
Toluene	0.88	0.050	1.000	0	88.2	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.3	80	120			
Xylenes, Total	2.8	0.10	3.000	0	94.4	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		108	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.

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RL Reporting Detection Limit

Page 8 of 8

1408005

WO#:

05-Aug-14

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.ha	Analysis Laboratory 4901 Hawkins NE iquergue, NM 87109 FAX: 505-345-4107 llenvironmental.com	sam	ple Log-In Check List
Client Name: SMA-FARM	Work Order Number:	1408005		RcptNo: 1
Received by/date:				
Logged By: Anne Thorne	8/1/2014 7:45:00 AM		Arre Hum	-
Completed By: Anne Thorne	8/1/2014		Ame Am	• ·
Reviewed By:	08/01/2014			
Chain of Custody	- 1)			
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗖	Not Present 🗹
2. Is Chain of Custody complete?		Yes 🗹	Νο	Not Present
3. How was the sample delivered?		Courier		
Log In				1
4. Was an attempt made to cool the samples	s?	Yes 🗹	No 🗌	
5. Were all samples received at a temperatur	re of >0° C to 6.0°C	Yes 🗹	No 🗌	
6. Sample(s) in proper container(s)?		Ÿes 🔽	No 🗌	
7. Sufficient sample volume for indicated test	(s)?	Yes 🗹	No 🗌	
8. Are samples (except VOA and ONG) prope	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 brol	ken?	Yes	No 🗹 🛛	# of processed
12. Does paperwork match bottle labels?		Yes 🗹	No 🗆	bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of	of Custody?	Yes 🗹	No 🗌	Adjusted?
14. Is it clear what analyses were requested?	-	Yes 🗹	No 🗌	
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗆	Checked by:

Special Handling (if applicable)

Person Notified:		Date		
			· · · · · · · · · · · · · · · · · · ·	
By Whom:	and the second	Via: 🔄 eMail 🚺 F	Phone 🔄 Fax 🔄 In	Person
Regarding:		·····		
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17. Additional remarks:

18. Cooler Information

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

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Client:	Soud	er mi	iller 7 Associates	□ Standard	Rush	24hr 3	30064	, L		 	AN		YS	SIS	S L	AE	30	RA'	τοι	ZY	
		•	,	Project Name							ww	w.ha	llenv	ironr	nent	al.co	m				
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	Fr	imio	otan, NM 874010	Project #:					Tel.	505	-345-3	975	F	ax	505-	345-	4107	,			_
Phone :	#: 50?	5-215-	6812	51228	55 BG1	·		•	÷.	, N	*	A	naly	sis	Reqi	lest				1. 1. 1. 1. 1.	a de se
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	tation AP	□ Othe	er	Sampler:			Sec. 1	₹	Ē		4 (1)	3270		NC	/ 80		2				Ē
	(Type)			Sample Tem	perature:			ці ці	# 	Ϋ́Θ.	d 50	٦ ۵	als	N N	des		¶0 N				5
Date	Time	Matrix	Sample Request ID	Container	Preservative Type	HEAL Nổ ICL Q			TEX + MTE	PH 8015B	DB (Metho	AH's (8310	CRA 8 Met	nions (F,Cl	081 Pestici	260B (VOA	270 (Semi-			00 44 	
131/14	1140	1102	5-9 Eugli 0-8'	Heottle Horx 2	Condial	10800	<u>c</u>	뾧	<u></u>	チー イー	<u>- </u>		<u>م</u>	A	8	8					
	1142	<u> </u>	S(-8 W WALL 09)			-0	ú2	\downarrow											_	\downarrow	_
	1125		SC-10 S. wall 0-8'				13										_				
	147		SC-11 South Base 9				04	\square												ŀ	
V	1240	\mathbf{V}	SC-13 NUGH(S. exc)	s' V	₩.	7	(حری	₩	- `	Y									_	$\left - \right $	-
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	Time:	Relinquish	tell neler	Received by	Im		4		_				,								
7.7	f necessary,	samples sub	omitted to Hall Environmental may be subc	ontracted to other ad	ccredited laboratori	es. This serves as notic	e of this p	possibi	lity. Ar	ny sub-	contract	ed data	will be	dear	ly nota	ted on	the ar	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>

August 07, 2014

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

OrderNo.: 1408231

Dear Steve Moskal:

RE: Lateral 2C-107

Hall Environmental Analysis Laboratory received 7 sample(s) on 8/6/2014 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,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1408231

Page 1 of 10

Hall Environmental Analysis Laboratory, Inc.

.

Date Reported: 8/7/2014

CLIENT: Souder, Miller and Associates

1408231-001

Project: Lateral 2C-107

Lab ID:

Client Sample ID: SW Base @ 13' Collection Date: 8/5/2014 1:55:00 PM Received Date: 8/6/2014 7:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS			•	Analyst	BCN
Diesel Range Organics (DRO)	49	9.9	mg/Kg	1	8/6/2014 11:49:46 AM	14626
Surr: DNOP	108	57.9-140	%REC	1	8/6/2014 11:49:46 AM	14626
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: KJH
Benzene	ND	0.039	mg/Kg	1	8/6/2014 1:14:24 PM	R20394
Toluene	ND	0.039	mg/Kg	1	8/6/2014 1:14:24 PM	R20394
Ethylbenzene	ND	0.039	mg/Kg	1	8/6/2014 1:14:24 PM	R20394
Xylenes, Total	ND	0.079	mg/Kg	1	8/6/2014 1:14:24 PM	R20394
Surr: 1,2-Dichloroethane-d4	87.4	70-130	%REC	1	8/6/2014 1:14:24 PM	R20394
Surr: 4-Bromofluorobenzene	85.0	70-130	%REC	1	8/6/2014 1:14:24 PM	R20394
Surr: Dibromofluoromethane	90.6	70-130	%REC	1	8/6/2014 1:14:24 PM	R20394
Surr: Toluene-d8	88.1	70-130	%REC	1	8/6/2014 1:14:24 PM	R20394
EPA METHOD 8015D MOD: GASO	LINE RANGE				Analyst	: KJH
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/6/2014 1:14:24 PM	R20394
Surr: BFB	111	61.2-137	%REC	1	8/6/2014 1:14:24 PM	R20394

Matrix: SOIL

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

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

Spike Recovery outside accepted recovery limits

S

Analytical Report Lab Order 1408231 Date Reported: 8/7/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2C-107

1408231-002

Lab ID:

Client Sample ID: SW Wall 0-13' Collection Date: 8/5/2014 1:57:00 PM Received Date: 8/6/2014 7:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS			'	Analyst	BCN
Diesel Range Organics (DRO)	10	10	mg/Kg	· 1	8/6/2014 12:11:21 PM	14626
Surr: DNOP	115	57.9-140	%REC	1	8/6/2014 12:11:21 PM	14626
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: KJH
Benzene	ND	0.043	mg/Kg	1	8/6/2014 1:42:33 PM	R20394
Toluene	ND	0.043	mg/Kg	1	8/6/2014 1:42:33 PM	R20394
Ethylbenzene	ND	0.043	mg/Kg	1	8/6/2014 1:42:33 PM	R20394
Xylenes, Total	ND	0.086	mg/Kg	1	8/6/2014 1:42:33 PM	R20394
Surr: 1,2-Dichloroethane-d4	85.4	70-130	%REC	1	8/6/2014 1:42:33 PM	R20394
Surr: 4-Bromofluorobenzene	81.8	70-130	%REC	1	8/6/2014 1:42:33 PM	R20394
Surr: Dibromofluoromethane	85.8	70-130	%REC	1	8/6/2014 1:42:33 PM	R20394
Surr: Toluene-d8	91.1	70-130	%REC	1	8/6/2014 1:42:33 PM	R20394
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: KJH
Gasoline Range Organics (GRO)	ND	4.3	mg/Kg	1	8/6/2014 1:42:33 PM	R20394
Surr: BFB	111	61.2-137	%REC	1	8/6/2014 1:42:33 PM	R20394

Matrix: SOIL

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 analysis	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 2 of 10
	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 Re	eport
Lab Order 1408	8231
Date Reported:	8/7/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: Lateral 2C-107

1408231-003

Lab ID:

Client Sample ID: N Wall 0-10' Collection Date: 8/5/2014 2:55:00 PM Received Date: 8/6/2014 7:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	8/6/2014 12:32:49 PM	14626
Surr: DNOP	110	57.9-140	%REC	1	8/6/2014 12:32:49 PM	14626
EPA METHOD 8260B: VOLATILES SHORT LIST					Analyst	: KJH
Benzene	ND	0.041	mg/Kg	1	8/6/2014 2:10:41 PM	R20394
Toluene	ND	0.041	mg/Kg	1	8/6/2014 2:10:41 PM	R20394
Ethylbenzene	ND	0.041	mg/Kg	1	8/6/2014 2:10:41 PM	R20394
Xylenes, Total	ND	0.083	mg/Kg	1	8/6/2014 2:10:41 PM	R20394
Surr: 1,2-Dichloroethane-d4	87.8	70-130	%REC	1	8/6/2014 2:10:41 PM	R20394
Surr: 4-Bromofluorobenzene	80.4	70-130	%REC	1	8/6/2014 2:10:41 PM	R20394
Surr: Dibromofluoromethane	92.3	70-130	%REC	1	8/6/2014 2:10:41 PM	R20394
Surr: Toluene-d8	90.6	70-130	%REC	1	8/6/2014 2:10:41 PM	R20394
EPA METHOD 8015D MOD: GASO	INE RANGE				Analyst	: KJH
Gasoline Range Organics (GRO)	ND .	4.1	mg/Kg	1	8/6/2014 2:10:41 PM	R20394
Surr: BFB	113	61.2-137	%REC	1	8/6/2014 2:10:41 PM	R20394

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Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank Holding times for preparation or analysis exceeded		
	E	Value above quantitation range	Н			
J Analyte detected below quantitation limitsO RSD is greater than RSDlimit		Analyte detected below quantitation limits	• ND	Not Detected at the Reporting Limit	Page 3 of 10	
		RSD is greater than RSDlimit	Р	Sample pH greater than 2.	1 450 5 61 10	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				

Hall Environmental Analysis Laboratory, Inc. Date Reported: 8/7/2014							
CLIENT: Souder, Miller and Associates Project: Lateral 2C-107 Lab ID: 1408231-004	Matrix:	SOIL	Client Sampl Collection I Received I	Client Sample ID: NE Wall 0-10' Collection Date: 8/5/2014 3:00:00 PM Received Date: 8/6/2014 7:35:00 AM			
Analyses	Result	RL C	Qual Units	DF	Date Analyzed	Batch	
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN	
Diesel Range Organics (DRO)	17	10	mg/Kg	1	8/6/2014 12:54:28 PM	14626	
Surr: DNOP	107	57.9-140	%REC	1	8/6/2014 12:54:28 PM	14626	
EPA METHOD 8260B: VOLATILES SHO	RTLIST				Analyst	: KJH	
Benzene	ND	0.039	mg/Kg	1	8/6/2014 2:38:50 PM	R20394	
Toluene	ND	0.039	mg/Kg	1	8/6/2014 2:38:50 PM	R20394	
Ethylbenzene	ND	0.039	mg/Kg	1	8/6/2014 2:38:50 PM	R20394	
Xylenes, Total	ND	0.078	mg/Kg	1	8/6/2014 2:38:50 PM	R20394	
Surr: 1,2-Dichloroethane-d4	89.9	70-130	%REC	1	8/6/2014 2:38:50 PM	R20394	
Surr: 4-Bromofluorobenzene	82.5	70-130	%REC	1	8/6/2014 2:38:50 PM	R20394	
Surr: Dibromofluoromethane	90.9	70-130	%REC	1	8/6/2014 2:38:50 PM	R20394	
Surr: Toluene-d8	94.1	70-130	%REC	1	8/6/2014 2:38:50 PM	R20394	
EPA METHOD 8015D MOD: GASOLINE	RANGE				Analyst	: KJH	
Gasoline Range Organics (GRO)	ND	3.9	mg/Kg	1	8/6/2014 2:38:50 PM	R20394	

61.2-137

%REC

112

TT 11 **T**T

Surr: BFB

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Analytical Report Lab Order 1408231

8/6/2014 2:38:50 PM

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R20394

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 Holding times for preparation or analysis exceeded		
	Е	Value above quantitation range	Н			
Ŋ		Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 4 of 10	
		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 1408231 Date Reported: 8/7/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

 Project:
 Lateral 2C-107

 Lab ID:
 1408231-005

Client Sample ID: SE Base @ 12' Collection Date: 8/5/2014 3:05:00 PM Received Date: 8/6/2014 7:35:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RAN	IGE ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	88	10	mg/Kg	1	8/6/2014 10:21:43 AM	14626
Surr: DNOP	96.4	57.9-140	%REC	1	8/6/2014 10:21:43 AM	14626
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analyst	: KJH
Benzene	ND	0.041	mg/Kg	1	8/6/2014 3:07:01 PM	R20394
Toluene	ND	0.041	mg/Kg	1	8/6/2014 3:07:01 PM	R20394
Ethylbenzene	ND	0.041	mg/Kg	1	8/6/2014 3:07:01 PM	R20394
Xylenes, Total	ND	0.082	mg/Kg	1	8/6/2014 3:07:01 PM	R20394
Surr: 1,2-Dichloroethane-d4	89.8	70-130	%REC	1	8/6/2014 3:07:01 PM	R20394
Surr: 4-Bromofluorobenzene	81.4	70-130	%REC	1	8/6/2014 3:07:01 PM	R20394
Surr: Dibromofluoromethane	89.5	70-130	%REC	1	8/6/2014 3:07:01 PM	R20394
Surr: Toluene-d8	96.5	70-130	%REC	1	8/6/2014 3:07:01 PM	R20394
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analyst	: KJH
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	8/6/2014 3:07:01 PM	R20394
Surr: BFB	113	61.2-137	%REC	1	8/6/2014 3:07:01 PM	R20394

Matrix: SOIL

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

Qualifiers:	*
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- 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

Value exceeds Maximum Contaminant Level.

