

AE Order Number Banner

Report Description

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App Number: pCOH0808737406

1RP - 1826 SOUTHERN UNION GAS COMPANY District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

						OPE	RATOR		Initi	al Report	Final Report
Name of Co	ompany	South	ern Union	Gas Services, I	Ltd.	Contact					Rose Slade
Address		801 S. Loop	464, Mon	ahans, TX, 797	56	Telephone	No.				432-940-5147
Facility Na	me: Trunk	"O" #5 (RP-1826)	=		Facility Ty	ре			Natur	al Gas Gathering
Surface Ow	ner South	nern Union C	Gas Servic	es Mineral O	wner:	Federal			Lease N	No.	
				LOCA	TIO	N OF RE	LEASE				
Unit Letter	Section	Township	Range	Feet from the		/South Line	Feet from the	East/	West Line	County	
D	31	23S	37E							Le	a
]	Latitude N32 1	5.410		Longitude W	103 11.	734		
				NAT	URE	OF REL	EASE				
Type of Rele	ase Natura	l Gas and Cru	ide Oil			A PERSONAL PROPERTY.	Release 15 bbls		Volume I	Recovered 0	Bbls
Source of Re	lease 16"1	Natural Gas P	ineline				0,000 MCF Gas Hour of Occurrence	ne .	Date and	Hour of Disc	overy 3/19/08
Source of the		Turur Gus I	iperiire			not known			Time: 3:0		overy shirted
Was Immedi	ate Notice C					If YES, To	Whom?			•	
			Yes	No Not Re	quired						
By Whom?						Date and H			HOBBS	SOCD	
Was a Water	course Read		V	l Na		If YES, Vo	olume Impacting	the Wat	ercourse.		
				No					DEC 1	0 2012	
If a Waterco	urse was Im	pacted, Descri	ibe Fully.*						DEC 1	& LUIL	
A 16" Natura was blocked	al Gas gathe and isolated	from the syst	rating at ap tem approx	proximately 30 p imately 500 ft we	est of th	ne site.					down. This section
Final remedi	ation will fo d March 25	llow the NMO	OCD recon	nmended guidelin	es for l	leaks and spill the Trunk "(s. O" #5 Release Si	te by an	environme	ental contracto	or that is no longer
concentration	ns above N	MOCD regul	latory stan	dards remained in the distriction activities	in-situ	and collect	confirmation soil	sample	es. Laborat	zene, BTEX, ory analytica	TPH and chloride I reports from the
Please see a			ironmenta	al Services Tech	inologi	es Remediati	on Summary ar	nd Site	Closure Re	equest for d	etails of remedial
I hereby cer regulations a public health should their or the enviro	tify that the all operators or the env operations honment. In	information gare required ironment. The nave failed to	to report a ne acceptant adequately MOCD acce	and/or file certain ce of a C-141 re investigate and	releas port by remedi	the NMOCE ate contamina	s and perform or marked as "Fin tion that pose a t elieve the operat	al Repo threat to or of re	e actions for rt" does not ground wa sponsibility	r releases, w t relieve the o ter, surface w for complia	NMOCD rules and hich may endanger operator of liability vater, human health nce with any other
Signatura	to	o AC	().	di			OIL CON	SER	ATION	DIVISIO	N NAA
Signature:	100	7 (1.5	- CO			- A manage - 1-1	District S	M	Joseph	-	KAN
Printed Nam	e: Rose L.	Slade				Approved by	District Supervis	Envi	ronment	al Special	ist
Title: EHS	Compliance	Specialist				Approval Da	te: 2 12 12		Expiration	Date: -	
E-mail Addr	ess: rose.sla	de@sug.com				Conditions o	f Approval:	_			
Date:		F	Phone: 432	-940-5147(cell)						IRP-18	26

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

☐ Final Report

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Initial Report

Release Notification and Corrective Action

OPERATOR

Name of Co	mpany	South	ern Union	Gas Services, 1	Ltd.	Contact				Rose Slade
Address		801 S. Loop	464, Mo	nahans, TX, 797	756	Telephone	No.			432-940-5147
Facility Nar	ne: Trunk	"O" #5 (RP-1826)		Facility Ty	pe			Natural Gas Gathering
Surface Ow	ner South	nern Union C	Jac Servi	ces Mineral C	wner.	Federal			Lease N	Jo
Surface Ow	nei Souti	ici ii Ollioli C	Jas Scivi	ces Willieral C	wiici.	rederar			Lease 1	νο.
				LOCA	TIO	N OF RE	LEASE			
Unit Letter	Section	Township	Range	Feet from the	North	South Line	Feet from the	East/W	Vest Line	County
D	31	23S	37E							Lea
							,			
				Latitude N32 1	5.410		Longitude W1	03 11.7	734	
						OF REL				
Type of Rele	ase Natura	l Gas and Cru	ide Oil	IMI	UKL		Release 15 bbls		Volume F	Recovered 0 Bbls
Type of Reie	ase matare	ir Gus una Cru	ide on				0,000 MCF Gas		v oranie i	tees vered o Bois
Source of Re	lease 16"]	Natural Gas P	ipeline				lour of Occurrenc	e	Date and	Hour of Discovery 3/19/08
						not known			Time: 3:0	0 p.m.
Was Immedia	ate Notice (v	N MN D		If YES, To	Whom?			
11			Yes	No Not Re	equirea					
By Whom?	- P	1 10				Date and F		1 777	HOBBS	SOCD
Was a Water	course Read		Yes D	No		If YES, Vo	olume Impacting t	he Wate	ercourse.	
									DEC 1	9 2012
If a Watercou	irse was Im	pacted, Descri	ibe Fully.*	k					DECI	2 2012
Describe Cou		1 D	Ji-1 A -ti-	. T-1						
A 16" Nature	d Gas gathe	em and Remed	rating at a	n Taken:	e i des	reloped a leak	The section of	line was	blo REC	and Blown down. This section
							. The section of	mic was	Olo emedera	edia-elovii dovii. Tilis section
was blocked and isolated from the system approximately 500 ft west of the site. Describe Area Affected and Cleanup Action Taken. An area measuring approximately 1000 sq. ft. was affected by the release and the backhoe activity. Final remediation will follow the NMOCD recommended guidelines for leaks and spills.										
								s affecte	ed by the r	elease and the backhoe activity.
Final remedia	ation will fo	ollow the NMO	OCD recor	nmended guidelir	nes for l	eaks and spill	S.			
On or around	March 25	2008 remed	iation acti	vities were condu	icted at	the Trunk "C	" #5 Release Site	e by an	environme	ental contractor that is no longer
										zene, BTEX, TPH and chloride
										ory analytical reports from the
confirmation	soil sample	es suggested p	revious re	mediation activitie	es met t	he requirement	nts of the NMOCI	D.		
Please see t	ho ottocho	d Posin Env	ironmont	al Carriage Tool	nologi	os Damadiati	on Cummanı an	d Sita (Closura P.	equest for details of remedial
activities an			ironment	ai Services Teci	morogr	es Kemeulali	on Summary un	u sue C	ciosure K	equest for details of remediar
			given abov	ve is true and con	nplete t	o the best of	my knowledge ar	nd under	rstand that	pursuant to NMOCD rules and
										r releases, which may endanger
										relieve the operator of liability
should their	operations l	nave failed to	adequately	y investigate and	remedia	ate contamina	tion that pose a th	nreat to	ground wa	ter, surface water, human health for compliance with any other
		ws and/or regu		eptance of a C-1	41 1epo	off does not i	eneve the operato	of of ies	polisionity	for compnance with any other
rederar, state	, or total la	No dilator regu					OIL CONS	SFRV	ATION	DIVISION
'/	the	1 L 0	X)	4.			OIL CON	DA	An.	1010
Signature:	10	K VY	- HC				200	WAY.	JULL	- Jekuny
	D 1	61.1				Approved by	District Supervise	or:		al Spacialist
Printed Name	e: Rose L.	Slade						CHIAII	Othirein	ar pheeranar
Title: EHS (omnliance	Specialist				Approval Da	te: 2/12/12	I	Expiration	Date: -
Title. Liis	omphanec	Specialist				ppiorui Du	12112112	1		
E-mail Addre	ess: rose.sla	de@sug.com				Conditions o	f Approval:	-		
										IRP-1826
Date:		P	hone: 432	2-940-5147(cell)						1111-1870