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit Page 5 of 10
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Analytical Report Lab Order 1408231 Date Reported: 8/7/2014

Analyst: KJH

R20394

R20394

8/6/2014 3:35:09 PM

8/6/2014 3:35:09 PM

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Client Sample ID: NW Wall 0-10' **Project:** Lateral 2C-107 Collection Date: 8/5/2014 3:10:00 PM Lab ID: 1408231-006 Matrix: SOIL Received Date: 8/6/2014 7:35:00 AM Analyses Result **RL** Qual Units **DF** Date Analyzed Batch **EPA METHOD 8015D: DIESEL RANGE ORGANICS** Analyst: BCN Diesel Range Organics (DRO) 14 8/6/2014 10:52:13 AM 10 mg/Kg 1 14626 Surr: DNOP 90.4 57.9-140 %REC 8/6/2014 10:52:13 AM 1 14626 **EPA METHOD 8260B: VOLATILES SHORT LIST** Analyst: KJH Benzene ND 0.042 mg/Kg 8/6/2014 3:35:09 PM R20394 1 Toluene ND 0.042 mg/Kg 8/6/2014 3:35:09 PM R20394 1 Ethylbenzene ND 0.042 mg/Kg 8/6/2014 3:35:09 PM R20394 1 Xylenes, Total ND 0.084 mg/Kg 8/6/2014 3:35:09 PM R20394 1 Surr: 1,2-Dichloroethane-d4 86.7 70-130 %REC 8/6/2014 3:35:09 PM R20394 1 Surr: 4-Bromofluorobenzene 80.8 70-130 %REC 1 8/6/2014 3:35:09 PM R20394 Surr: Dibromofluoromethane 89.6 70-130 %REC 1 8/6/2014 3:35:09 PM R20394 Surr: Toluene-d8 92.0 70-130 %REC 8/6/2014 3:35:09 PM R20394

61.2-137

113

EPA METHOD 8015D MOD: GASOLINE RANGE Gasoline Range Organics (GRO) ND 4.2

Surr: BFB

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
- 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
- Holding times for preparation or analysis exceeded Н

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mg/Kg

%REC

- Not Detected at the Reporting Limit ND Page 6 of 10
- Sample pH greater than 2. Р
- RL Reporting Detection Limit

Analytical Report Lab Order 1408231 Date Reported: 8/7/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Souder, Miller and Associates
 Client Sample ID: N Base @ 10'

 Project:
 Lateral 2C-107
 Collection Date: 8/5/2014 3:12:00 PM

 Lab ID:
 1408231-007
 Matrix: SOIL
 Received Date: 8/6/2014 7:35:00 AM

 Analyses
 Result
 RL
 Qual
 Units
 DF Date Analyzed
 Batch

EPA METHOD 8015D: DIESEL RANGE C	RGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	34	10	mg/Kg	1	8/6/2014 11:23:01 AM	14626
Surr: DNOP	94.9	57.9-140	%REC	1	8/6/2014 11:23:01 AM	14626
EPA METHOD 8260B: VOLATILES SHO	RT LIST				Analyst:	KJH
Benzene	ND	0.040	mg/Kg	1	8/6/2014 4:03:17 PM	R20394
Toluene	ND	0.040	mg/Kg	1	8/6/2014 4:03:17 PM	R20394
Ethylbenzene	ND	0.040	mg/Kg	1	8/6/2014 4:03:17 PM	R20394
Xylenes, Total	ND	0.080	mg/Kg	1	8/6/2014 4:03:17 PM	R20394
Surr: 1,2-Dichloroethane-d4	86.2	70-130	%REC	1	8/6/2014 4:03:17 PM	R20394
Surr: 4-Bromofluorobenzene	82.3	70-130	%REC	1	8/6/2014 4:03:17 PM	R20394
Surr: Dibromofluoromethane	90.5	70-130	%REC	1	8/6/2014 4:03:17 PM	R20394
Surr: Toluene-d8	92.7	70-130	%REC	1	8/6/2014 4:03:17 PM	R20394
EPA METHOD 8015D MOD: GASOLINE	RANGE				Analyst:	KJH
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	8/6/2014 4:03:17 PM	R20394
Surr: BFB	110	61.2-137	%REC	1	8/6/2014 4:03:17 PM	R20394

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 analys	is exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 7 of 10
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	ruge / or ro
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			
	3	Spike Recovery duside accepted recovery mints			

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1408231

07-Aug-14

Client: Project:	Souder, Miller and Lateral 2C-107	Associa	utes							
Sample ID MB-1462	6 SampT	ype: ME	BLK	Tes	Code: El	PA Method	8015D: Dies	el Range (Drganics	
Client ID: PBS	Batch	n ID: 14	626	F	tunNo: 2	0396				
Prep Date: 8/6/201	4 Analysis D	ate: 8/	6/2014	S	eqNo: 5	93213	Units: mg/H	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (D	RO) ND	10								
Surr: DNOP	9.0		10.00		90.3	57.9	140			
Sample ID LCS-146	26 SampT	ype: LC	s	Tes	Code: El	PA Method	8015D: Dies	el Range (Drganics	
Client ID: LCSS	Batch	n ID: 14	626	F	lunNo: 2	0396				
Prep Date: 8/6/201	4 Analysis D	ate: 8/	6/2014	S	eqNo: 5	93214	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (D	RO) 45	10	50.00	0	90.5	68.6	130			
Surr: DNOP	4.5		5.000		89.9	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
 - Not Detected at the Reporting Limit
- P Sample pH greater than 2.

ND

RL Reporting Detection Limit

Page 8 of 10

- 1460 0 01 1

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: Lateral 2C-107

Sample ID MB-14615MK	SMK SampType: MBLK TestCode: EPA Method 8260B: Volatiles Short List									
Client ID: PBS	Batc	h ID: R2	0394	RunNo: 20394						
Prep Date:	Analysis [Date: 8/	6/2014	S	GeqNo: 5	93945	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								
mp-Xylenes	ND	0.050								
o-Xylene	ND	0.050								
Surr: 1,2-Dichloroethane-d4	0.45		0.5000		90.5	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.7	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.3	70	130			
Surr: Toluene-d8	0.45		0.5000		90.6	70	130			
Sample ID LCS-14615MK	Samp	Type: LC	S	Tes	tCode: El	PA Method	8260B: Vola	tiles Short	List	
Client ID: LCSS	Batc	h ID: R2	0394	F	RunNo: 2	0394				
Prep Date:	Analysis [Date: 8/	6/2014	S	SeqNo: 5	93946	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	1.000	0	97.1	70	130			
Toluene	0.99	0.050	1.000	0	99.3	60.1	120			
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.9	70	130			
Surr: 4-Bromofluorobenzene	0.41		0.5000		82.9	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		90.0	70	130			
Surr: Toluene-d8	0.46		0.5000		91.5	70	130			

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#: 1408231

07-Aug-14

Page 9 of 10

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

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25.00

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WO#: 1408231

07-Aug-14

Client: Soud Project: Later	ler, Miller and Associates ral 2C-107			
Sample ID MB-14615MK	SampType: MBLK	TestCode: EPA Method	8015D Mod: Gasoline Range	
Client ID: PBS	Batch ID: R20394	RunNo: 20394		
Prep Date:	Analysis Date: 8/6/2014	SeqNo: 593947	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	480 500.0	95.1 61.2	137	
Sample ID LCS-14615M	K SampType: LCS	TestCode: EPA Method	8015D Mod: Gasoline Range	
Client ID: LCSS	Batch ID: R20394	RunNo: 20394		
Prep Date:	Analysis Date: 8/6/2014	SeqNo: 593948	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD RPDLimit	Qual

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113

80

61.2

120

137

Qualifiers:

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

Gasoline Range Organics (GRO)

Surr: BFB

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

Page 10 of 10

ection Limit

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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: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM	Work Order Number:	1408231		RcptNo: 1	
Received by/date:	08/06/14				
Logged By: Anne Thorne	8/6/2014 7:35:00 AM		arne Am	~	
Completed By: Anne Thorne	8/6/2014		anne Stran	~	
Reviewed By:	- ORTOLIN				
Chain of Custody					
1. Custody seals intact on sample b	ottles?	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	e samples?	Yes 🗹	No 🗆		
5. Were all samples received at a te	emperature of >0° C to 6.0°C	Yes 🗹	No 🗌		
6. Sample(s) in proper container(s)	?	Yes 🗹	No 🗌		
7. Sufficient sample volume for indic	cated test(s)?	Yes 🗹	No 🗆		
8. Are samples (except VOA and OI	NG) properly preserved?	Yes 🗹	No 🗌		
9. Was preservative added to bottle	s?	Yes 🗌	No 🗹		
10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹	
11. Were any sample containers rec	eived broken?	Yes 🗆	No 🗹 🏻	the former and	
12. Does paperwork match bottle lab	els?	Yes 🗹	No 🗖	for pH: (<2 or >12 unles	- s noted)
13. Are matrices correctly identified o	n Chain of Custody?	Yes 🗹	No 🗆	Adjusted?	
14. Is it clear what analyses were req	uested?	Yes 🗹	No 🗆		
15. Were all holding times able to be (If no, notify customer for authoriz	met? zation.)	Yes 🗹	No 🗆	Checked by:	
the set of	/				

Special Handling (if applicable)

Person Notified:	Date		•
By Whom:	Via: 🗍 eMail 🔲 P	Phone 🗌 Fax 🔲 In F	Person
Regarding:			

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	ľ	Signed By	
1	3.6	Good	Yes					

Page 1 of 1

С	hain	of-Cu	ustody Record	I I urn-Arounu	nme:	Dame Day	Ι.	۰.				1. E		/те	20					
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Date	Time	Matrix	Sample Request ID	FContainer Type and #	Preservative Type	HEAL NO 1408231	BTER MI	BTEX + MI	TPH 8015E	TPH (Metho	EDB (Meth	PAH's (831 RCRA 8 M	Anions (F,C	8081 Pestic	8260B (VO	8270 (Sem				Alf bubbles
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411	f necessary.	samples sub	mitted to Hall Environmental may be subc	contracted to other a	ccredited laboratorie	as. This serves as notice of this	L Dossit	nility	Any su	h-contr	acted d	ata will l	e clear			- the ar	alutical			

C

omitted 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

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

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

Oil Conservation Division 1220 South St. Er

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

				Santa	a Fe	5t. Francis e. NM 8750	5 Dr.		
		R	elease	Notificat	ior	and Cor	rective A	ction	
			010400		OP	FRATOR		Initial R	enort 🕅 Final Report
Name of C	ompany: E	Interprise F	ield Servic	es LLC		Contact: Tho	mas Long		
Address: 6	614 Reilly A	ve, Farmin	gton, NM 8	37401		Telephone No	505-599-2	286	
Facility Na	me: Jicarill	a 67#15				Facility Type:	Natural Gas	Gathering Line	
Surface Ov	wner: Jicar	illa Apache	Tribe	Mineral Owr	ner:	Jicarilla Apa	che Tribe	API No.	
				LOCATI	ION		ASE	-	
Unit Letter H	Section 30	Township 25N	Range 5W	Feet from the 1405	Lin	orth South ne	Feet from the 618	East West Lin	e County Rio Arriba
			Lat	itude <u>36.374</u> 4	<u>480</u>	Longitudes -	107.394348		RCVD SEP 2'14
				NATUF	RE	OF RELEA	SE		OIL CONS. DIV.
Type of Rel	ease: Natura	al Gas and N	vatural gas	liquids		Volume of Re	elease: 887.58	Volume R	ecovered: Unknown
Source of R meter tube.	elease: Acci	dental discha	arge from a	valve on the		Date and Hou 5/15/2014 @	ur of Occurren 3:00 p.m.	ce: Date and 5/15/2014	Hour of Discovery: (@ 3:25 p.m.
Was Immed	liate Notice C	Given?				If YES, To W	hom? JAEPO	 Hobson Sando 	oval; JAO&GA – Bryce
Required						палілопо			DIST. 3
By Whom?	Thomas Lor	ng Nahad2				Date and Hou	ur 5/12/2014 @	6:12 p.m. by p	hone and email
	ercourse rea]Yes 🛛	No		n res, voiun	ne impacting t	ne vvatercourse.	
If a Waterco Describe Ca discovered o completed o from four (4) NMOCD ap	purse was Im ause of Prob on the well ti on June 2, 20) to five (5) fe proved land	pacted, Desc lem and Rem e line. The lir 014. The fina eet in depth. farm facility.	cribe Fully. nedial Action ne was isola Il excavatio Approxima	n Taken: A thir ated, blown dov n dimensions n tely 178 cubic	rd pa wn a neas yard	arty reported a p nd lock out and sured approxim is of hydrocarbo	oossible line le I tag out was a ately fifty-five (on impacted so	ak, after further pplied. Remedia 55) feet long by il was excavated	investigation the leak was tion activities were seven (7) feet wide ranging d and transported to a
Describe Ar dimensions Approximate party correc	ea Affected a measured a ely 178 cubic tive action re	and Cleanup pproximately c yards of hyd eport is includ	Action Tak fifty-five (5 drocarbon in ded with this	en.* Remediati 5) feet long by npacted soil wa s "final" c-141.	ion a seve as e	activities were c en (7) feet wide xcavated and tr	ompleted on J ranging from f ransported to a	une 2, 2014. Th four (4) to five (5 a NMOCD appro	e final excavation) feet in depth. ved land farm facility. A third
I hereby cerr rules and re which may e relieve the c ground wate operator of	tify that the i gulations all endanger pu operator of lia er, surface w responsibility	nformation g operators ar blic health or ability should ater, human y for compliar	iven above e required t the enviror their opera health or th nce with an	is true and con o report and/or ment. The acc tions have faile e environment. y other federal,	nplet r file cepta ed to . In , stat	te to the best of certain release ance of a C-14 adequately inv addition, NMOC te, or local laws	f my knowledg notifications a 1 report by the restigate and r CD acceptance and/or regula	e and understan nd perform corre NMOCD marke emediate contan e of a C-141 repo tions.	d that pursuant to NMOCD ective actions for releases d as "Final Report" does not hination that pose a threat to ort does not relieve the
		2/					OIL CONS	ERVATION	DIVISION
Signature:	L				_	· · · -			mold
Printed Nan	ne: Ivan W. Z	Zirbes				Approved by El	vironmental S		TUVV
Title: Sr. D	irector, Envi	ronmental	<u></u>			Approval Date:	11/12/14	Expiration I	Date:
E-mail Addr	ess: snolan	@eprod.com				Conditions of A	pproval:		Attached
Date: 8	- 25 - 2	2014 PH	ione: (713)	381-6595					5

HANCS 143163 7900



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CORRECTIVE ACTION REPORT

Property:

Jicarilla 67 #15 Pipeline Release NE 1/4, S30 T25N R5W Rio Arriba County, New Mexico

August 1, 2014 Apex Project No. 7030414G020

Prepared for:

Enterprise Field Services LLC 614 Reilly Avenue Farmington, NM 87401 Attn: Mr. Tom 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 Form
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Appendix D:	Table
Appendix E:	Laboratory Analytical Report & Chain of Custody Documentation



CORRECTIVE ACTION REPORT

Jicarilla 67 #15 Pipeline Release NE 1/4, S30 T25N R5W Rio Arriba County, New Mexico

Apex Project No. 7030414G020

1.0 INTRODUCTION

1.1 Site Description & Background

The Jicarilla 67 #15 Pipeline Release site is located within the Enterprise Field Services LLC (Enterprise) pipeline right-of-way (ROW) in the northeast (NE) ¼ of Section 30 in Township 25 North, Range 5 West in rural Rio Arriba County, New Mexico, referred to hereinafter as the "Site" or "subject Site". The Site is located adjacent to a dirt road, surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On May 30, 2014, Enterprise shut in the Jicarilla 67 #15 pipeline and initiated excavation activities at the Site in an effort to locate and repair a subsurface leak. Two leaks were subsequently identified and repaired. An unknown quantity of natural gas was released from the pipeline as a result of internal corrosion. The leaking pipeline was identified by distressed vegetation in the vicinity of the release.