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

		Rele	ease Notific	eatio		orrective A	ction		I Para	T rivel Day
Name of Compan	South	ern Union	Gas Services,	Ltd	Contact	IOK	\leftarrow	M Initi	al Report	Final Rep Tony Savoi
Address			26 Jal, N.M. 88		Telephone N	No.				575-395-211
Facility Name			County Field D	_	Facility Typ				Natur	ral Gas Gatherin
Surface Owner: S	outhern Union C	Gas Servic	es Mineral C)wner:	: Federal			Lease N	No.	
			LOCA	ATIO	N OF REI	LEASE				
Unit Letter Sect D 31	Township 23S	Range 37E	Feet from the	North	h/South Line	Feet from the	East/\	West Line	County	Lea
					0 Longitude E OF RELI	e W103 11.734 EASE	4		USTR	90'
Type of Release : N	atural Gas and Cr	ude Oil				Release: 15 bbl	S	Volume I	Recovered	0 Bbls
Source of Release	16" Natural Gas F	Pipeline				lour of Occurrence	e	Date and Time: 3:0		sovery 3/19/08
Was Immediate No		Yes [No Not R	equired	If YES, To	Whom?				
By Whom?					Date and H	lour:				
Was a Watercourse] Yes ⊠	No		If YES, Vo	olume Impacting t	he Wate	ercourse.		
Describe Cause of A 16" Natural Gath This section was Describe Area Afferinal remediation of I hereby certify that regulations all oper public health or the should their operation of the environment federal, state, or loc	s gathering line of blocked and isolated and Cleanup will follow the NM the information gators are required to environment. The ons have failed to In addition, NMC	Action Tak OCD reconiven above to report are acceptance adequately OCD accep	at approximatel the system approximatel the system approximate. An area measumended guideling is true and computer of a C-141 report investigate and r	suring anes for olete to release ort by the remedia	approximately leaks and spill the best of my notifications at he NMOCD mate contaminati	est of the site. 1000 sq. ft. was a s. knowledge and und perform correcarked as "Final R on that pose a thr	ffected nderstative act eport" ceat to gi	by the release nd that pursions for rel loes not rel round wate	suant to NMO leases which leve the open r, surface wal	ackhoe activity. OCD rules and may endanger ator of liability ter, human health
Signature:	1 ony	Duri	20		Approved by	OIL CON		ohus		<u>N</u>
Printed Name: .	ohn A. Savoie					ENVIRO	MME	NTAL EN	VGINEER	
Title: Remediation	Supervisor				Approval Dat	e: 3.26.08		Expiration	Date: 5.2	86.2
E-mail Address: to	ny.savoie@sug.co	m			Conditions of				Attached	
Date: 3/25/08	CI LCN		575-395-2116		SUBMIT	C-141 Fires	L	/	IR	S# HOR
Attach Additional	Sneets If Necess	sary			W De	C-141 Fire CLEMENTATION FER TO 1 NO FILME	LRP	1826		1826
					(0)	NEIHAL	PAR	e wor	ZK	

FCOHO 808 737072

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260

jwlowry@basinenv.com

Office: (575) 396-2378

Fax: (575) 396-1429



REMEDIATION SUMMARY & SITE CLOSURE REQUEST

SOUTHERN UNION GAS SERVICES
TRUNK "O" #5
HISTORICAL RELEASE SITE
Lea County, New Mexico
Unit Letter "D" (NW/NW), Section 31, Township 23 South, Range 37 East
Latitude 32° 15.410' North, Longitude 103° 11.734' West
NMOCD Reference # 1RP-1826

Prepared For:

Southern Union Gas Services 801 S. Loop 464 Monahans, TX 79756

Prepared By:
Basin Environmental Service Technologies, LLC
3100 Plains Highway
Lovington, New Mexico 88260

December 2012

HOBBS OCD

DEC 1 2 2012

RECEIVED

Joel W. Lowry Project Manager

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Table 1 - Concentrations of Benzene, BTEX, TPH & Chloride in Soil

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Appendix A – Photographs

Appendix B – Laboratory Analytical Reports

Appendix C – Release Notification and Corrective Action (Form C-141)

1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this *Remediation Summary & Site Closure Request* for the Trunk "O" #5 Historical Release Site (1RP-1826). The legal description of the release site is Unit Letter "D" (NW/NW), Section 31, Township 23 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 15.410' North latitude and 103° 11.734' West longitude. The property affected by the release is owned by Southern Union Gas Services. Please reference Figure 1 for a "Site Location Map".

On March 19, 2008, Southern Union discovered a release had occurred on the Trunk "O" Pipeline. The "Release Notification and Corrective Action Form" (Form C-141) indicated failure of a section of sixteen-inch (16") low-pressure natural gas pipeline resulted in the release of approximately fifteen barrels (15 bbls) of crude oil and fifty thousand (50,000) Mcf of natural gas. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on March 26, 2008. The Form C-141 indicated the release and initial response activities affected approximately one thousand, square feet (1,000 ft²) of pasture land. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix C.

Previous remediation activities were conducted at the Trunk "O" #5 Release Site by an environmental contractor that is no longer affiliated with the site. The nature and extent of the aforementioned activities remains unclear, as environmental reports and work records are not readily available.

On June 22, 2012, at the request of Southern Union, Basin assumed remediation responsibilities at the Trunk "O" #5 Historical Release Site.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Unit Letter D, Section 31, Township 23 South, Range 34 East. An NMOCD representative indicated groundwater should be encountered at approximately one hundred feet (100') below ground surface (bgs) on the initial Form C-141. Based on the NMOCD ranking system and the presence of elevated chlorides at six feet (6') bgs, ten (10) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Trunk "O" #5 Historical Release Site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene 10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) 1,000 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On November 7, 2012, Basin responded to the Trunk "O" #5 Historical Release Site. An initial investigation indicated previous remediation activities had been conducted at the release site.

On November 9, 2012, excavation activities began at the historical release site. The excavation floor and sidewalls were advanced until it appeared native soil had been reached. Excavated material was stockpiled on-site, pending final disposition.

On November 13, 2012, seven (7) confirmation soil samples (South Wall @ 6', West Wall @ 2.5' North Wall @ 3', East Wall @ 2.5', South Floor @ 9', West Floor @ 3' and East Floor @ 3') were collected and submitted to Xenco Laboratories, of Odessa, Texas, for determination of TPH and chloride concentrations in accordance with EPA Methods SW 846-8015M and 300.1, respectively. Laboratory analytical results indicated TPH concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the samples submitted with the exception of soil sample East Wall @ 2.5', which had a TPH concentration of 317 mg/Kg. Analytical results indicated chloride concentrations ranged from 6.63 mg/Kg for soil sample West Wall @ 2.5' to 287 mg/Kg for soil sample South Wall @ 6'. Based on laboratory analytical results, further delineation would be required in the area represented by soil sample South Wall @ 6'.

Soil samples East Wall @ 2.5' and South Floor @ 9' were also analyzed for BTEX constituent concentrations in accordance with EPA Methods SW 846-8021B. Analytical results indicated the concentration of benzene was less than the appropriate laboratory MDL for each of the soil sample submitted. BTEX concentrations ranged from less than the laboratory MDL for soil sample East Wall @ 2.5' to 0.02618 mg/Kg for soil sample South Floor @ 9'. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix B.

One (1) five-point composite soil sample (Stockpile) was collected from the stockpiled material and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated soil sample stockpile had a BTEX concentration of 0.0325 mg/Kg, a TPH concentration of 30.9 mg/Kg and a chloride concentration of 129 mg/Kg. Based on these laboratory analytical results, it was determined that the stockpiled material was suitable for use as backfill.

On November 19, 2012, a delineation trench was advanced in the area represented by soil sample South Wall @ 6'. One (1) soil sample (South Wall #2) was collected and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated the chloride concentration of soil sample South Wall #2 was 13.3 mg/Kg. Based on laboratory analytical results, it was determined horizontal delineation had been achieved in the area defined by soil sample South Wall @ 6'.

On November 28, 2012, upon receiving approval from the NMOCD, the excavation was backfilled with the on-site material. Prior to backfilling, the final dimensions of the excavation were approximately forty feet (40') in length, thirty feet (30') in width and three feet (3') to nine feet (9') in depth. Excavation backfill was compacted in lifts and contoured to match the surrounding topography. The site will be reseeded in accordance with the landowner's requests.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Xenco Laboratories, of Odessa, Texas, for BTEX, TPH, and/or chloride analyses using the methods described below:

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with modified EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method 300/300.1

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

5.0 SITE CLOSURE REQUEST

Confirmation soil samples collected from floor and sidewalls of the Trunk "O" #5 excavation were analyzed by and NMOCD-approved laboratory. Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels in each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Trunk "O" #5 Historical Release Site.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Southern Union Gas Services.

7.0 DISTRIBUTION

Copy 1: Geoffrey Leking

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division (District 1)