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

1.2 **Project Objective**

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

2.0 SITE RANKING

The Site is under the jurisdiction of the Jicarilla Apache Nation Environmental Protection Office (JANEPO). In the absence of published JANEPO regulatory guidance, Apex TITAN Inc. (Apex) referenced the New Mexico ENMRD OCD's *Guidelines for Remediation of Leaks, Spills and Releases*. Apex utilized the general site characteristics obtained during the completion of corrective action activities 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	Ο		
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	0		
	>1,000 feet	0			
Total Ran	0				

*Based on anticipated groundwater depth of >100 feet below grade surface (bgs).

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of "0". This ranking is based on the following:

- The Site is approximately 1,050 feet south of an un-named ephemeral wash which drains to the Lapis Canyon northwest of the Site. This wash appears to only convey water during significant rain events, but might be considered a surface water body by some entities.
- The Site is not located within a Wellhead Protection Area as no water wells were identified on the Office of the State Engineer website database within one mile of the Site.

3.0 **RESPONSE ACTIONS**

3.1 Soil Excavation Activities

On May 30, 2014, Enterprise initiated excavation activities at the Site to locate and repair a potential leak. Two leaks were subsequently identified and repaired. The release consisted primarily of dry natural gas. Subsequent to the completion of pipeline repairs, the hydrocarbon affected soils were excavated from the Site. During the corrective action activities, West States Energy Contractors, Inc., provided heavy equipment and labor support, and Aaron Bryant, an Apex environmental professional, provided environmental support.

Minor soil staining was visible at the Site near the points of release. Affected soils were excavated utilizing backhoe and hand tools and loaded into a tandem-axle dump truck for transportation to the disposal/treatment facility.

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

The total depth of the final excavation ranged from 4 feet bgs to approximately 5 feet bgs in the release footprint. The surface expression of the release and subsequent excavation measured approximately 55 feet long and approximately 7 feet wide.

A total of approximately 178 cubic yards of hydrocarbon affected soils were transported to the TNT landfarm near Lindrith, NM for disposal/remediation. The executed C-138 form is provided in Appendix B. The excavation was backfilled with clean imported fill from a Jicarilla-approved stockpile and contoured to surrounding grade.

2



Enterprise monitored the excavation for explosive atmosphere conditions and oxygen deficiency prior to any entries into the excavation.

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 ten (10) confirmation samples (C-1 through C-10) from the resulting excavation for laboratory analysis. Figure 3 depicts the approximate location of the excavated areas and shows the final confirmation sample locations in relation to the final excavation dimensions (Appendix A).

The 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 24-hour rush analysis.

3.3 Laboratory Analytical Methods

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

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

4.0 DATA EVALUATION

The Site is under the jurisdiction of the JANEPO. In the absence of published JANEPO regulatory guidance, Apex referenced New Mexico OCD *Guideline for Remediation of Leaks, Spills, and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.30 *Remediation.* These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.1 Confirmation Soil Samples

Apex compared the BTEX and TPH concentrations or reporting limits (RLs) associated with the final confirmation samples collected from the excavated area to the OCD *Remediation Action Levels* for sites having a total ranking score of "0".

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



- The laboratory analyses of the confirmation samples collected from soils remaining in place do not indicate total BTEX concentrations above laboratory RLs, which are below the OCD *Remediation Action Level*.
- The laboratory analyses of the confirmation samples collected from soils remaining in place indicate combined TPH GRO/DRO concentrations ranging from below the laboratory detection limits to 12.1 milligrams per Kilogram (mg/Kg), which are below the OCD *Remediation Action Level.*

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

5.0 FINDINGS AND RECOMMENDATIONS

The Jicarilla 67 #15 Pipeline Release site is located within the Enterprise pipeline ROW in the NE ¼ of Section 30 in Township 25 North, Range 5 West in rural Rio Arriba County, New Mexico. The Site is located along a dirt road, surrounded by native vegetation rangeland periodically interrupted with oil and gas gathering facilities, including one (1) Enterprise natural gas gathering pipeline which traverses the area from east to west.

On May 30th, 2014, Enterprise shut in the Jicarilla 67 #15 pipeline and initiated excavation activities at the Site in an attempt to locate and repair a subsurface leak. An unknown quantity of natural gas was potentially released from the pipeline as a result of internal corrosion. The leaking pipeline was identified by distressed vegetation in the vicinity of the release.

- The primary objective of the corrective actions was to reduce the concentration of COCs in the on-Site soils to below the New Mexico EMNRD OCD Remediation Action Levels using the New Mexico EMNRD OCD's Guidelines for Remediation of Leaks, Spills and Releases as guidance.
- The total depth of the final excavation ranged from approximately 4 feet bgs to approximately 5 feet bgs in the release footprint. The maximum surface expression of the excavation measured approximately 55 feet long by 7 feet wide.
- Prior to backfilling, ten (10) final confirmation samples were collected from the resulting excavation for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit benzene or total BTEX concentrations above laboratory RLs, which are below the OCD Remediation Action Levels. Laboratory analytical results for soils remaining in place did not exhibit concentrations of combined TPH GRO/DRO above the OCD Remediation Action Level of 5,000 mg/Kg for a Site ranking of "0".
- A total of approximately 178 cubic yards of hydrocarbon affected soils were transported to the TNT landfarm near Lindrith, NM for disposal/remediation. The excavation was backfilled with clean imported fill from a nearby Jicarilla-approved pond and contoured to the surrounding grade.

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



6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex TITAN's (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\7030414G020\Figure 1.dwg 07/24/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G020\Figure 2.dwg 07/24/14



Z:\Houston South\Drafting\New Mexico 04\2014\7030414G020\Figure 3.dwg 07/24/14

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

Form C-138 Revised 08/01/11

*Surface Waste Ma	nagement Fa	cility Operator
and Generator s	hall maintain	and make this
documentation available	able for Divis	ion inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address: Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401
2. Originating Site: Jicarilla 67#15 Pipeline
3. Location of Material (Street Address, City, State or ULSTR): Unit Letter G, Section 30, T 25N, R 05W, 36.374480, -107.394348, Rio Arriba County, NM
4. Source and Description of Waste: Hydrocarbon Impacted Soils Source: Natural Gas Liquids (oil and condensate) from a pipeline release Description: Exempt petroleum affected soil from clean-up efforts at well site Estimated Volume _50_yd ³ / bbls Known Volume (to be entered by the operator at the end of the haul) _178 (vd ³) bbls
5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS
Ly Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby Generator Signature certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)
RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non- exempt waste. <u>Operator Use Only: Waste Acceptance Frequency Monthly Weekty Per Load</u>
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, 5-29-14, representative for Enterprise Field Services, LLC authorize T-N-T to complete Generator Signature the required testing/sign the Generator Waste Testing Certification.
I, $\underline{(\alpha_5)}$, representative for $\underline{t \cdot v - t}$ do hereby certify that
Representative/Agent Signature representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.
OCD Permitted Surface Waste Management Facility
Name and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 Address of Facility: 70 CR 405, Lindrith NM
Method of Treatment and/or Disposal:
Waste Acceptance Status:
PRINT NAME: SIGNATURE: Surface Waste Management Facility Authorized Agent TITLE: Surface Waste Management Facility Authorized Agent TELEPHONE NO.505-320-2737





View prior to corrective actions, facing east.



Photograph 2

General view of excavation during pipeline repair activities, facing west.



Photograph 3

General view of excavation during pipeline repair activities, facing west.









TABLE 1 Jicentile 67 (715 Pipeline Release Soil ANALYTICAL SUMMARY

Sample I.D.	Date	Sample Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	• Total BTEX (mg/kg)	TPH GRO	TPH DRO
								(mg/kg)	(mg/kg)
New Mexico Ent Department, Oil (ergy, Mineral & Conservation Di Action Level	Natural Resources vision, Remediation	10	NE	NE	NE	50	1	00
				Final Confirm	nation Samples				
C-1	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0
C-2	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<30.0
C-3	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	12.1	<30.0
C-4	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<4.97	<30.0
C-5	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<29.9
C-6	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
C-7	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
C-8	6/2/2014	4 to 5	<0.05	<0.05	<0.05	<0.05	ND	<4.99	<30.0
C-9	6/2/2014	5	<0.05	<0.05	<0.05	<0.05	ND	<5.00	<29.9
C-10	6/2/2014	5	<0.05	< 0.05	<0.05	<0.05	ND	<4.98	<30.0

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

NE = Not Established

ND = Not Detected above the Laboratory Reporting Limits



Analytical Report

Report Summary

Client: Enterprise Products Chain Of Custody Number: 16813 Samples Received: 6/3/2014 9:29:00AM Job Number: 97057-0352 Work Order: P406004 Project Name/Location: Jic 67 #15

Entire Report Reviewed By:

Date: 6/5/14

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.

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Enterprise Products	Project Name:	Jie 67 #15	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	05-Jun-14 09:12

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
C-1	P406004-01A	Solid	06/02/14	06/03/14	Glass Jar, 4 oz.
C-2	P406004-02A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-3	P406004-03A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-4	P406004-04A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-5	P406004-05A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-6	P406004-06A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-7	P406004-07A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-8	P406004-08A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-9	P406004-09A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.
C-10	P406004-10A	Soil	06/02/14	06/03/14	Glass Jar, 4 oz.

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Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301	Ph (970) 259-0615 Fr (800) 362-1879	laboratory@envirotech-inc.com

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Project Number: Project Manager:		Jic 67 #15 97057-0352 Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12		
	C-1 P406004-01 (Solid)									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Volatile Organics by EPA 8021										
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B		
Surrogate: Bromochlorobenzene		93.9%	80	-120	1423008	06/03/14	06/03/14	EPA 8021B		
Surrogate: 1,3-Dichlorobenzene		88.4 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D		

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Project Name: Project Number: Project Manager:		Jic 67 #15 97057-0352 Kyle Summers-Apex TITAN				Reported: 05-Jun-14 09:12		
C-2 P406004-02 (Solid)									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B	
Surrogate: 1,3-Dichlorobenzene		86.4 %	80	-120	1423008	06/03/14	06:03/14	EPA 8021B	
Surrogate: Bromochlorobenzene		91.9%	80	-120	1423008	06/03/14	06/03/14	EPA 8021B	
Nonhalogenated Organics by 8015		·							
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	I	1423009	06/03/14	06/03/14	EPA 8015D	

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	et Name: et Number: et Manager:	Jame: Jic 67 #15 Jumber: 97057-0352 Aanager: Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12				
C-3 P406004-03 (Solid)												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
Volatile Organics by EPA 8021												
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: Bromochlorobenzene		98.1 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: 1,3-Dichlorobenzene		87.9 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Nonhalogenated Organics by 8015												
Gasoline Range Organics (C6-C10)	12.1	4.99	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D				

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	t Name: t Number: t Manager:	Jic 6' 9705 Kyle	Jic 67 #15 97057-0352 Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12		
		P4060	C-4 04-04 (Sc	olid)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
Volatile Organics by EPA 8021											
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
Ethylbenzene	ND	0.05	mg/kg	i	1423008	06/03/14	06/03/14	EPA 8021B			
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B			
Surrogate: Bromochlorobenzene		93.5 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B			
Surrogate: 1,3-Dichlorobenzene		87.0 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B			
Nonhalogenated Organics by 8015											
Gasoline Range Organics (C6-C10)	ND	4.97	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D			
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D			

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	et Name: et Number: et Manager:	Jic 67 #15 97057-0352 : Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12				
C-5 P406004-05 (Solid)												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
Volatile Organics by EPA 8021												
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
p.m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: 1,3-Dichlorobenzene		82.3 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: Bromochlorobenzene		87.6 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Nonhalogenated Organics by 8015												
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D				
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D				

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	et Name: et Number: et Manager:	Jic 67 #15 er: 97057-0352 ger: Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12				
C-6 P406004-06 (Solid)												
		Reporting					· · · · · · · · · · · · · · · · · · ·					
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
Volatile Organics by EPA 8021												
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: Bromochlorobenzene		91.6 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: 1,3-Dichlorobenzene		85.3 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Nonhalogenated Organics by 8015												
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D				

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	t Name: t Number: t Manager:	: Jic 67 #15 ver: 97057-0352 ger: Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12				
C-7 P406004-07 (Solid)												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
Volatile Organics by EPA 8021												
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: Bromochlorobenzene		87.7 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: 1,3-Dichlorobenzene		81.8 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Nonhalogenated Organics by 8015												
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D				

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	et Name: et Number: et Manager:	ame: Jic 67 #15 umber: 97057-0352 anager: Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12				
C-8 P406004-08 (Solid)												
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes			
Volatile Organics by EPA 8021												
Benzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Ethylbenzene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: Bromochlorobenzene		93.4 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Surrogate: 1,3-Dichlorobenzene		88.7 %	80	-120	1423008	06/03/14	06/03/14	EPA 8021B				
Nonhalogenated Organics by 8015		<u>_</u>										
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg	1	1423008	06/03/14	06/03/14	EPA 8015D				
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D				

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	t Name: t Number: t Manager:	Jie 67 #15 97057-0352 Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12		
		P4060	C-9 04-09 (So	olid)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
Volatile Organics by FPA 9071										
Volatile Organics Dy EFA 8021	ND		ma/ka	1	1423008	06/03/14	06/04/14	EPA 8021B		
Toluena	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Ethylhenzone	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EDA 8021D		
n m Yulana	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	00/04/14	EPA 8021B		
o-xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
lotal Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Surrogate: 1,3-Dichlorobenzene		86.9 %	80	-120	1423008	06/03/14	06/04/14	EPA 8021B		
Surrogate: Bromochlorobenzene		91.4%	80	-120	1423008	06/03/14	06/04/14	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	29.9	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D		

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Enterprise Products 614 Reilly Ave Farmington NM, 87401	Projec Projec Projec	t Name: t Number: t Manager:	Jic 67 #15 97057-0352 Kyle Summers-Apex TITAN					Reported: 05-Jun-14 09:12		
		P4060	C-10 04-10 (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	1423008	06/03/14	06/04/14	EPA 8021B		
Toluene	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Ethylbenzene	ND	0.05	mg/kg	۱	1423008	06/03/14	06/04/14	EPA 8021B		
p,m-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
o-Xylene	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Total Xylenes	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Total BTEX	ND	0.05	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8021B		
Surrogate: Bromochlorobenzene		109 %	80	-120	1423008	06/03/14	06:04/14	EPA 8021B		
Surrogate: 1,3-Dichlorobenzene		104 %	80	-120	1423008	06/03/14	06/04/14	EPA 8021B		
Nonhalogenated Organics by 8015										
Gasoline Range Organics (C6-C10)	ND	4.98	mg/kg	1	1423008	06/03/14	06/04/14	EPA 8015D		
Diesel Range Organics (C10-C28)	ND	30.0	mg/kg	1	1423009	06/03/14	06/03/14	EPA 8015D		

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Enterprise Products	Project Name:	Jic 67 #15	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	05-Jun-14 09:12

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1423008 - Purge and Trap EPA 503	30 <u>A</u>									
Blank (1423008-BLK1)				Prepared: ()2-Jun-14	Analyzed: ()3-Jun-14			
Benzene	ND	0.05	mg/kg							
Toluene	ND	0.05								
Ethylbenzene	ND	0.05								
p.m-Xylene	ND	0.05	н							
o-Xylene	ND	0.05								
Total Xylenes	ND	0.05	"							
Total BTEX	ND	0.05								
Surrogate: 1,3-Dichlorobenzene	45.3		ug/L	50.0		90.6	80-120			
Surrogate: Bromochlorohenzene	47.7		"	50.0		95.4	80-120			
Duplicate (1423008-DUP1)	Sou	rce: P406001-	01	Prepared: ()2-Jun-14	Analyzed: ()3-Jun-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	45.0		ug/L	50.0		90.0	80-120			
Surrogate: Bromochlorobenzene	46.9		"	50.0		93.8	80-120			
Matrix Spike (1423008-MS1)	Sou	rce: P406001-	01	Prepared: ()2-Jun-14 /	Analyzed: ()3-Jun-14			
Benzene	45.9		ug/L	50.0	ND	91.9	39-150			
Toluene	46.2		"	50.0	ND	92.3	46-148			
Ethylbenzene	47.0		"	50.0	ND	94.0	32-160			
p,m-Xylene	92.8		"	100	ND	92.8	46-148			
o-Xylene	46.5			50.0	ND	93,1	46-148			
Surrogate: 1,3-Dichlorobenzene	46.6		"	50.0		93.2	80-120			
Surrogate: Bromochlorobenzene	48.8		н	50.0		97.7	80-120			

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Analyte

Enterprise Products	Project Name:	Jic 67 #15	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	05-Jun-14 09:12

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory Reporting Spike Source %REC Result Limit Units %REC RPD Level Result Limits Batch 1423008 - Purge and Trap EPA 5030A

Blank (1423008-BLK1)				Prepared: 0	2-Jun-14	Analyzed	03-Jun-14	
Gasoline Range Organics (C6-C10)	ND	5.00	mg/kg					
Duplicate (1423008-DUP1)	Sour	ce: P406001-	01	Prepared: 0	2-Jun-14	Analyzed	: 03-Jun-14	
Gasoline Range Organics (C6-C10)	ND	4.99	mg/kg		ND			30
Matrix Spike (1423008-MS1)	Sour	ce: P406001.	-01	Prepared: 0	2-Jun-14	Analyzed	03-Jun-14	
Gasoline Range Organics (C6-C10)	0.47		mg/L	0.450	ND	104	75-125	

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RPD

Limit

Notes



Enterprise Products	Project Name:	Jic 67 #15	
614 Reilly Ave	Project Number:	97057-0352	Reported:
Farmington NM, 87401	Project Manager:	Kyle Summers-Apex TITAN	05-Jun-14 09:12

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory Reporting Spike Source %REC RPD Limit RPD Analyte Result Units Level %REC Limits Limit Result Notes Batch 1423009 - DRO Extraction EPA 3550C Blank (1423009-BLK1) Prepared: 02-Jun-14 Analyzed: 03-Jun-14 Diesel Range Organics (C10-C28) ND 30.0 mg/kg Duplicate (1423009-DUP1) Source: P406001-01 Prepared: 02-Jun-14 Analyzed: 03-Jun-14 Diesel Range Organics (C10-C28) 36.1 29.9 37.5 3.76 30 mg/kg Matrix Spike (1423009-MS1) Source: P406001-01 Prepared: 02-Jun-14 Analyzed: 03-Jun-14 Diesel Range Organics (C10-C28) 270 mg/L 250 35.6 93.6 75-125

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	-		
614 Reilly Ave P	Project Number:	97057-0352	Reported:
Farmington NM, 87401 P	Project Manager:	Kyle Summers-Apex TITAN	05-Jun-14 09:12

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

16813

Client: ENTERPRISE Project Name / Location: Jic 67 #15 AN				NALY	ísis i	/ PAI	RAM	ETER	IS														
Email results to: Kyle S	umn	ner	s ^e	ampler Name: A A¥	20N	Bry	ANT	-		8015)	1 8021)	8260)	s				÷						
Client Phone No.: 903-5	321	-5	603	Client No.: 91	705	1-03	52			Method 8	(Methoc	Method	8 Metal	/ Anion		with H/F	ble 910-	418.1)	RIDE			e Cool	e Intact
Sample No./ Identification	Sa D	mple late	Sample Time	Lab No.	No./ of Co	Volume ntainers	Pr HNO3	eservati нсі	ve	TPH (I	втех	VOC (RCRA	Cation	RCI	TCLP	со Та) НАТ	CHLO			Sampl	Sampl
<u>C-1</u>	6/2	2/14	1200	P406004-01	1x	102	_			X	Х											\checkmark	\checkmark
<u> </u>			1205	P400004-02						Х	X												
<u> </u>			1210	P406004.03						χ	Х												
C-4			1215	9406004-04						χ	X												
C-5			1220	2406004-05						X	χ											\Box	
C-6			1225	P406004-016	-					X	χ												
(-7			1230	P406004-07						χ	X												
C-8			1235	\$ \$4010004-08	_					X	X												
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Sample Matrix Soil 🔽 Solid 🗌 Sludge 🗌	Aque	eous 🗌) Other	¯			Ÿ	'oy'	ike-	4	Gl	- 1	15	60	6	Pe6 131	ку. 14	ł					
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																				sa	паде		71 17 576-129

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

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

		Re	elease	Notificati	on and Co	rrective A	ction		<u></u>		
				(OPERATOR		Initial F	Report [🛛 Final Report		
Name of C	Company: E	nterprise Fie	ld Servic	es LLC	Contact: The	Contact: Thomas Long					
Address: 6	14 Reilly A	ve, Farmingt	on, NM 8	37401	Telephone N	Telephone No. 505-599-2286					
Facility Name: McKenzie #2					Facility Type	Facility Type: Natural Gas Gathering Pipeline					
Surface O	wner: BLM			Mineral Own	er: BLM		API No				
				LOCATIO		ASE	· · _ · _ · _ · _ · _ · _ · _ · _ ·				
Unit Letter	Section	Township	Range	Feet from	NortD/South	Feet from	East/West	County			
G	24	25N	10W	the	Line	the	Line	Rio Arriba	a _.		
	2,481					1,960					
			Lati	tude: <u>36.3859</u>	<u>1</u> Longitud	de: <u>107.41689</u>					
<u>-</u>				NATUR	E OF RELE	ASE					
Type of Rel	ease: Natura	al gas and nati	ural gas lic	quids	Volume of F	Release: Unknov	vn Volume F	Recovered: N	lone		
Source of R	telease: Inter	nal Corrosion	of the nat	ural gas pipeline	Date and H	our of Occurrenc	e: Date and	Hour of Disc	covery:		
Mas Immer	liata Notico (Siven?		·····	11/13/13 @	<u>11:00 a.m.</u>	11/13/13	@ 11:45 a.n	n		
vvas minet]Yes [No 🖾 Not	11 123, 10 0	WHOM?	61	AANA DI	VDOTO		
Required		_					UI	- CON2 . DI	V DIST. 3		
By Whom?					Date and He	our		1111 90	2014		
Was a Wate	ercourse Rea	iched?			If YES, Volu	If YES, Volume Impacting the Watercourse.					
		L_	j res 🖄	J NO							
Describe Ca Area technic	ause of Problician discover	lem and Reme red a leak on t	edial Actio the McKer	n Taken.* nzie #2 pipeline.	The line was isol	ated, depressuria	zed and lock ou	ut tag out wa	s applied. The		
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rules and re which may e relieve the o ground wate operator of	gulations all endanger pul operator of lia er, surface w responsibility	operators are blic health or t ability should t ater, human h v for compliance	required to the enviror heir operate lealth or th ce-with an	to report and/or f nment. The acce tions have failed le environment. y other federal, s	ile certain release aptance of a C-14 I to adequately in In addition, NMC state, or local law	e notifications an 41 report by the N westigate and re 0CD acceptance s and/or regulations	MOCD marke mediate contar of a C-141 repons.	ective action d as "Final R nination that ort does not	s for releases Report" does not pose a threat to relieve the		
			/			OIL CONSE	<u>ERVATION</u>	<u>DIVISIO</u>			
Signature: In Y. Tuse							Λ	i H	$ \mathcal{A} $		
Printed Name: Jon E. Fields Approved by Environmental Specialist:											
Title: Directe	or, Environm	ental			Approval Date	11/12/14	Expiration	Date:			
E-mail Addr	ess: jefields	@eprod.com			Conditions of	Approval:		A4			
Date: 7	121/14	, ,	Phone:	(713) 381-6684				Attached			
Attach Add	itional Shee	ts If Necess	ary	<u> </u>	Hows 143	31638463	\$				

OIL CONS. DIV DIST. 3 JUL 29 2014

Enterprise Products McKenzie #2 Well Tie Release Site Latitude North 36.38591°, Longitude West -107.416890° Unit G (SW ¼, NE ¼) Section 24 T25N R6W Rio Arriba County, New Mexico July 9, 2014



Submitted To:

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

Submitted By:

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



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1.0 Executive Summary

On November 21, 2013 and June 19, 2014, Souder, Miller & Associates (SMA) responded to a hydrocarbon release associated with the McKenzie #2 well tie pipeline release. The table below summarizes information about the release and remediation activities.

TABLE 1: RELEASE INFORMATION								
Name		McKenzie #2	Well Tie F	Release				
	Latitude	Latitude/Longitude Section, Township, Ran						
Location	36.38591° -107.416890°		Unit G (SW ¼, NE ¼)	Section 24	T 25N, R 6W			
Date Reported	November 26, 2013							
Reported By	Tom Long							
Land Owner	Bureau of La	nd Management	(BLM)					
Reported To	BLM, NM Oil	Conservation Di	vision (NN	IOCD)				
Diameter of Pipeline	4 inches	4 inches						
Source of Release	Corrosion							
Release Contents	Natural Gas/Condensate							
Release Volume: Natural Gas	Unknown							
Release Volume: Condensate	Unknown							
Nearest Waterway	Gonzales Ca	nyon Wash						
Depth to Groundwater	Assumed to t	be greater than 1	00 feet					
Nearest Domestic Water Source	Greater than	1,000 feet						
NMOCD Ranking	10							
SMA Response Dates	November 21, 2013 and June 19, 2014							
Subcontractors	West States Energy Contractors (WSEC)							
Disposal Facility	T-N-T Landfa	irm						
Yd ³ Contaminated Soil Excavated and Disposed	40							

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 McKenzie #2 well tie pipeline release. The McKenzie #2 well tie pipeline release was the result of internal/external corrosion of the underground pipeline. The amounts of natural gas and condensate lost are unknown. The release was reported on November 26, 2014. The release location is located in Unit G (SW ¼, SW ¼), Section 24, Township 25 North, Range 6 West, 36.385833°, -107.416944°, Rio Arriba 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 between tributaries of the Gonzales Canyon and Lapis Canyon on land owned by BLM with an elevation of approximately 6,554 feet above sea level. After evaluation of the site using aerial photography and topographic maps it was determined that the site is located approximately 1,010 north of the Lapis Canyon tributary. Review of the topographic maps also determined depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No wells are located within 1,000 feet 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 1,000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On November 21, 2013, under the supervision of SMA, WSEC personnel installed a clamp at the release point to stop the leak and repaired the well tie. SMA provided oversight and guidance of excavation activities release through field screening using a calibrated photoionization detector (PID) while WSEC used a rubber-tired backhoe to perform the excavation and temporary repair. Bedrock was encountered at a depth of 4.5 below ground surface and the final excavation was approximately 19 feet long by 9 feet wide by 4.5 feet deep. Field screening indicated that soils were not suitable for use

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as backfill. The soils were used as backfill because adverse weather conditions did not allow safe removal of the soils.

On June 6, 2014, SMA returned to guide excavation activities of WSEC and to determine the extent of the release through field screening using a calibrated photoionization detector (PID). Field screening samples were collected while WSEC was conducting excavation activities using a rubber-tired backhoe. Table 3 summarizes the field screening results. Field notes are included in Appendix A.

The final excavation measured approximately 39 feet long by 13 feet wide with depths of 1 to 5 feet below ground surface. Field screening of the excavated material determined that the soils removed were not suitable for use as backfill material. The impacted soil was transported for disposal to T-N-T Landfarm, located near Lindrith, NM. Certificates of waste are included in Appendix C.

All laboratory soil samples 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 3 illustrates the extent of the excavation and laboratory samples locations with laboratory report results.

5.0 Conclusions and Recommendations

As noted in Section 3.0 of this report, NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 10: 10 ppm benzene, 50 ppm total BTEX, and 1,000 ppm TPH. Laboratory analysis detected concentrations of DRO in samples SC-1 North (10 ppm), SC-2 West (14 ppm), SC-3 (26 ppm), and SC-4 (60 ppm). However, these concentrations are below the NMOCD/BLM Guidelines for total TPH. All other laboratory analysis detected benzene, total BTEX, and TPH (GRO/DRO) at concentrations below the NMOCD Guidelines. A summary of laboratory analysis is included in Table 4. 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.