1625 French Drive Hobbs, NM 88240

GeoffreyR.Leking@state.nm.us

Copy 2: Rose Slade

Southern Union Gas Services

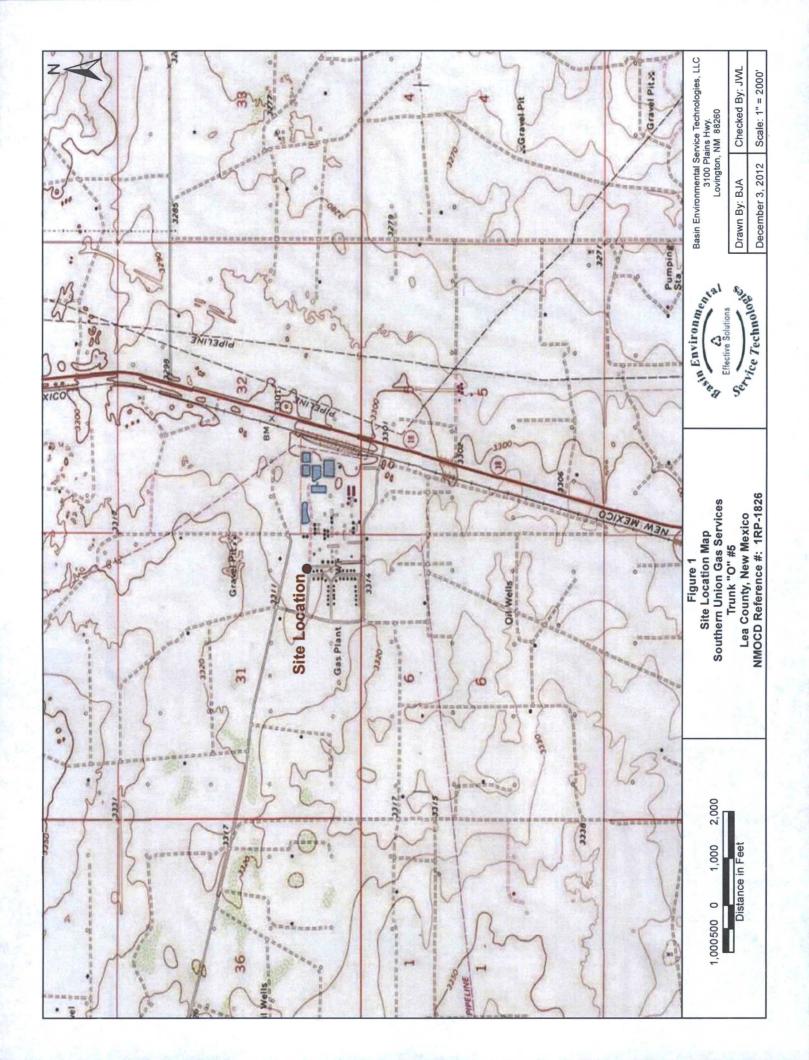
801 S. Loop 464

Monahans, Texas 79756 rose.slade@sug.com

Copy 3: Basin Environmental Service Technologies, LLC

P.O. Box 301

Lovington, New Mexico 88260



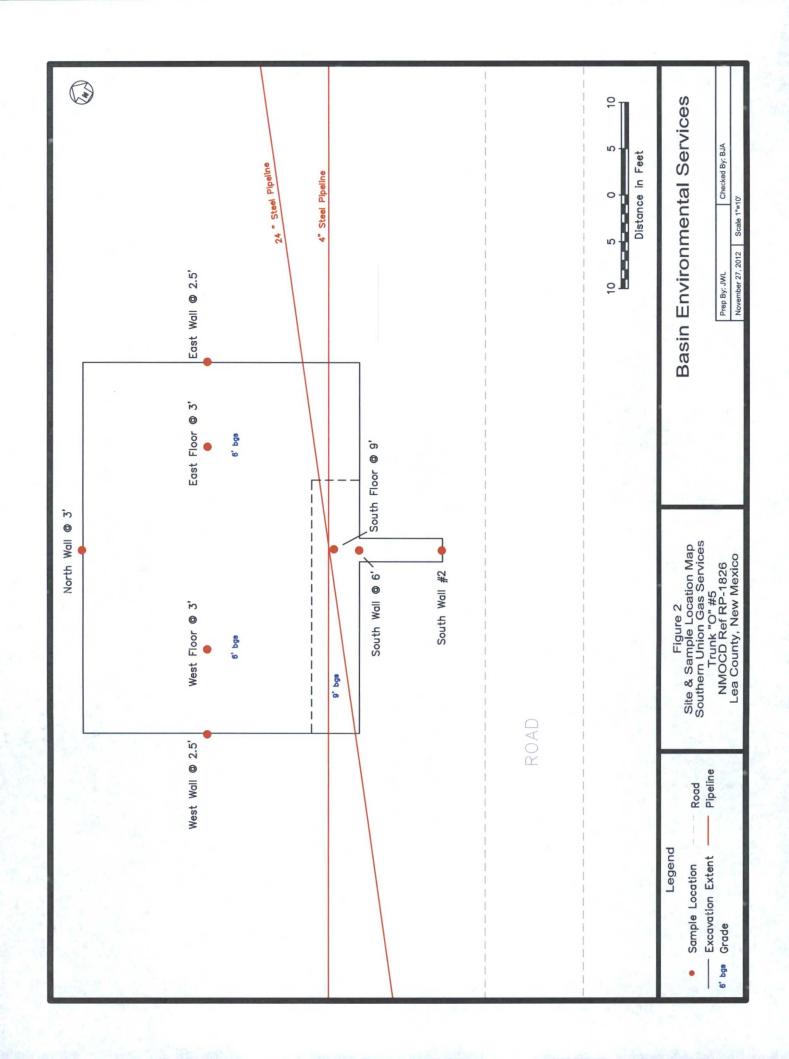


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES TRUNK "O" #5 HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD REF# 1RP-1826

					METHOD: EF	METHOD: EPA SW 846-8021B, 5030	21B, 5030		MET	METHOD: 8015M	5M	TOTAL	METHOD: E300.0
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE	SOIL	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
South Wall @ 6'	.9	11/13/2012	In-Situ	,					<18.7	<18.7	<18.7	<18.7	287
West Wall @ 2.5'	2.5'	11/13/2012	In-Situ	,				1	<17.8	<17.8	<17.8	<17.8	6.63
North Wall @ 3'	3'	11/13/2012	In-Situ					1	<18.0	<18.0	<18.0	<18.0	8.50
East Wall @ 2.5'	2.5'	11/13/2012	In-Situ	<0.00105	<0.00210	<0.00105	<0.00210	<0.00210	18.0	279	20.2	317	238
South Floor @ 9'	9,	11/13/2012	In-Situ	<0.00109	<0.00218	0.00448	0.0217	0.02618	<16.2	<16.2	<16.2	<16.2	14.7
West Floor @ 3'	3'	11/13/2012	In-Situ	-				1	<16.3	<16.3	<16.3	<16.3	16.8
East Floor @ 3'	3,	11/13/2012	In-Situ				1	,	<17.3	<17.3	<17.3	<17.3	142
Stockpile	N/A	11/13/2012 Stockpiled	Stockpiled	<0.00124	0.0325	<0.00124	<0.00248	0.0325	<18.6	30.9	<18.6	30.9	129
South Wall #2	.9	11/23/2012	In-Situ						,				13.3
NMOCD Standard				10				20				1,000	200

- = Not analyzed.



Photograph of the initial release at the Trunk "O"#5 Historical Release Site.



Photograph of previous excavation activities at the Trunk "O"#5 Historical Release Site.



Photograph of recent excavation activities at the Trunk "O"#5 Historical Release Site.



Photograph of recent excavation activities at the Trunk "O"#5 Historical Release Site.



Photograph of recent excavation activities at the Trunk "O"#5 Historical Release Site.



Photograph of recent excavation activities at the Trunk "O"#5 Historical Release Site.



Photograph of the backfilled excavation at the Trunk "O"#5 Historical Release Site.



Photograph of the backfilled excavation at the Trunk "O"#5 Historical Release Site.

Analytical Report 452569

for Southern Union Gas Services- Monahans

Project Manager: Joel Lowry
Trunk "O" #5 (RP-1826)

20-NOV-12

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098)

EDA I I TEXACITED TO (TICAL)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)





20-NOV-12

Project Manager: Joel Lowry Southern Union Gas Services- Monahans 801 South Loop 464 Monahans, TX 79756

Reference: XENCO Report No: 452569

Trunk "O" #5 (RP-1826)

Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 452569. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 452569 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Nicholas Straccione

Project Manager

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Sample Cross Reference 452569



Southern Union Gas Services- Monahans, Monahans, TX

Trunk "O" #5 (RP-1826)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Wall @ 6'	S	11-13-12 13:25		452569-001
West Wall @ 2.5'	S	11-13-12 13:30		452569-002
North Wall @ 3'	S	11-13-12 13:35		452569-003
East Wall @ 2.5'	S	11-13-12 13:41		452569-004
South Floor @ 9'	S	11-13-12 13:45		452569-005
West Floor @ 3'	S	11-13-12 13:48		452569-006
East Floor @ 3'	S	11-13-12 13:52		452569-007
Stockpile	S	11-13-12 14:25		452569-008

CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans

Project Name: Trunk "O" #5 (RP-1826)



Project ID:

Work Order Number: 452569

Report Date: 20-NOV-12 Date Received: 11/15/2012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Project Location: Lea County, NM Contact: Joel Lowry

Project Id:

Certificate of Analysis Summary 452569

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #5 (RP-1826)