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July 9, 2014

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

Submitted by:

SOUDER, MILLER & ASSOCIATES

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Steve Moskal Project Scientist

Reviewed by:

all

Reid S. Allan, PG Principal Scientist

Engineering + Environmental + Surveying

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Fig

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Figures

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Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P:5-Enterprise MSA (2013) 5122104/8G19 - McKenzie #2/CAD/CM/ILOCATION MAP.dwg, SJM, 7/9/2014 1:54 PM



Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P:15-Enterprise MSA (2013) 5122104/BG19 - McKenzie #2/CAD/CMINLOCATION MAP.dwg, SJM, 7/9/2014 1:53 PM

Tables

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Enterprise Products Table 2: Site Ranking

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Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20 50' to 99' = 10 >100' = 0	0	Verified using Petroleum Recovery Reaserch maps: field verified.	Groundwater is assumed to be greater than 100 feet below ground surface
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20 200' - 1000' = 10 >1000' = 0	10	Verified using Petroleum Recovery Reaserch maps: field verified.	A tributary of Lapis Canyon is located approximately 1,000 feet south of the site.
Ranking Criteria for Horizintal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	. 0	New Mexico State Engineer's Office online water well data base	There are no recorded wells within 1000' of the release site.
Total Site Ranking	10		
Soil Remedation Standards	0 to 9	10 to 19	>19
Benzene BTEX TPH	10 PPM 50 PPM 5000 PPM	10 PPM 50 PPM 1000 PPM	10 PPM 50 PPM 100 PPM



Enterprise Productions

McKenzie #2 Well Tie Release Site 7/9/2014

T-61- 2.	C	- 4 0			C	Desculto
Table 3:	Summary	OTE	excavation	rieia	Screening	Results

FIELD SCREENING RESULTS SUMMARY								
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Lab Sample Collected Y/N			
6/19/2014	1110	SC-1: North Wall Composite	1-4	4.9	Y			
6/19/2014	1115	SC-2: West Wall Composite	1-3	14.2	Y			
6/19/2014	1120	SC-3: East Wall Composite	1-3	30.2	Y			
6/19/2014	1125	SC-4: Base Composite	3	46.2	Y			
6/19/2014	1340	SC-5: South Wall Composite	1-3	0	Y			



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

McKenzie #2 Well Tie Release 7/9/2014

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines		NMOCD Site Ranking: 10		1,000) ppm	10 ppm	50 ppm
6/19/2014	1110	SC-1 North	1-4	<4.4	18	<0.044	<0.088
6/19/2014	1115	SC-2 West	1-3	<4.1	14	<0.041	<0.083
6/19/2014	1120	SC-3 East	1-3	<4.6	26	<0.046	<0.092
6/16/2014	1125	SC-4 Base	3	<4.4	60	<0.044	0.11
6/19/2014	1340	Sc-5 South	1-3	<4.0	<9.9	<0.040	<0.079

SM

Appendix A Field Notes

SUBJECT EXCRUALION Clearance PROJECT MCKENZIC NO. 2 PAGE DATE 6/19/2014 JES CLIENT ENTUPHISE BY CHECKED BY 8:15 leave office 11:00 onsile & Mckenzie No.2 Mike Rancey Z15 7362 Jason Sample North Wall, SC-1 11:10 Sample west wall, SE-2 11:15 Sample East Wall, Sc-3 11:20 Sample Buse, sc-4 11:25 11:30 calibrate PID w/ clear Air (zero) + Spar Gas (100 ppm) 11:32 SC-1 @ 4.9 ppm 11:33 SC-2 @ 14.2 ppm 11:34 56.3 @ 30.2 ppm 11:35 5C.4 @ 46.2 ppm 11:45 Masure excavation + Map (see pg. 2) 12:30 off site 13:30 back on site, ficture, SC-5 south@ 13:40, GAS Loc. N 36.38579 W -107.41689 off site 13:50 1 16:15 e affice impack, chin of asstaly > rush Sancdary



Field Screening									
Location Name Date									
Mack	enric #2	· · · · · · · · · · · · · · · · · · ·	•	6/19/	2019				
Location Name	Description	Depth (Feet BGS)	Time Collected	Time Screened	PID Reading (ppm)				
5c-1	North would composite	<u>)- 4'</u>	17:10	11:3Z	4.9				
56-2	composite	1-3'	11:15	11:33	14.2				
56-3	East wall composite	1-3'	11:20	11:34	30.2				
3c-4	Base composite	Base C 3	11:25	11:35	46.2				
56-5	South wall Composite	1-3'	13:40	13:50	0.0				
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	· · ·								
Cal. o	oun e 11:30 Ire	sh Uir 4	Span (100	April					

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Appendix B Site Photography

Site Photographs Enterprise Products Mckenzie #2 Pipeline Release



Photo 1: Clamp installed on pipeline at the McKenzie #2 Well Tie Release site.



Photo #2: Excavation activities of the McKenzie #2 Well Tie Release site on 11/21/2013

Site Photographs Enterprise Products Mckenzie #2 Pipeline Release



Photo #3: Excavation and stockpiled soil at the McKenzie #2 Well Tie Release site



Photo #4: Final Excavation of the McKenzie #2 Well Tie Release site.

Appendix C Soil Disposal Documentation

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

l bbls

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

REO	UEST	FOR	APPRC	VAL	TO	ACCEPT	SOLID	WASTE
-----	------	-----	--------------	------------	----	--------	-------	-------

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site: McKenzie #2 Gathering Pipeline

3. Location of Material (Street Address, City, State or ULSTR): Unit Letter G, Section 24, T 25N, R 6W, 36.385833, -107.41694, Rio Arriba County, NM

4. Source and Description of Waste: Hydrocarbon Impacted Soils

Source: Natural Gas Liquids (oil and condensate) from a pipeline release

Description: Exempt petroleum affected soil from clean-up efforts at well site

Estimated Volume 50 00/ bbls Known Volume (to be entered by the operator at the end of the haul)

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

The

5.

Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with nonexempt waste. <u>Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load</u>

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

Them Long

6-17-14, representative for Enterprise Field Services, LLC authorize T-N-T to complete

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

I, ______ do hereby certify that

Representative/Agent Signature

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 Address of Facility: 70 CR 405, Lindrith NM

Method of Treatment and/or Evaporation	Disposal:	Treating Plant	🛛 Landfarm	🗍 Landfill	Other	
Waste Acceptance Status:			_			

APPRO	VED [] DENIED (Must Be Ma	intained As Permanent Record)
PRINT NAME: Litisha Schmitz SIGNATURE: Surface Waste Management Facility Authonize	TITLE: CHice Hdmin TELEPHONE NO.505-320-2737	DATE: 4-19-14

Appendix D Laboratory Analytical Reports



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

June 23, 2014 Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: FAX

RE: McKenzie No 2

OrderNo.: 1406955

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <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 1406955 Date Reported: 6/23/2014

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-001

Lab ID:

Client Sample ID: SC-1 North Collection Date: 6/19/2014 11:10:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE OF	RGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	18	9.8	mg/Kg	1	6/20/2014 11:41:02 AM	13803
Surr: DNOP	90.2	57.9-140	%REC	1	6/20/2014 11:41:02 AM	13803
EPA METHOD 8015D: GASOLINE RANGE					Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	6/20/2014 11:25:31 AM	R19405
Surr: BFB	101	80-120	%REC	1	6/20/2014 11:25:31 AM	R19405
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AM	R19405
Toluene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AM	R19405
Ethylbenzene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AM	R19405
Xylenes, Total	ND	0.088	mg/Kg	1	6/20/2014 11:25:31 AM	R19405
Surr: 4-Bromofluorobenzene	114	80-120	%REC	1	6/20/2014 11:25:31 AM	R19405

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	 Analyte detected in the associated Method Blank Holding times for preparation or analysis exceeded 		
	Е	Value above quantitation range	Н			
	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	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 1406955

Date Reported: 6/23/2014

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-002

Lab ID:

Client Sample ID: SC-2 West Collection Date: 6/19/2014 11:15:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	14	10	mg/Kg	1	6/20/2014 12:11:02 PM	13803
Surr: DNOP	82.7	57.9-140	%REC	1	6/20/2014 12:11:02 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE				Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	6/20/2014 11:55:38 AM	R19405
Surr: BFB	93.3	80-120	%REC	1	6/20/2014 11:55:38 AM	R19405
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	R19405
Toluene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	R19405
Ethylbenzene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	R19405
Xylenes, Total	ND	0.083	mg/Kg	1	6/20/2014 11:55:38 AM	R19405
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	6/20/2014 11:55:38 AM	R19405

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	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 8
	0	RSD is greater than RSD1imit	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 1406955

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-003

Lab ID:

Client Sample ID: SC-3 East Collection Date: 6/19/2014 11:20:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst	BCN
Diesel Range Organics (DRO)	26	9.8	mg/Kg	1	6/20/2014 12:41:22 PM	13803
Surr: DNOP	88.2	57.9-140	%REC	1	6/20/2014 12:41:22 PM	13803
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Surr: BFB	117	80-120	%REC	1	6/20/2014 12:25:50 PM	R19405
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Toluene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Ethylbenzene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Xylenes, Total	ND	0.092	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Surr: 4-Bromofluorobenzene	115	80-120	%REC	1	6/20/2014 12:25:50 PM	R19405

Matrix: SOIL

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 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	RPD outside accepted recovery limits	RL.	Reporting Detection Limit				
	S	Spike Recovery outside accepted recovery limits						

Analytical Report

Lab Order 1406955

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-004

Lab ID:

Client Sample ID: SC-4 Base Collection Date: 6/19/2014 11:25:00 AM Received Date: 6/20/2014 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)	60	10		mg/Kg	1	6/20/2014 1:11:41 PM	13803
Surr: DNOP	91.2	57.9 - 140		%REC	1	6/20/2014 1:11:41 PM	13803
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Surr: BFB	132	80-120	s	%REC	1	6/20/2014 12:56:05 PM	R19405
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.044		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Toluene	ND	0.044		mg/Kg	. 1	6/20/2014 12:56:05 PM	R19405
Ethylbenzene	ND	0.044		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Xylenes, Total	0.11	0.089		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Surr: 4-Bromofluorobenzene	118	80-120		%REC	1	6/20/2014 12:56:05 PM	R19405

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 4 of 8		
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	i uge 4 of 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 1406955 Date Reported: 6/23/2014

CLIENT: Souder, Miller and Associates McKenzie No 2 Project:

1406955-005

Lab ID:

Client Sample ID: SC-5 South Collection Date: 6/19/2014 1:40:00 PM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analyst:	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 1:42:03 PM	13803
Surr: DNOP	89.4	57.9-140	%REC	1	6/20/2014 1:42:03 PM	13803
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst:	NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Surr: BFB	87.9	80-120	%REC	1	6/20/2014 1:26:09 PM	R19405
EPA METHOD 8021B: VOLATILES					Analyst:	NSB
Benzene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Toluene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Ethylbenzene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Xylenes, Total	ND	0.079	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Surr: 4-Bromofluorobenzene	100	80-120	%REC	1	6/20/2014 1:26:09 PM	R19405

Matrix: SOIL

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method	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 5 of 8			
	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.

WO#: 1406955

23-Jun-14

Client: Soude Project: McKe	r, Miller and As nzie No 2	socia	tes							
Sample ID MB-13803	SampTyp	e: MB	LK	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics	
Client ID: PBS	Batch ID: 13803			RunNo: 19402						
Prep Date: 6/20/2014	Analysis Date: 6/20/2014			SeqNo: 561328			Units: mg/Kg			
Analyte	Result F	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.3		10.00		83.4	57.9	140			_
Sample ID LCS-13803	SampTyp	e: LC	s	Tes	tCode: El	PA Method	8015D: Dies	el Range (Drganics	
Client ID: LCSS	Batch ID	D: 138	303	F	RunNo: 1	9402				
Prep Date: 6/20/2014	Analysis Date	e: 6/2	20/2014	S	SeqNo: 5	61594	Units: mg/M	(g		
Analyte	Result	PQL_	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	100	60.8	145			
Surr: DNOP	3.4		5.000		68.9	57.9	140			

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
- Spike Recovery outside accepted recovery limits S
- В Analyte detected in the associated Method Blank
- 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 6 of 8
QC SUMMARY REPORT

WO#: 1406955

23-Jun-14

Client: Souder, Project: McKen	Miller and zie No 2	Associa	ites							
Sample ID MB-13793 MK	Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID: PBS	Batc	h ID: R1	9405	F	RunNo: 1	9405				
Prep Date:	Analysis [Date: 6 /	20/2014	Ś	SeqNo: 5	61885	Units: mg/ł	٢g		
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 LCS-13793 MK	Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID: LCSS	Batc	h ID: R1	9405	F	RunNo: 1	9405				
Prep Date:	Analysis [Date: 6 /	20/2014	S	SeqNo: 5	61886	Units: mg/l	۲g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	5.0	25.00	0	89.1	71.7	134			
Sun: BFB	950		1000		95.2	80	120			

Qualifiers:

- Value exceeds Maximum Contaminant Level. *
- Value above quantitation range Е
- 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
- Not Detected at the Reporting Limit ND
- 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

Project: McKenzie No 2

· · · · · · · · · · · · · · · · · · ·										
Sample ID MB-13793 MK	Samp	Type: ME	BLK	Test	PA Method	8021B: Volat	iles			
Client ID: PBS	Batc	h ID: R1	9405	R	unNo: 1					
Prep Date:	Analysis (Date: 6/	20/2014	S	eqNo: 5	61907	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10							•	
Surr: 4-Bromofluorobenzene	1.1		1.000		114	80	120			
Sample ID LCS-13793 MK	Samp	Гуре: LC	s	Tes	Code: El	PA Method	8021B: Volat	tiles	<u> </u>	
Client ID: LCSS	Batc	h ID: R1	9405	R	unNo: 1	9405				
Prep Date:	Analysis (Date: 6/	20/2014	S	eqNo: 5	61908	Units: mg/H	g		
Analista	Describ									. .
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	Result	PQL 0.050	SPK value 1.000	SPK Ref Val	%REC 95.6	LowLimit 80	HighLimit 120	%RPD	RPDLimit	Qual
Benzene Toluene	0.96 0.93	PQL 0.050 0.050	SPK value 1.000 1.000	SPK Ref Val 0 0	%REC 95.6 92.8	LowLimit 80 80	HighLimit 120 120	%RPD		Qual
Benzene Toluene Ethylbenzene	0.96 0.93 0.93	PQL 0.050 0.050 0.050	SPK value 1.000 1.000 1.000	SPK Ref Val 0 0 0	%REC 95.6 92.8 92.5	LowLimit 80 80 80	HighLimit 120 120 120	%RPD		Qual
Benzene Toluene Ethylbenzene Xylenes, Total	0.96 0.93 0.93 2.9	PQL 0.050 0.050 0.050 0.10	SPK value 1.000 1.000 1.000 3.000	SPK Ref Val 0 0 0 0	%REC 95.6 92.8 92.5 97.8	LowLimit 80 80 80 80	HighLimit 120 120 120 120	<u>%RPD</u>	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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 8 of 8

WO#: 1406955 23-Jun-14

HALL Hall Enviro Ital Analysis Laboratory ENVIRONMENTAL 4901 Hawkins NE Albuquerque, NM 87109 ANALYSIS Albuquerque, NM 87109 Samp LABORATORY TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com Client Name: SMA-FARM Work Order Number: 1406955 Received by/date: Kessele

Sample Log-In Check List

Client Name:	SMA-FAKM	Work Order Numbe	er: 1406955		RcptNo:	1
Received by/da	ate:					
Logged By:	Anne Thorne	6/20/2014 8:00:00 AI	м	ame Im	~	
Completed By:	Anne Thome	6/20/2014		ane Im	_	
Reviewed By:	This I	DUIZOKS				
Chain of Cu	stody		<u> </u>			
1. Custody se	eals intact on sample bottles	?	Yes 🗌	No 🗌	Not Present 🗹	
2. Is Chain of	Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was t	he sample delivered?		Courier			
<u>Log In</u>						
4. Was an at	tempt made to cool the sam	ples?	Yes 🗹	No 🗌		
5. Were all se	amples received at a temper	rature 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 sample	es (except VOA and ONG) p	roperly preserved?	Yes 🗹	No 🗌		
9. Was prese	rvative added to bottles?		Yes 🗋	No 🗹	na 🗆	
10.VOA viais	have zero headspace?		Yes	No 🗆	No VOA Viais 🗹	
11. Were any	sample containers received	broken?	Yes	No 🗹	# of preserved	
40 -					bottles checked	
12. Does pape (Note discr	rwork match bottle labels? repancies on chain of custod	v)	Yes 🗹	NO	(<2 o	r >12 unless noted)
13. Are matrice	es correctly identified on Cha	ain of Custody?	Yes 🗹	No 🗆	Adjusted?	
14. Is it clear w	vhat analyses were requeste	d?	Yes 🗹	No 🗆		
15. Were all ho (If no, notif	olding times able to be met? y customer for authorization	.)	Yes 🗹	No 🗌	Checked by:	
<u>Special Han</u>	dling (if applicable)					
16. Was client	notified of all discrepancies	with this order?	Yes 🗌	No 🗍	NA 🗹	-
Pers	on Notified:	Date	n - San Calue al Sul Review for the second	STREAM AND		
Ву W	/hom:	Via:	🗌 eMail 🔲 F	Phone 门 Fax	in Person	
Rega	arding:				1	1

17. Additional remarks:

Client Instructions:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record		MALL ENVIRONMENTAL
Client: 5MA	□ Standard □ Rush Same day	
	Project Name:	
Viailing Address: AN IN Box	Mckenzie No 2	901 Hawkins NF - Albuquerque, NM 87109
F 101 W. Dibadual	Project #:	Fel 505-345-3975 Eav 505-345-4107
tarmination, NPL 81401	5122104	Analysis Request
amail or Fax#:	Project Manager:	
DA/Q@ Package:	s 00 21	
Standard Level 4 (Full Validation)	Steve Mookal 00	
Accreditation	Sampler: J. Sprague E	
□ NELAP □ Other		O3, P 03, P 118, O3, P 118, O3, P 03, P 03, P 118, O 03, P 04, O 0
□ EDD (Type)	Sample Temperature	
Date Time Matrix Sample Request ID	Container Type and # Type HEAL No.	rPH (Meth EDB (Meth EDB (Meth Anions (F,(3260B (VO 3260B (VO 3270 (Sem
:/19/2014 11:10 Soil SC-1 North	14m Jost	
19 hour 11:15 Soil SC-Z West	And Jas	
1/1014 11:20 Soil SC-3 East	14π , by $ -\alpha 3 \times$	
19/2014 11:25 Soil SC-9 Bast	14mg / at	
19/2014 13:40 5011 56-5 500th	1402 Jar	X
Date: Time: Relinquished by:	Received by: Date Time Remar	ks: Bill to Enturprise
19 N 1810 Mustu Whellen	Am 20672014	
If necesser, samples submitted to Hall Environmental may be sub	ontracted to other accredited laboratories. This serves as notice of this possibility	. Any sub-contracted data will be clearly notated on the analytical report.

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

State of New Mexico Energy Minerals and Natural Resources

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

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

				San	ta Fe	e, NM 87	505				
		F	Releas	e Notifica	atior	n and C	orrective	Acti	on	an en	an ann an an an ann an ann an ann an ann ann an a
					OP	ERATO	R	\boxtimes	Initial	Report	Final Report
Name of C	Company:	Enterprise	Field Ser	vices LLC		Contact: T	homas Long				
Address: 6	514 Reilly /	Ave, Farmin	ngton, NM	1 87401		Telephone	No. 505-599-2	2286			
Facility Na	me: Later	al K-31	<u></u>			Facility I y	be: Natural Ga	s Gat	hering L	ine	
Surface O	wner: BLM			Mineral O	wner:	BLM			API No	D	
				LOCA ⁻	TION		EASE				
Unit Letter	Section	Township	Range	Feet from	North	n/Couth	Feet from	East	Vest	County	
К	21	25N	6W	the 1900	Line		the 1486	Line	_	Rio Arriba	3
	_	Latitude	e <u>36.3</u>	9791		_ Longitud	de <u>-107.476</u>	31		RCVD SEI	≥2°14
				NATU	JRE	OF RELI	EASE			OIL COM	
Type of Rel	ease: Natur	al Gas and N	Natural Ga	is Liquids		Volume o	f Release Unkn	own	Volume	Recovered:	Unknown
Source of R	lelease: Inte	ernal Corrosi	on			Date and	Hour of Occurre	nce:	Date and	d Hour of Di	scovery:
Was Immer	liate Notice	Given?		······		8/22/2014	@ 1:00 p.m.		8/22/201	4 @ 2:00 p.	.m. discovered:
		☐ Ye	s 🗌 No	Not Requ	uired	Courtesy	notification to BI	_M – SI	hari Ketch	um DIST	
By Whom?				I'		Date and	Hour				
Was a Wate	ercourse Re	ached?				If YES, Vo	olume Impacting	the Wa	atercourse		
			🗌 Yes	🖾 No			1 0				
Describe Ar were dispate third party e	ea Affected ched to the nvironment	and Cleanu location and al contractor	p Action T the leak v will overs	aken: A third pa vas confirmed. T ee excavation a	arty rep The lin activitie	ported a pos le was isola es and collect	ssible line leak o ted and de-press ct closure samp	n an Er surized e durin	nterprise F and lock g repair a	Right of Way out tag out v ctivities. A "f	. Technicians vas applied. A inal" c-141 will
be submitte	u uhoit tece		iu party er		nnacio		action report.				
I hereby cer rules and re which may of relieve the c ground wate operator of	tify that the gulations al endanger pu operator of I er, surface v responsibilit	information Il operators a ublic health c iability should vater, humar ty for complia	given abover the require for the envire the envire the apple of the	ve is true and co d to report and/ ronment. The a erations have fai the environmer any other federa	omplet or file accepta iled to nt. In a al, state	te to the best certain releat ance of a C- adequately addition, NN e, or local la	at of my knowled ase notifications 141 report by th investigate and IOCD acceptanc aws and/or regul	ge and and pe e NMC remed ce of a ations.	understa erform cor CD marke iate conta C-141 rep	nd that purs rective actio ed as "Final mination tha port does no	uant to NMOCD ns for releases Report" does not it pose a threat to t relieve the
Signaturo	Van) F.l.					OIL CON	SERV	ATION	I DIVISIO	M /
	- yyn	- 1 auro	d	·						man A	14
Printed Nat	je: Jon Fiel	as		·		Approved by	Environmental	Specia	list: C	Zl	m
Title: Directo	or, Environn	nental			/	Approval Da	ate: ////7///	4 1	Expiration	Date:	
E-mail Addr	ess:jefields	@eprod.com	1		(`	Conditions o	of Approval:			Attached	
Date: g	28.	2014	Phor	ne: (713)381-668	84						
Attach Addi	tional She	ets IT Neces	ssary		Ŧ	ANC.	s 14/32	14/	774	3	

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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

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

				Sai	nta Fe	e, NM 87	505					
		F	Releas	e Notific	ation	and C	orrective	Acti	on			
					OP	ERATO	र	\boxtimes] Initial	Report	Final Report	
Name of Co	ompany:	Enterprise I	Field Ser	vices LLC		Contact: T	nomas Long	0000				
Facility Nar	ne: Lindri	ith Unit#23	igton, iniv	187401	F	<u>eiepnone</u> Facility Tyr	NO. 505-599-	2286 as Gati	hering I	ine		
Surface Ou	nor: Priv	ato	-	Minoral)wpor:							
			·						APIN	0		
	Section	Township	Bango	LOCA		OF REL	EASE	- East	Mant	County		
N	9	24N	3W	the	Line		the	Line	vest	Rio Arriba		
				1245			1945					
		Latitude_	36.32	1014		Longitud	le <u>-107.16</u> 4	<u>1249</u>				
				NAT	URE	OF RELI	EASE					
Type of Rele	ease: Natur	al Gas and N	Natural Ga	s Liquids		Volume o	f Release: 12,8	04	Volume	Recovered: Unkn	own	
Source of Re	elease: Pip	eline was se	vered as a	a result of heav	/y	Date and	Hour of Occurre	ence:	Date an	d Hour of Discove	ery: 8/5/2014	
Vas Immedi	lood event. iate Notice	Given?		@ 2:15 p.m. Whom? Notifi	cation		p.m. · Report # 109153	9: NMOCD				
		🛛 Ye	s 🗌 No	Not Rec	luired	- Cory Si	nith; USACE a	nd NMI	ED		NUDICT 0	
By Whom?	Thomas L	ong				Date and	Hour:8/6/2014 (@ 3:00	p.m.	UIL CUNS. L	<u>אר און און און און און און און און און און</u>	
Was a Wate	rcourse Re	ached?	🛛 Yes	🗌 No		If YES, Vo	olume Impacting	g the Wa	atercours	e Nov 1	2 2014	
	·····			***						·····		
Largo Wash	urse was ir . No visible	indications	scribe Full of hydroca	y." The pipelin rbon impacts t	e was s o the w	severed as a ash were ol	a result of heavy oserved.	y rains a	and a floo	d event which disc	charged to	
Describe Ca	use of Prol	blem and Re	medial Ac	tion: A third pa	rty repo	orted a poss	ible line leak al	ong the	Lindrith l	Jnit #23 pipeline.	Technicians	
supporting th	nea to con ne pipeline	was eroded	causing it	to severe. The	e pipelin	ie was isola	ted, blown dowi	n, locke	d out and	l tagged out. The r	elease.	
discharge in	to Largo wa	ash. There w	ere no vis	ible indications	s of hyd	rocarbon in	pacts to the wa	ish.				
Describe Are	ea Affected	and Cleanu	p Action T	aken: A third p	arty rep	ported a pos	sible line leak a	along th	e Lindrith water run	Unit #23 pipeline.	the bank	
that was sup	porting the	pipeline wa	s eroded o	ausing it to se	vere. Tl	he pipeline	was isolated, bl	own do	wn, locke	d out and tagged o	out. The	
release discl contractor sa	harge into I ampled the	Largo wash. wash on 8/8	There wei 3/2014. A "	e no visible in final" c-141 wil	dication	s of hydroc	arbon impacts t n receipt of the	o the wa third pa	ash. A thi rty envirc	rd party environme inmental contracto	ental or corrective	
action report	t					•	•			•		
I hereby cert	tify that the	information	given abo	ve is true and o	complet	e to the bes	t of my knowled	dge and	understa	and that pursuant I	to NMOCD	
which may e	ndanger pu	ublic health c	are require or the envi	o to report and ronment. The	accepta	ance of a C	43e notifications 141 report by th	s and pe he NMC	CD mark	rective actions for ed as "Final Repo	releases ort" does not	
relieve the o	perator of I	iability shoul	d their ope	erations have f	ailed to	adequately	investigate and	d remed	iate conta	amination that pos	e a threat to	
operator of r	esponsibili	ty for complia	ance with	any other fede	ral, stat	e, or local la	aws and/or regu	lations.				
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Title: Directo	or, Environr	nental				Approval Da	ate: 11/12/14	4	Expiratio	n Date:		
		@enrod.com				Conditions	of Approval:					
			I				η πρητοναι.			Attached	:	
Date: S/	119/20	14	Phor	ne: (713)381-6	684							
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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division

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		F	Releas	e Notific	ation	and C	orrective	Acti	on			
					OP	ERATO	र र	Б	⊲ ∂ Initial	Report		Final Report
Name of C	ompany:	Enterprise I	ield Serv	vices LLC	(Contact: T	homas Long	<u>×</u> _	<u></u>			
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By Whom?						Date and	Hour					
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E-mail Addr	ess:jefields	@eprod.com	I	1		Conditions	, of Approval:			Attach	ed 🗌	
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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. Santa Fe, NM 87505 Form C-141 Revised August 8, 2011

				Sa	inta Fe	e. NM 87	505					
		R	elease	Notific	atio	n and C	orrective	Act	ion			
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Was Immed	iate Notice (Given?		о		If YES, To	Whom? Cory	Smith	-NMOCD	; Shari Ke	tcham	– BLM;
Required					NOT		omassen - LEF	ر س		OIL CON	S. DI\	/ DIST. 3
By Whom?	Thomas Lor	ng				Date and	Hour 7/1/2014	@ 9:17	7 a.m.		-9-1	2014
VVas a VVate	rcourse Rea	iched?		1 No		If YES, Vo	olume Impacting	g the V	Vatercourse	e JUL	. 69 1	2014
		L		110								
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Describe Ca	use of Probl	em and Rem	edial Actio	n: While att	empting	to flare dow	vn the old unit #	f1 suct	ion header	with a por	table f	lare, it was
noticed that	the pressure	e on the Y-str	ainer was l	building and	the flar	e was begin	ning to die dow	n. The	e Y-strainer	valve was	s isolat	ed and the
Valves were	opened slid	o check for b http://doisee.if	lockage. O the annare	nce employ	vees dei was de	ieved block	ages were clear ne hall valve at	the str	y began to	proceed v	with the	e flare down.
blockage rel	eased liquid	which cause	d a small fi	re on the fla	are traile	er and arour	id as well as a r	hearby	brush. Em	plovees w	ere ab	le to
extinguish th	ne flames wit	h one exting	uisher. The	hydrovac c	rew spr	ayed water	on the smolder	ing are	as as a pre	caution.		
Describe Are	ea Affected a	and Cleanup	Action Tak	en.* As the	ball valv	ve at the str	ainer was open	ed the	apparent b	lockage re	eleased	liquid
which cause	d a small fire	e on the flare	trailer and	ground as v	well as a	a nearby bru	ish. Employees	were a	able to exti	nguish the	flame	s with one
L bereby cert	ifv that the i	nformation di	ven above	is true and	complet	e to the hes	t of my knowled	dae an	d understa	nd that nu	rsuant	to NMOCD
rules and re	gulations all	operators are	e required t	o report and	d/or file	certain relea	ase notifications	s and p	erform cor	rective act	ions fo	r releases
which may e	ndanger pul	olic health or	the enviror	ment. The	accepta	nce of a C-	141 report by th	e NMC	CD marke	d as "Fina	l Repo	rt" does not
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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division