Date Received in Lab: Thu Nov-15-12 10:56 am

Report Date: 20-NOV-12



1 EF	Lab Id:	452569-001	452569-002	157560 002	150560 001	20000000	70000000
19		100-100-0	400-10070-	427207-003	422369-004	452569-005	452569-006
	Field Id:	South Wall @ 6'	West Wall @ 2.5'	North Wall @ 3'	East Wall @ 2.5'	South Floor @ 9'	West Floor @ 3'
Anuiyas wequesteu	Depth:						
V	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sa	Sampled:	Nov-13-12 13:25	Nov-13-12 13:30	Nov-13-12 13:35	Nov-13-12 13:41	Nov-13-12 13:45	Nov-13-12 13:48
BTEX by EPA 8021B Ext	Extracted:				Nov-20-12 08:30	Nov-15-12 11:00	
An	Analyzed:				Nov-20-12 11:10	Nov-15-12 13:24	
Un	Units/RL:				mg/kg RL	mg/kg RL	
Benzene					ND 0.00105	ND 0.00109	
Toluene					ND 0.00210	ND 0.00218	
Ethylbenzene					ND 0.00105	0.00449 0.00109	
m_p-Xylenes					ND 0.00210	0.0130 0.00218	
o-Xylene					ND 0.00105	0.00874 0.00109	
Total Xylenes					ND 0.00105	0.0217 0.00109	
Total BTEX					ND 0.00105	0.0262 0.00109	
00/300.1	Extracted:	Nov-16-12 10:14	Nov-16-12 10:14	Nov-16-12 10:14	Nov-16-12 10:14	Nov-16-12 10:14	Nov-16-12 10:14
SUB: TX104704215	Analyzed:	Nov-16-12 11:39	Nov-16-12 11:56	Nov-16-12 12:14	Nov-16-12 12:31	Nov-16-12 13:05	Nov-16-12 13:22
Un	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		287 2.62	6.63 2.35	8.50 2.48	238 20.0	14.7 2.23	16.8 2.42
Percent Moisture Ext	Extracted:						
An	Analyzed:	Nov-15-12 14:40	Nov-15-12 14:40	Nov-15-12 14:40	Nov-15-12 14:40	Nov-15-12 14:40	Nov-15-12 14:40
Un	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		19.6 1.00	16.0 1.00	16.8 1.00	4.57 1.00	7.89 1.00	8.17 1.00
TPH By SW8015 Mod	Extracted:	Nov-15-12 11:15	Nov-15-12 11:15	Nov-15-12 11:15	Nov-15-12 11:15	Nov-15-12 11:15	Nov-15-12 11:15
. An	Analyzed:	Nov-16-12 02:57	Nov-16-12 04:33	Nov-16-12 05:05	Nov-16-12 05:37	Nov-16-12 06:08	Nov-16-12 06:40
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 18.7	ND 17.8	ND 18.0	18.0 15.7	ND 16.2	ND 16.3
C12-C28 Diesel Range Hydrocarbons		ND 18.7	ND 17.8	ND 18.0	7.51 272	ND 16.2	ND 16.3
C28-C35 Oil Range Hydrocarbons		ND 18.7	ND 17.8	ND 18.0	20.2 15.7	ND 16.2	ND 16.3
Total TPH		ND 18.7	ND 17.8	ND 18.0	317 15.7	ND 16.2	ND 16.3

Nicholas Straccione

Project Manager

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Final 1.000

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This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report repressed the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.



Project Location: Lea County, NM Contact: Joel Lowry

Project Id:

Certificate of Analysis Summary 452569

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #5 (RP-1826)

Date Received in Lab: Thu Nov-15-12 10:56 am

Report Date: 20-NOV-12

	Lab Id:	452569-007	452569-008	
Analysis Ronnostod	Field Id:	East Floor @ 3'	Stockpile	
Allunysis trequesicu	Depth:			
	Matrix:	SOIL	SOIL	
	Sampled:	Nov-13-12 13:52	Nov-13-12 14:25	
BTEX by EPA 8021B	Extracted:		Nov-20-12 08:30	
	Analyzed:		Nov-20-12 11:43	
	Units/RL:		mg/kg RL	
Benzene			ND 0.00124	
Toluene			0.00325 0.00248	
Ethylbenzene			ND 0.00124	
m_p-Xylenes			ND 0.00248	
o-Xylene			ND 0.00124	
Total Xylenes			ND 0.00124	
Total BTEX			0.00325 0.00124	
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-16-12 10:14	Nov-16-12 10:14	
SUB: TX104704215	Analyzed:	Nov-16-12 13:39	Nov-16-12 13:56	
	Units/RL:	mg/kg RL	mg/kg RL	
Chloride		142 2.40	129 27.6	
Percent Moisture	Extracted:			
	Analyzed:	Nov-15-12 14:40	Nov-15-12 14:40	
	Units/RL:	% RL	% RL	
Percent Moisture		13.2 1.00	19.8 1.00	
TPH By SW8015 Mod	Extracted:	Nov-15-12 11:15	Nov-15-12 11:15	
	Analyzed:	Nov-16-12 07:11	Nov-16-12 07:42	
	Units/RL:		mg/kg RL	
C6-C12 Gasoline Range Hydrocarbons		ND 17.3	ND 18.6	
C12-C28 Diesel Range Hydrocarbons		ND 17.3	30.9 18.6	
C28-C35 Oil Range Hydrocarbons		ND 17.3	ND 18.6	
Total TPH		ND 17.3	30.9 18.6	

Nicholas Straccione

Project Manager

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Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 900976

Sample: 452569-005 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 11/15/12 13:24	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 901052

Sample: 452569-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12	02:57 St	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	91.4	100	91	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 901052

Sample: 452569-002 / SMP

Batch:

Matrix: Soil

Units: mg

ng/kg	Date Analyzed: 11/16/12 04:33	SURROGATE RECOVERY STUDY							
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
	Analytes			[D]					
		89.5	99.9	90	70-135				
		45.0	50.0	90	70-135				

Lab Batch #: 901052

1-Chlorooctane o-Terphenyl

Sample: 452569-003 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12 05:05 SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1-Chlorooctane	89.8	99.8	90	70-135		
o-Terphenyl	45.2	49.9	91	70-135		

Lab Batch #: 901052

Sample: 452569-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date A	nalyzed: 11/16/12 05:37	SURROGATE RECOVERY STUDY					
TPH By SW801 Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooctane		88.9	99.8	89	70-135		
o-Terphenyl		44.9	49.9	90	70-135		

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 901052

Sample: 452569-005 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12 06:08 SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	89.2	99.7	89	70-135	
o-Terphenyl	44.2	49.9	89	70-135	

Lab Batch #: 901052

Sample: 452569-006 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg	Date Analyzed: 11/16/12 06:40	SURROGATE RECOVERY STUDY					
Units: mg/kg	Date Analyzed: 11/10/12 00.40						
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
	Analytes			[D]			
1-Chlorooctane		93.4	100	93	70-135		
o-Terphenyl		47.0	50.0	94	70-135		

Lab Batch #: 901052

Sample: 452569-007 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12 07:11 SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	89.9	100	90	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 901052

Sample: 452569-008 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12 07:42 SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	87.0	99.6	87	70-135			
o-Terphenyl	44.1	49.8	89	70-135	54 A		

Lab Batch #: 901301

Sample: 452569-004 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/20/12 11:10	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]	4 6	
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	-
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 901301

Sample: 452569-008 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 11/20/12 11:43	3 SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 900976

Sample: 630013-1-BLK / BLK

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 11/15/12 09:33 SURROGATE RECOVERY STUDY							
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0258	0.0300	86	80-120			
A Bromofluorobenzene	0.0242	0.0200	0.1	00 120			

Lab Batch #: 901052

Sample: 630055-1-BLK / BLK

Batch: Matrix: Solid

Units: mg/kg Date Analyzed: 11/16/12 02:25 SURROGATE RECOVERY STUDY							
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1-Chlorooctane	93.1	99.8	93	70-135			
o-Terphenyl	46.7	49.9	94	70-135			

Lab Batch #: 901301

Sample: 630198-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 11/20/12 10:36	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0259	0.0300	86	80-120		
4-Bromofluorobenzene	0.0280	0.0300	93	80-120		

Lab Batch #: 900976

Sample: 630013-1-BKS / BKS

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 11/15/12 09:01	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene	0.0298	0.0300	99	80-120		
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	P	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 901052

Sample: 630055-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 11/16/12 01:21 SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	92.0	100	92	70-135	
o-Terphenyl	48.7	50.1	97	70-135	

Lab Batch #: 901301

Sample: 630198-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg	Date Analyzed: 11/20/12 09:13	SURROGATE RECOVERY STUDY						
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorobenzene	•	0.0268	0.0300	89	80-120			
4-Bromofluorobenzene		0.0297	0.0300	99	80-120			

Lab Batch #: 900976

Sample: 630013-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 11/15/12 09:17 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0315	0.0300	105	80-120	

Lab Batch #: 901052

Sample: 630055-1-BSD / BSD

Batch:

1

Matrix: Solid

Units: mg/kg Date Analyzed: 11/16/12 01:53 SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.2	99.9	90	70-135	
o-Terphenyl .	49.9	50.0	100	70-135	-

Lab Batch #: 901301

Sample: 630198-1-BSD / BSD

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 11/20/12 09:30		SU	RROGATE RE	COVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Analytes	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene		0.0335	0.0300	112	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 900976

Sample: 451912-011 S/MS

Batch: 1

Matrix: Soil

Units: mg/kg	Date Analyzed: 11/15/12 12:34	SURROGATE RECOVERY STUDY					
ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1,4-Difluorobenzene		0.0318	0.0300	106	80-120		
4-Bromofluorobenzene		0.0336	0.0300	112	80-120		

Lab Batch #: 901052

Sample: 452569-001 S/MS

Batch: 1

Matrix: Soil

SURROGATE RECOVERY STUDY						
Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		[D]				
95.8	99.8	96	70-135			
		 				
	Amount Found [A]	Amount Found Amount [B] 95.8 99.8	Amount True Recovery %R [D] 95.8 99.8 96	Found Amount Recovery Limits [A] [B] %R %R [D]		

Lab Batch #: 901301

Sample: 452203-011 S/MS

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 11/20/12 10:20	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0295	0.0300	98	80-120		
4-Bromofluorobenzene	0.0269	0.0300	90	80-120		

Lab Batch #: 900976

Sample: 451912-011 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/15/12 12:51	SURROGATE RECOVERY STUDY						
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
Analytes			[D]				
1,4-Difluorobenzene	0.0311	0.0300	104	80-120			
4-Bromofluorobenzene	0.0333	0.0300	111	80-120			

Lab Batch #: 901052

Sample: 452569-001 SD / MSD

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 11/16/12 04:01	SURROGATE RECOVERY STUDY						
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctane	87.6	99.8	88	70-135			
o-Terphenyl	53.8	49.9	108	70-135			

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



Project Name: Trunk "O" #5 (RP-1826)

Work Orders: 452569,

Project ID:

Lab Batch #: 901301

Sample: 452203-011 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 11/20/12 11:26	SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags	
Analytes			[D]			
1,4-Difluorobenzene	0.0343	0.0300	114	80-120		
4-Bromofluorobenzene	0.0308	0.0300	103	80-120		

Surrogate Recovery [D] = 100 * A / B

^{*} Surrogate outside of Laboratory QC limits

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



BS / BSD Recoveries



Project Name: Trunk "O" #5 (RP-1826)

Work Order #: 452569

Lab Batch ID: 900976 Analyst: KEB

Sample: 630013-1-BKS

Date Analyzed: 11/15/2012 Project ID:

> Date Prepared: 11/15/2012 Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	PIKE / B	LANKS	PIKE DUPL	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes	:	[B]	[c]	[Q]	[E]	Result [F]	[9]				
Benzene	<0.00100	0.100	0.105	105	0.100	0.106	901	1	70-130	35	
Toluene	<0.00200	0.100	0.110	110	0.100	0.113	113	3	70-130	35	
Ethylbenzene	<0.00100	0.100	0.106	106	0.100	0.110	110	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.224	112	0.200	0.234	117	4	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.114	114	5	71-133	35	

Analyst: KEB

Lab Batch ID: 901301

Date Prepared: 11/20/2012

Sample: 630198-1-BKS

Batch #: 1

Date Analyzed: 11/20/2012 Matrix: Solid

Units: mg/kg		BLAN	K /BLANK S	PIKE / B	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE F	RECOVE	RY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[6]				
Benzene	<0.00100	0.100	0.0861	98	0.100	0.101	101	16	70-130	35	
Toluene	<0.00200	0.100	0.0891	68	0.100	0.102	102	14	70-130	35	
Ethylbenzene	<0.00100	0.100	0.0822	82	0.100	0.0990	66	19	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.175	88	0.200	0.210	105	18	70-135	35	
o-Xylene	<0.00100	0.100	0.0849	85	0.100	0.104	104	20	71-133	35	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: Trunk "O" #5 (RP-1826)

Work Order #: 452569

Lab Batch ID: 901103 Analyst: TTE

Project ID:

Date Analyzed: 11/16/2012 Matrix: Solid

Date Prepared: 11/16/2012 Sample: 630090-1-BKS

Batch #: 1

Flag Limits %RPD Control 20 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits 80-120 RPD % Blk. Spk Dup. |SR |G| 94 Duplicate Result [F] Blank Spike 188 Spike Added 200 Ξ Blank Spike %R [D] 94 Blank Spike Result [C]187 Spike Added 200 [B] Blank Sample Result <2.00 V Inorganic Anions by EPA 300/300.1 Units: mg/kg Analytes Chloride

Analyst: KEB

Lab Batch ID: 901052

Sample: 630055-1-BKS

Date Prepared: 11/15/2012

Batch #: 1

Matrix: Solid

Date Analyzed: 11/16/2012

Flag Limits %RPD Control 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits 70-135 70-135 %R RPD % 3 7 Blk. Spk Dup. %R [G] 95 94 Duplicate Result [F] Blank Spike 940 952 Spike Added 666 666 $\overline{\Xi}$ Blank Spike %R [D] 92 92 Blank Spike Result 924 920 Spike Added 1000 1000 [B] Blank Sample Result <15.0 <15.0 A TPH By SW8015 Mod C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Units: mg/kg Analytes