Form C-141 Revised August 8, 2011

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Name of C	ompany: E	nterprise Fie	ld Servic	es LLC	Contact: Thor	mas Long					
Address: 6	14 Reilly A	ve, Farmingt	on, NM 8	7401	Telephone No	<u>505-599-2</u>	286	·			
Facility Na	me: IVICKe	nzie #2			Facility Type:	Natural Gas	s Gathe	ering Pi	peline		
Surface Ov	vner: BLM		· · · ·	Mineral Owne	er: BLM			API No			
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Title: Direct	or, Environm	nental			Approval Date	: BY:	<u>Cory Smi</u>	th 8/6	Vilin		- <u>-</u>
E-mail Addr	ess: jefields	@eprod.com			Conditions of A	Approval:	· · ·	(505)	334-6178 Ex Attache	t. 115 d	
Date:			Phone:	(713) 381-6684		No Siano	sture	<u> </u>			
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Enterprise Products McKenzie #2 Well Tie Release Site Latitude North 36.38591°, Longitude West -107.416890° Unit G (SW ¼, NE ¼) Section 24 T25N R6W Rio Arriba County, New Mexico July 9, 2014



Submitted To:

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

Submitted By:

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

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Appendices:

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1.0 Executive Summary

On November 21, 2013 and June 19, 2014, Souder, Miller & Associates (SMA) responded to a hydrocarbon release associated with the McKenzie #2 well tie pipeline release. The table below summarizes information about the release and remediation activities.

TABLE 1: RELEASE INFORMATION							
Name McKenzie #2 Well Tie Release							
	Latitude	/Longitude	Sectio	on, Townsh	nip, Range		
Location	36.38591°	-107.416890°	Unit G (SW ¼, NE ¼)	Section 24	T 25N, R 6W		
Date Reported	November 26	6, 2013			······································		
Reported By	Tom Long						
Land Owner	Bureau of La	nd Management	(BLM)				
Reported To	BLM, NM Oil	Conservation Di	vision (NM	OCD)			
Diameter of Pipeline	4 inches						
Source of Release	Corrosion						
Release Contents	Natural Gas/	Condensate					
Release Volume: Natural Gas	Unknown						
Release Volume: Condensate	Unknown						
Nearest Waterway	Gonzales Ca	nyon Wash					
Depth to Groundwater	Assumed to b	e greater than 1	00 feet				
Nearest Domestic Water Source	Greater than	1,000 feet					
NMOCD Ranking	10						
SMA Response Dates	November 21	, 2013 and June	19, 2014				
Subcontractors	West States I	Energy Contracto	ors (WSEC	;)			
Disposal Facility	T-N-T Landfa	rm					
Yd ³ Contaminated Soil Excavated and Disposed	40						

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 McKenzie #2 well tie pipeline release. The McKenzie #2 well tie pipeline release was the result of internal/external corrosion of the underground pipeline. The amounts of natural gas and condensate lost are unknown. The release was reported on November 26, 2014. The release location is located in Unit G (SW ¼, SW ¼), Section 24, Township 25 North, Range 6 West, 36.385833°, -107.416944°, Rio Arriba 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 between tributaries of the Gonzales Canyon and Lapis Canyon on land owned by BLM with an elevation of approximately 6,554 feet above sea level. After evaluation of the site using aerial photography and topographic maps it was determined that the site is located approximately 1,010 north of the Lapis Canyon tributary. Review of the topographic maps also determined depth to groundwater is estimated to be greater than 100 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well data base for water wells in the vicinity of the release. No wells are located within 1,000 feet 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 1,000 ppm total petroleum hydrocarbons (TPH). Table 2 illustrates site ranking rationale.

4.0 Summary of Field Activities

On November 21, 2013, under the supervision of SMA, WSEC personnel installed a clamp at the release point to stop the leak and repaired the well tie. SMA provided oversight and guidance of excavation activities release through field screening using a calibrated photoionization detector (PID) while WSEC used a rubber-tired backhoe to perform the excavation and temporary repair. Bedrock was encountered at a depth of 4.5 below ground surface and the final excavation was approximately 19 feet long by 9 feet wide by 4.5 feet deep. Field screening indicated that soils were not suitable for use

as backfill. The soils were used as backfill because adverse weather conditions did not allow safe removal of the soils.

On June 6, 2014, SMA returned to guide excavation activities of WSEC and to determine the extent of the release through field screening using a calibrated photoionization detector (PID). Field screening samples were collected while WSEC was conducting excavation activities using a rubber-tired backhoe. Table 3 summarizes the field screening results. Field notes are included in Appendix A.

The final excavation measured approximately 39 feet long by 13 feet wide with depths of 1 to 5 feet below ground surface. Field screening of the excavated material determined that the soils removed were not suitable for use as backfill material. The impacted soil was transported for disposal to T-N-T Landfarm, located near Lindrith, NM. Certificates of waste are included in Appendix C.

All laboratory soil samples 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 3 illustrates the extent of the excavation and laboratory samples locations with laboratory report results.

5.0 Conclusions and Recommendations

As noted in Section 3.0 of this report, NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 10: 10 ppm benzene, 50 ppm total BTEX, and 1,000 ppm TPH. Laboratory analysis detected concentrations of DRO in samples SC-1 North (10 ppm), SC-2 West (14 ppm), SC-3 (26 ppm), and SC-4 (60 ppm). However, these concentrations are below the NMOCD/BLM Guidelines for total TPH. All other laboratory analysis detected benzene, total BTEX, and TPH (GRO/DRO) at concentrations below the NMOCD Guidelines. A summary of laboratory analysis is included in Table 4. 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.

Engineering • Environmental • Surveying

www.soudermiller.com

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

Submitted by:

,

SOUDER, MILLER & ASSOCIATES

(lese) 10

Steve Moskal Project Scientist

Reviewed by:

I. all

Reid S. Allan, PG Principal Scientist

Figures





P15-Enterprise MSA (2013) 5122104\BG19 - McKenzle #2\CAD\CMALOCATION MAP.owg, SJM, 7/8/2014 1:54 PM



Copyright 2014 Souder, Miller & Associates - All Rights Reserved

P35-Enterprise MSA (2013) 5122104IBG19 - McKenzie #2ICADICIvitLOCATION MAP.dvg, SJM, 7/9/2014 1:53 PM

Tables

Enterprise Products Table 2: Site Ranking

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20 50' to 99' = 10 >100' = 0	0	Verified using Petroleum Recovery Reaserch maps: field verified.	Groundwater is assumed to be greater than 100 feet below ground surface
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20 200' - 1000' = 10 >1000' = 0	10	Verified using Petroleum Recovery Reaserch maps: field verified.	A tributary of Lapis Canyon is located approximately 1,000 feet south of the site.
Ranking Criteria for Horizintal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0	0	New Mexico State Engineer's Office online water well data	There are no recorded wells within 1000' of the release
Total Site Ranking	10	base	site.
Soil Remedation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
ТРН	5000 PPM	1000 PPM	100 PPM



Enterprise Productions Table 3: Summary of Excavation Field Screening Results

FIELD SCREENING RESULTS SUMMARY									
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading (ppm)	Lab Sample Collected Y/N				
6/19/2014	1110	SC-1: North Wall Composite	1-4	4.9	Y				
6/19/2014	1115	SC-2: West Wall Composite	1-3	14.2	Y				
6/19/2014	1120	SC-3: East Wall Composite	1-3	30.2	Y				
6/19/2014	1125	SC-4: Base Composite	3	46.2	Y				
6/19/2014	1340	SC-5: South Wall Composite	1-3	0	Y				



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

McKenzie #2 Well Tie Release 7/9/2014

Date	Time	Sample ID	Sample Depth (Feet BGS)	Method 8015 GRO	Method 8015 DRO	Method 8021 Benzene	Method 8021 BTEX
NMOCD Guidelines		NMOCD Sit	NMOCD Site Ranking: 10		1,000 ppm		50 ppm
6/19/2014	1110	SC-1 North	1-4	<4.4	18	<0.044	<0.088
6/19/2014	1115	SC-2 West	1-3	<4.1	14	<0.041	<0.083
6/19/2014	1120	SC-3 East	1-3	<4.6	26	<0.046	<0.092
6/16/2014	1125	SC-4 Base	3	<4.4	60	<0.044	0.11
6/19/2014	1340	Sc-5 South	1-3	<4.0	<9.9	<0.040	<0.079



Appendix A Field Notes

D D SUBJECT EXCAUATION CLEARANCE PROJECT MCKUNZIC NO. 2 PAGE DATE 6/19/2014 JES CLIENT Entuprise BY CHECKED ΒY 8:15 leave office 11:00 onsile le Mckenzie No.2 Mike Rancey Z15 7362 Jason 11:10 Sample North Wall, SC-1 Sample: west wall, Se-2 11:15 Sample East Wall, SC-3 11:20 Sample Base, 3C-4 11:25 11:30 calibrate PID w/ clear Air (Zero) + Spar Gas (100 ppn) 11:32 SC-1 @ 4.9 ppm 11:33 SC-Z C 14.2 ppm 11:34 55-3 @ 30.2 ppm . 56-4 @ 46.2 ppm 11:35 11:45 Measure excavation + Map (see pg. 2) 12:30 off site 13:30 back on site, picture, SC-5 South @ 13:40, GAS Lice. 36.38579 N W -107.41689 13:50 off site ŧ 16:15 e office impack, chain of anstoday > rush Sancdary . . .



	Location Name			D	ate
Mack	6/19/	2019			
Location Name	Description	Depth (Feet BGS)	Time Collected	Time Screened	PID Read (ppm)
5c-1	North would composite	1-4'	11:10	11:3Z	4.9
5C-Z	composite	1-3'	11:15	11:33	14.2
50-3	East ball composite	1-3'	11:20	11:34	30.2
3c-4	Base composite	Base C 3'	\I:25	11:35	46.2
56-5	South wall Composite	1-3'	13:40	13:50	0.0
	·				
					<u></u>

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Appendix B Site Photography

1

Site Photographs Enterprise Products Mckenzie #2 Pipeline Release



Photo 1: Clamp installed on pipeline at the McKenzie #2 Well Tie Release site.



Photo #2: Excavation activities of the McKenzie #2 Well Tie Release site on 11/21/2013

Site Photographs Enterprise Products Mckenzie #2 Pipeline Release



Photo #3: Excavation and stockpiled soil at the McKenzie #2 Well Tie Release site



Photo #4: Final Excavation of the McKenzie #2 Well Tie Release site.

Appendix C Soil Disposal Documentation

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

bbls

vd

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

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

Z. **Originating Site:**

McKenzie #2 Gathering Pipeline

3. Location of Material (Street Address, City, State or ULSTR): Unit Letter G, Section 24, T 25N, R 6W, 36.385833, -107.41694, Rio Arriba County, NM

4. Source and Description of Waste: Hydrocarbon Impacted Soils

Source: Natural Gas Liquids (oil and condensate) from a pipeline release Description: Exempt petroleum affected soil from clean-up efforts at well site Estimated Volume 50 vd/ bbls Known Volume (to be entered by the operator at the end of the haul)

GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

5.

I. Thomas Long, representative or authorized agent for Enterprise Field Services, LLC do hereby

Generator Signature

certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-Operator Use Only: Waste Acceptance Frequency Monthly Weekly Per Load exempt waste.

RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

MSDS Information 🔲 RCRA Hazardous Waste Analysis 🔯 Process Knowledge 🔲 Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

Them Loy

4	6-17-14	, representative f	for Enterp	rise Field	Services,	LLC	authorize	T-N-T	to complete
---	---------	--------------------	------------	------------	-----------	-----	-----------	-------	-------------

Generator Signature

the required testing/sign the Generator Waste Testing Certification.

do hereby certify that I, , representative for

Representative/Agent Signature

representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: TNT Evap Pond/Landfarm, NM01-0008 Address of Facility: 70 CR 405, Lindrith NM
Method of Treatment and/or Disposal:

	Evaporation	Injection	Treating Plant	🛛 Landfarm	🗌 Landfill	Othe	er
Waste Acce	ptance Status:	AP	PROVED	🗌 DE	NIED (Must Be	e Maintair	ed As Permanent Record)
PRINT NAN SIGNATUR	IE: Litish E: Surface Waste Ma	a Schane nagement Facility Aut	HZTITI honzed Agent	E: CHIC EPHONE NO.50	Adin:	۹	DATE: 4-19-14

Appendix D 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: www.hallenvironmental.com

June 23, 2014

Steve Moskal Souder, Miller and Associates 401 W. Broadway Farmington, NM 87401 TEL: FAX

RE: McKenzie No 2

OrderNo.: 1406955

Dear Steve Moskal:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/20/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <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 1406955						
Date Reported: 6/23/2014						

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-001

Lab ID:

Client Sample ID: SC-1 North Collection Date: 6/19/2014 11:10:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS				Analys	t: BCN
Diesel Range Organics (DRO)	18	9.8	mg/Kg	1	6/20/2014 11:41:02 AN	13803
Surr: DNOP	90.2	57.9-140	%REC	1	6/20/2014 11:41:02 AN	1 13803
EPA METHOD 8015D: GASOLINE RAM	NGE				Analysi	t: NSB
Gasoline Range Organics (GRO)	ND	4.4	mg/Kg	1	6/20/2014 11:25:31 AM	1 R19405
Surr: BFB	101	80-120	%REC	1	6/20/2014 11:25:31 AM	I R19405
EPA METHOD 8021B: VOLATILES					Analys	t: NSB
Benzene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AM	I R19405
Toluene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AN	I R19405
Ethylbenzene	ND	0.044	mg/Kg	1	6/20/2014 11:25:31 AM	1 R19405
Xylenes, Total	ND	0.088	mg/Kg	1	6/20/2014 11:25:31 AN	1 R19405
Surr: 4-Bromofluorobenzene	114	80-120	%REC	1	6/20/2014 11:25:31 AN	R19405

Matrix: SOIL

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

			THE REAL PROPERTY AND ADDRESS OF THE PARTY O	· · · · · · · · · · · · · · · · · · ·		
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	 Analyte detected in the associated Method Blank Holding times for preparation or analysis exceeded 		
	Ε	Value above quantitation range	Н			
J Analyte detected below quantitation limits		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 4 50 1 01 0	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	s	Spike Recovery outside accepted recovery limits				

Analytical Report	
Lab Order 1406955	

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-002

Lab ID:

Client Sample ID: SC-2 West Collection Date: 6/19/2014 11:15:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 8015D: DIESEL RANGE ORGANICS Analyst: BCN										
Diesel Range Organics (DRO)	14	10	mg/Kg	1	6/20/2014 12:11:02 PM	1 13803				
Surr: DNOP	82.7	57.9-140	%REC	1	6/20/2014 12:11:02 PM	13803				
EPA METHOD 8015D: GASOLINE RA	NGE				Analys	t: NSB				
Gasoline Range Organics (GRO)	ND	4.1	mg/Kg	1	6/20/2014 11:55:38 AM	A R19405				
Surr: BFB	93.3	80-120	%REC	1	6/20/2014 11:55:38 AN	/ R19405				
EPA METHOD 8021B: VOLATILES					Analys	t: NSB				
Benzene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	A R19405				
Toluene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	/ R19405				
Ethylbenzene	ND	0.041	mg/Kg	1	6/20/2014 11:55:38 AM	A R19405				
Xylenes, Total	ND	0.083	mg/Kg	1	6/20/2014 11:55:38 AN	/ R19405				
Surr: 4-Bromofluorobenzene	107	80-120	%REC	1	6/20/2014 11:55:38 AN	1 R19405				

Matrix: SOIL

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank Holding times for preparation or analysis exceeded		
	E	Value above quantitation range	Н			
	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.	1 460 2 01 0	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit		
	S	Spike Recovery outside accepted recovery limits				
Analytical Report Lab Order 1406955

Hall Environmental Analysis Laboratory, Inc.

Lab Order 1406955
Date Reported: 6/23/2014

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-003

Lab ID:

Client Sample ID: SC-3 East Collection Date: 6/19/2014 11:20:00 AM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE O	RGANICS				Analyst	BCN
Diesel Range Organics (DRO)	26	9.8	mg/Kg	1	6/20/2014 12:41:22 PM	13803
Surr: DNOP	88.2	57.9-140	%REC	1	6/20/2014 12:41:22 PM	13803
EPA METHOD 8015D: GASOLINE RANGI	E				Analyst	NSB
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Surr: BFB	117	80-120	%REC	1	6/20/2014 12:25:50 PM	R19405
EPA METHOD 8021B: VOLATILES					Analyst	NSB
Benzene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Toluene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Ethylbenzene	ND	0.046	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Xylenes, Total	ND	0.092	mg/Kg	1	6/20/2014 12:25:50 PM	R19405
Surr: 4-Bromofluorobenzene	115	80-120	%REC	1	6/20/2014 12:25:50 PM	R19405

Matrix: SOIL

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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.	
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report Lab Order 1406955

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

 CLIENT:
 Souder, Miller and Associates
 Client Sample ID: SC-4 Base

 Project:
 McKenzie No 2
 Collection Date: 6/19/2014 11:25:00 AM

 Lab ID:
 1406955-004
 Matrix: SOIL
 Received Date: 6/20/2014 8:00:00 AM

 Analyses
 Result
 BL
 Oual
 Units
 DE

Analyses	Result	RL (Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANG	E ORGANICS					Analyst	BCN
Diesel Range Organics (DRO)	60	10		mg/Kg	1	6/20/2014 1:11:41 PM	13803
Surr: DNOP	91.2	57.9-140		%REC	1	6/20/2014 1:11:41 PM	13803
EPA METHOD 8015D: GASOLINE RA	NGE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Surr: BFB	132	80-120	s	%REC	1	6/20/2014 12:56:05 PM	R19405
EPA METHOD 8021B: VOLATILES						Analyst	: NSB
Benzene	ND	0.044		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Toluene	ND	0.044		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Ethylbenzene	ND	0.044		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Xylenes, Total	0.11	0.089		mg/Kg	1	6/20/2014 12:56:05 PM	R19405
Surr: 4-Bromofluorobenzene	118	80-120		%REC	1	6/20/2014 12:56:05 PM	R19405

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

			n	A 1	- J Dloule
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 4 of 8
	0	RSD is greater than RSDImit	Р	Sample pH greater than 2.	10.80 1010
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

Analytical Report	
Lab Order 1406955	

Date Reported: 6/23/2014

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates Project: McKenzie No 2

1406955-005

Lab ID:

Client Sample ID: SC-5 South Collection Date: 6/19/2014 1:40:00 PM Received Date: 6/20/2014 8:00:00 AM

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE	ORGANICS	<u>.</u>			Analyst	BCN
Diesel Range Organics (DRO)	ND	9.9	mg/Kg	1	6/20/2014 1:42:03 PM	13803
Surr: DNOP	89.4	57.9-140	%REC	1	6/20/2014 1:42:03 PM	13803
EPA METHOD 8015D: GASOLINE RAN	GE				Analysi	t: NSB
Gasoline Range Organics (GRO)	ND	4.0	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Surr: BFB	87.9	80-120	%REC	1	6/20/2014 1:26:09 PM	R19405
EPA METHOD 8021B: VOLATILES					Analyst	: NSB
Benzene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Toluene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Ethylbenzene	ND	0.040	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Xylenes, Total	ND	0.079	mg/Kg	1	6/20/2014 1:26:09 PM	R19405
Surr: 4-Bromofluorobenzene	100	80-120	%REC	1	6/20/2014 1:26:09 PM	R19405

Matrix: SOIL

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	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 5 of 8
	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 Associates Project:

McKenzie No 2

_

Sample ID MB-13803	SampType: MBLK TestCode: EPA Method 8015D: Diesel Range Organics										
Client ID: PBS	Batch ID:	13803	Ru	unNo: 19							
Prep Date: 6/20/2014	Analysis Date:	6/20/2014	Se	eqNo: 56	1328	Units: mg/Kg					
Analyte	Result PQ	L SPK_value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Diesel Range Organics (DRO)	ND	10									
Surr: DNOP	8.3	10.00		83.4	57.9	140					
Sample ID LCS-13803	SampType:	LCS	Test	Code: EP	A Method	8015D: Diese	el Range C)rganics			
Client ID: LCSS	Batch ID:	13803	Rı	unNo: 19	402						
Pren Date: 6/20/2014	Analysis Date: 6/20/2014 SeqNo: 561594 Units: mg/Kg										
Thep Bate. GIEGIEGI4	Finalysis Dute.	0/20/2011	0	9	1004						
Analyte	Result PQ	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Analyte Diesel Range Organics (DRO)	Result PQ	L SPK value 10 50.00	SPK Ref Val	%REC 100	LowLimit 60.8	HighLimit 145	%RPD	RPDLimit	Qual		

Qualifiers:

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

Page 6 of 8

1406955

23-Jun-14

WO#:

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

WO#: 1406955

23-Jun-14

Client: Soud Project: McK	er, Miller and enzie No 2	Associa	ites								
Sample ID MB-13793 MI	K Samp	Type: ME	BLK	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	e	·	
Prep Date:	Batc Analysis [h ID: R1 Date: 6 /	9405 20/2014	F	RunNo: 1 SeqNo: 5	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO Surr: BFB) ND 960	5.0	1000		96.1	80	120				
Sample ID LCS-13793 M	K Samp	Type: LC	s	Tes	tCode: El	PA Method	8015D: Gas	oline Rang	je		
Client ID: LCSS	Batc	h ID: R1	9405	F	RunNo: 1	9405					
Prep Date:	Analysis (Date: 6/	20/2014	5	SeqNo: 5	61886	Units: mg/l	<g< td=""><td></td><td></td></g<>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO) 22	5.0	25.00	0	89.1	71.7	134				
Surr: BFB	950		1000		95.2	80	120				

Qualifiers:

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

Page 7 of 8

- Page /

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Souder, Miller and Associates

Project: McKenzie No 2

Sample ID MB-13793 MK	Sampl	ype: ME	BLK	Tes	PA Method	8021B: Volat	tiles								
Client ID: PBS	Batcl	h ID: R1	9405	F	unNo: 1	9405									
Prep Date:	Analysis [Date: 6/	20/2014	S	eqNo: 5	61907	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	1.1		1.000		114	80	120								
	· · · · · · · · · · · · · · · · · · ·	_													
Sample ID LCS-13793 MK	SampT	Type: LC	S	Tes	Code: El	PA Method	8021B: Volat	liles							
Sample ID LCS-13793 MK Client ID: LCSS	Samp1 Batcl	Type: LC h ID: R1	S 9405	Tes F	Code: El	PA Method 9405	8021B: Volat	liles							
Sample ID LCS-13793 MK Client ID: LCSS Prep Date:	Samp1 Batcl Analysis [Гуре: LC h ID: R1 Date: 6 /	S 9405 20/2014	Tes F S	tCode: Ef tunNo: 19 SeqNo: 5	PA Method 9405 61908	8021B: Volat Units: mg/K	liles (g							
Sample ID LCS-13793 MK Client ID: LCSS Prep Date: Analyte	SampT Batc Analysis I Result	Fype: L C h ID: R1 Date: 6/ PQL	S 9405 20/2014 SPK value	Tes F S SPK Ref Val	Code: Ef tunNo: 19 GeqNo: 56 %REC	PA Method 9405 61908 LowLimit	8021B: Volat Units: mg/K HighLimit	illes (g %RPD	RPDLimit	Qual					
Sample ID LCS-13793 MK Client ID: LCSS Prep Date: Analyte Benzene	SampT Batcl Analysis I Result 0.96	Type: L C h ID: R1 Date: 6/ PQL 0.050	S 9405 20/2014 SPK value 1.000	Tes F SPK Ref Val 0	Code: Ef RunNo: 19 GeqNo: 56 <u>%REC</u> 95.6	PA Method 9405 61908 LowLimit 80	8021B: Volat Units: mg/K HighLimit 120	illes (g %RPD	RPDLimit	Qual					
Sample ID LCS-13793 MK Client ID: LCSS Prep Date: Analyte Benzene Toluene	SampT Batcl Analysis I <u>Result</u> 0.96 0.93	Type: LC h ID: R1 Date: 6/ PQL 0.050 0.050	S 9405 20/2014 SPK value 1.000 1.000	Tes F SPK Ref Val 0 0	Code: Ef RunNo: 19 GeqNo: 50 %REC 95.6 92.8	PA Method 9405 61908 LowLimit 80 80	8021B: Volat Units: mg/K HighLimit 120 120	illes (g %RPD	RPDLimit	Qual					
Sample ID LCS-13793 MK Client ID: LCSS Prep Date: Analyte Benzene Toluene Ethylbenzene	Samp Batcl Analysis I Result 0.96 0.93 0.93	Type: LC h ID: R1 Date: 6/ PQL 0.050 0.050 0.050	S 9405 20/2014 SPK value 1.000 1.000 1.000	Tes F SPK Ref Val 0 0 0 0	Code: Ef RunNo: 19 SeqNo: 50 <u>%REC</u> 95.6 92.8 92.5	PA Method 9405 61908 LowLimit 80 80 80	8021B: Volat Units: mg/K HighLimit 120 120 120	iiles 59 %RPD	RPDLimit	Qual					
Sample ID LCS-13793 MK Client ID: LCSS Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Samp1 Batcl Analysis I Result 0.96 0.93 0.93 2.9	Type: LC h ID: R1 Date: 6/ PQL 0.050 0.050 0.050 0.10	S 9405 20/2014 SPK value 1.000 1.000 3.000	Tes F SPK Ref Val 0 0 0 0 0	Code: Ef RunNo: 19 SeqNo: 5 %REC 95.6 92.8 92.5 97.8	PA Method 9405 61908 LowLimit 80 80 80 80 80	8021B: Volat Units: mg/K HighLimit 120 120 120 120	iiles (g %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
- P Sample pH greater than 2.
- RL Reporting Detection Limit

Page 8 of 8

1406955

WO#:

23-Jun-14

HALL Hall Environmental Analysis Laboratory ENVIRONMENTAL 4901 Hawkins NE ANALYSIS LABORATORY TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM	Work Order Number:	1406955		RcptNo:	1
Received by/date:					
Logged By: Anne Thorne 6/2	20/2014 8:00:00 AM		anne Hann		
Completed By: Anne Thorne 6/2	20/2014		A. M		
Reviewed By:	nulzalus		and from		
Chain of Custody					
1 Custody seals intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🗹	
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present	
3. How was the sample delivered?		Courier			
<u>Log In</u>					
4. Was an attempt made to cool the samples?		Yes 🗹	No 🗌	NA 🗌	
5. Were all samples received at a temperature of	>0° C to 6.0°C	Yes 🗹	No 🗌	NA 🗆	
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌		
7. Sufficient sample volume for indicated test(s)?		Yes 🗹	No 🗌		
8. Are samples (except VOA and ONG) properly p	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?		Yes 🗹	No 🗆	bottles checked for pH:	- <u>10</u>
(Note discrepancies on chain of custody)		¥		2 o) Adiusted?	r >12 unless noted)
13. Are matrices correctly identified on Chain of Cu	istoay?	ves 🔽			
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: By Whom: Regarding:	Date Via: [_ eMail 📋	Phone 🗌 Fax	In Person	
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17. Additional remarks:					
18. <u>Cooler Information</u>	and and going the same strain.	<u> </u>			

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Yes

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Date	Time	Matrix	Sampl	e Request ID	Container Type and #	Preservative Type	HEAL NO 140695	20.5 S	BTEX +-#	BTEX + M	TPH 8015	TPH (Meth	EDB (Meth	PAHS (83) RCRA R M	Anions (F,(8081 Pesti	8260B (VO	8270 (Sem		:	1	Air Bubbles
:/19/ha	H :10	ssil	56-1	North	1402 Jar			201	X		X								_	-		
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19/2014	11:25	Soil	52-4	Base	1 for Jar			204	X		X											
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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.