Blank Spike Recovery [D] = 100*(C)/(B]Blank Spike Duplicate Recovery [G] = 100*(F)/(E]All results are based on MDL and Validated for QC Purposes Relative Percent Difference RPD = 200*[(C-F)/(C+F)]



Form 3 - MS Recoveries

Project Name: Trunk "O" #5 (RP-1826)



Work Order #: 452569

Lab Batch #: 901103

Project ID:

Date Analyzed: 11/16/2012

Date Prepared: 11/16/2012

Analyst: TTE

QC- Sample ID: 452569-004 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	238	2000	2120	94	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Trunk "O" #5 (RP-1826)



Work Order #: 452569

Lab Batch ID: 900976

QC-Sample ID: 451912-011 S

Project ID:

Matrix: Soil

Date Analyzed: 11/15/2012

KEB Batch #: Analyst: Date Prepared: 11/15/2012

Flag Limits %RPD Control 35 35 35 35 35 Control Limits 70-130 70-130 71-129 70-135 71-133 MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY RPD % 2 4 4 9 Dup. %R [G] 102 103 100 94 95 Spiked Sample Result [F] Duplicate 0.100 0.109 0.216 0.106 0.101 Spike Added 0.212 0.106 0.106 0.106 0.106 Ξ Spiked Sample %R [D] 100 107 100 103 107 Spiked Sample Result 0.112 0.225 0.105 0.108 0.105 [C]Spike Added [B] 0.210 0.105 0.105 0.105 0.105 <0.00105 <0.00210 < 0.00105 <0.00210 Parent Sample Result <0.00105 [A] BTEX by EPA 8021B Analytes Reporting Units: mg/kg Ethylbenzene m_p-Xylenes o-Xylene Benzene Toluene

Date Analyzed: 11/20/2012 Lab Batch ID: 901301

QC-Sample ID: 452203-011 S Date Prepared: 11/20/2012

Matrix: Soil Batch #:

KEB Analyst:

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	MAT!	RIX SPIF	KE DUPLICA	TE REC	VERY S	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00105	0.105	0.0944	06	0.106	0.114	108	19	70-130	35	
Toluene	<0.00211	0.105	8860.0	94	0.106	0.117	110	17	70-130	35	
Ethylbenzene	<0.00105	0.105	0.0951	91	0.106	0.111	105	15	71-129	35	
m_p-Xylenes	<0.00211	0.211	0.199	94	0.212	0.231	109	15	70-135	35	
o-Xylene	<0.00105	0.105	9960.0	92	901.0	0.115	108	17	71-133	35	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



Form 3 - MS / MSD Recoveries

Project Name: Trunk "O" #5 (RP-1826)

Work Order #: 452569

Date Analyzed: 11/16/2012 Lab Batch ID: 901052

QC-Sample ID: 452569-001 S Date Prepared: 11/15/2012

Matrix: Soil Batch #:

Project ID:

KEB Analyst:



Reporting Units: mg/kg		M	ATRIX SPIKI	E / MAT	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY !	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Spiked Result Sampl	Spiked Sample	Spik	Duplicate Spiked Sample		RPD	Control	Control Limits	
Analytes	Result [A]	Added [B]	[C]	%R [D]	Adde [E]	d Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	<18.6	1240	1200	26	1240	1140	92	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<18.6	1240	1200	26	1240	1120	06	7	70-135	35	

Flag

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Trunk "O" #5 (RP-1826)

Work Order #: 452569

Lab Batch #: 901027

Project ID:

Date Prepared: 11/15/2012

Analyst: WRU

Date Analyzed: 11/15/2012 14:40 QC- Sample ID: 452569-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %	SAMPLE	/ SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[D]			
Percent Moisture	19.6	20.8	6	20	

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Odessa, Texas 79765 12600 West I-20 East

Phone: 432-563-1800 Fax: 432-563-1713

YAG & TAT brabnate □ NPDES RUSH TAT (Pre-Schedule) (24) 48, 72 hrs × × × × × × × Fotal Dissolved Solids PO #: Bill Southern Union Gas Services × × × × × × × CHLORIDES TRRP M.A.O. Project Name: Trunk "O" #5 (RP-1826) SCI rabels on container(s)
Custody seals on container(s)
Gustody seals on coller(s) by Sampler/Client Rep. ? by Courier? UPS Temperature Upon Receipt: VOCs Free of Headspace? BTEX 8021B/5030 or BTEX 8260 × Analyze For: Laboratory Comments: Project Loc: Lea County, NM X Standard Netals: As Ag Ba Cd Cr Pb Hg Se TCLP: TOTAL: SAR / ESP / CEC pm@basinenv.com, rose.slade@sug.com, cydni.inskeep@sug.com Injons (Cl., SO4, Alkalinity) Project #: Sations (Ca, Mg, Na, K) Report Format: 9001 XT 3001 XT :Hd. Time × × × × × × × × 80158 M2108 Final 1.000 Specify Oth Matrix Soil Soil Soil Soil Soil Soil Soil Soil cipi DM-Drinking Water SL Date Other (Specify) Preservation & # of Containers None Na2S2O3 Call when TPH analysis is complete to consider running an additional sample for BTEX HOBN OS²H (575) 396-1429 HCI HNO × × × × × × × eol × Total #. of Containers Fax No: e-mail: 1330 1335 1341 1345 1348 1352 1425 1325 Time Sampled Dume 11/13/2012 11/13/2012 11/13/2012 11/13/2012 11/13/2012 11/13/2012 11/13/2012 11/13/2012 Received by: Basin Environmental Service Technologies, LLC Date Sampled Ending Depth Time 05:3 Beginning Depth 2 4/11/ Lovington, NM 88260 Ben J. Arguljo (\$75)396-2378 Company Address: P.O. Box 301 South Floor @ 9' West Wall @ 2.5 East Wall @ 2.5 West Floor @ 3' South Wall @ 6' North Wall @ 3' East Floor @ 3' RE FIELD CODE Stockpile Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip: Special Instructions: (lab use only) ORDER #: Relinquished 05 90 9 no 8 () 8 03 (vino esu dsi) # 8A

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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 11/15/2012 10:56:00 AM

Checklist reviewed by:

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Tomporature Measuring device used :

Date:

Vork Order #: 452569	Tomporata	re measuring device used :
	Sample Receipt Checklis	t Comments
#1 *Temperature of coole	er(s)?	1.5
#2 *Shipping container in	n good condition?	Yes
#3 *Samples received or	n ice?	Yes
#4 *Custody Seals intact	t on shipping container/ cooler?	Yes
#5 Custody Seals intact	on sample bottles?	Yes
#6 *Custody Seals Signe	ed and dated?	Yes
#7 *Chain of Custody pre	esent?	Yes
#8 Sample instructions of	complete on Chain of Custody?	Yes
#9 Any missing/extra sar	mples?	No
#10 Chain of Custody sig	gned when relinquished/ received?	Yes
#11 Chain of Custody ag	grees with sample label(s)?	Yes
#12 Container label(s) le	egible and intact?	Yes
#13 Sample matrix/ prop	perties agree with Chain of Custody?	Yes
#14 Samples in proper of	container/ bottle?	Yes
#15 Samples properly pr	reserved?	Yes
#16 Sample container(s)) intact?	Yes
#17 Sufficient sample an	mount for indicated test(s)?	Yes
#18 All samples received	d within hold time?	Yes
#19 Subcontract of samp	ple(s)?	Yes
#20 VOC samples have	zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples pr	reserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples	preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes
Must be completed for	after-hours delivery of samples prior to placing	ng in the refrigerator
Analyst:	PH Device/Lot#:	
		_
Checklist co	mpleted by:	Date:

Analytical Report 452904

for Southern Union Gas Services- Monahans

> Project Manager: Joel Lowry Trunk "O" 30" #5 (RP-1826)

> > RP-1826 26-NOV-12

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098)

> Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





26-NOV-12

Project Manager: Joel Lowry

Southern Union Gas Services- Monahans

801 South Loop 464 Monahans, TX 79756

Reference: XENCO Report No: 452904

Trunk "O" 30" #5 (RP-1826)
Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 452904. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 452904 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Nicholas Straccione

Project Manager

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Sample Cross Reference 452904



Southern Union Gas Services- Monahans, Monahans, TX

Trunk "O" 30" #5 (RP-1826)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South Wall #2	S	11-19-12 11:55		452904-001

CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans Project Name: Trunk "O" 30" #5 (RP-1826)

Project ID: RP-1826 Work Order Number: 452904 Report Date: 26-NOV-12 Date Received: 11/21/2012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Project Location: Lea County, NM Contact: Joel Lowry Project Id: RP-1826

Certificate of Analysis Summary 452904

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" 30" #5 (RP-1826)

Date Received in Lab: Wed Nov-21-12 12:53 pm Report Date: 26-NOV-12

Project Manager: Nicholas Straccione

	Lab Id:	452904-001	
Auglieic Dogwood	Field Id:	South Wall #2	
Anuiysis nequesieu	Depth:		
	Matrix:	SOIL	
	Sampled:	Nov-19-12 11:55	
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-23-12 19:29	
SUB: TX104704215	Analyzed:	Nov-23-12 19:29	
	Units/RL:	mg/kg RL	
Chloride		13.3 1.36	
Percent Moisture	Extracted:		
	Analyzed:	Nov-21-12 13:49	
	Units/RL:	% RL	
Percent Moisture		21.2 1.00	

Nicholas Straccione Project Manager

Page 5 of 11

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results experses detroughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Final 1.000



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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4143 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave. Phoenix, AZ 85040	(602) 437-0330	



BS / BSD Recoveries



Project Name: Trunk "O" 30" #5 (RP-1826)

Work Order #: 452904

Analyst: JOL

Lab Batch ID: 901508

Date Prepared: 11/23/2012 Sample: 630351-1-BKS

Project ID: RP-1826 Date Analyzed: 11/23/2012

Matrix: Solid

Lab Batch ID: 901508	Sample: 630351-1-BKS	KS	Batch #:	1 #: 1					Matrix: S	Solid		
Units: mg/kg			BLAN	K/BLANKS	PIKE / F	LANKS	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	ICATE 1	RECOVE	RY STUD	Y	
Inorganic Anions by EPA 300/300.1		Blank Sample Result	Spike Added	Blank Spike Decult	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes		₹	[B]	[C]	[D]	[E]	Result [F]	[6]	0/	No.	O INO	
Chloride		<1.00	100	105	105	100	105	105	0	80-120	20	

Relative Percent Difference RPD = 200*(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Trunk "O" 30" #5 (RP-1826)



Work Order #: 452904

Lab Batch #: 901508

B 11/22/2012

Project ID: RP-1826

Date Analyzed: 11/23/2012

Date Prepared: 11/23/2012

Analyst: JOL

QC- Sample ID: 452891-001 S

Batch #:

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300

Parent Sample Spike Spike Result %R Control Limits Flag

Lab Batch #: 901508

Date Analyzed: 11/23/2012

Date Prepared: 11/23/2012

Analyst: JOL

QC- Sample ID: 452891-002 S

Chloride

Batch #:

10800

11300

22500

Matrix: Soil

104

80-120

MATRIX / MATRIX SPIKE RECOVERY STUDY Reporting Units: mg/kg **Parent** Spiked Sample **Inorganic Anions by EPA 300** Control Sample Spike %R Result Limits Flag Result Added [D] %R [C][A] [B] **Analytes**

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference [E] = 200*(C-A)/(C+B) All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: Trunk "O" 30" #5 (RP-1826)

Work Order #: 452904

Lab Batch #: 901385

Project ID: RP-1826

Date Prepared: 11/21/2012

A

Analyst: WRU

Date Analyzed: 11/21/2012 12:30 **QC- Sample ID:** 452891-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reporting Cints. 70	SAMI LE	SAMI LE	DUILIC	AIL REC	OVERI
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	19.2	19.3	1	20	

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East Odessa, Texas 79765

Phone: 432-563-1800 Fax: 432-563-1713

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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 11/21/2012 12:53:00 PM

Work Order #: 452904

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Vork Order #: 452904		g action acti
	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		0
#2 *Shipping container in good of	condition?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seals intact on ship	ping container/ cooler?	Yes
#5 Custody Seals intact on samp	ole bottles?	Yes
#6 *Custody Seals Signed and d	lated?	Yes
#7 *Chain of Custody present?		Yes
#8 Sample instructions complete	on Chain of Custody?	Yes
#9 Any missing/extra samples?		No
#10 Chain of Custody signed wh	en relinquished/ received?	Yes
#11 Chain of Custody agrees wit	th sample label(s)?	Yes
#12 Container label(s) legible an	nd intact?	Yes
#13 Sample matrix/ properties ag	gree with Chain of Custody?	Yes
#14 Samples in proper container	r/ bottle?	Yes
#15 Samples properly preserved	!?	Yes
#16 Sample container(s) intact?		Yes
#17 Sufficient sample amount fo	r indicated test(s)?	Yes
#18 All samples received within	hold time?	Yes
#19 Subcontract of sample(s)?		Yes
#20 VOC samples have zero hea	adspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved	with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserve	ed with NaAsO2+NaOH, ZnAc+NaOH?	Yes
	ours delivery of samples prior to placing	in the refrigerator
Analyst:	PH Device/Lot#:	
Checklist completed	d by:	Date:
Checklist reviewed	by:	Date: