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

State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003

Form C-141

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

Release Notification and Corrective Action

						OPE	RATOR	In	itial Report	Final Report		
Name of Co	ompany	South	ern Unio	n Gas Services,	Ltd.	Contact				Rose Slade		
Address		801 S. Loop	464, M	onahans, TX, 79	756	Telephon	e No.			432-940-5147		
Facility Nar	me: L-5 (8"	Line) (RP-23	34) Lea	County Field De	pt.	Facility T	ype L-5 8"		Natu	ral Gas Gathering		
Surface Ow	ner State	of New Mex	ico	Mineral O	wner: S	State of Nev	v Mexico	Lease	No.			
** ** *	I a .:	m 1:	D			OF RE		D				
Unit Letter O	Section 21	Township 21S	Range 37E	Feet from the	North/	South Line	Feet from the	East/West Lin	e County Le	èa		
				Latitude N32 2	7.436		Longitude W1	03 09.935				
				NAT	URE	OF REL	EASE					
Type of Rele	ase Crude	Oil, Produced	water an				Release 5bbls	Volum	e Recovered	NONE		
Source of Re	lease 8" N	atural Gas Pip	eline			Date and I	lour of Occurrence	Date at 12:15		covery 10/14/09		
Was Immedia	ate Notice (Yes [No □Not Re	quired	If YES, To	Whom? Geoff I					
By Whom?	Rose Slade				1	Date and I	Hour: 10/14/09 2:	50 n m				
Was a Water							olume Impacting t					
			Yes	⊠ No								
If a Watercou	urse was Im	pacted, Descri	be Fully.	k						, pr		
	Watercourse was Impacted, Describe Fully.* scribe Cause of Problem and Remedial Action Taken:											
				erating at approxim								
Describe Are	a Affected	and Cleanup A	Action Tal	en. Approximatel	ly 30x30	sq. ft. of pa	sture land was aff	fected by the leaf	and temporary	y repair.		
Remediation	activities w	vere conducted	in accord	lance with the NM	OCD's	Guidelines o	n Spills, Leaks ar	nd Releases.		1		
							on Summary an	d Site Closure	Request for d	letails of remedial		
				om confirmation s			mu limousladaa a	nd understand ti	ot mummiont to	NMOCD rules and		
										which may endanger		
										operator of liability		
should their	operations l	nave failed to	adequatel	y investigate and r	remediat	te contamina	tion that pose a tl	hreat to ground	water, surface v	water, human health		
				eptance of a C-14	11 repor	t does not r	elieve the operator	or of responsibil	ity for complia	ance with any other		
federal, state,	or local la	ws and/or regu	lations.				OH CON	CERTATIO	NI DINUIGIO	N.T.		
	V	DIX) .				OIL CON	SERVATIO	N DIVISIO	<u>'N</u>		
Signature:	Nox !	7	LOC .							\		
Printed Name	e: Rose L.	Slade			A	Approved by	District Supervis	or:		= 4		
Title: EHS C	Compliance	Specialist			1	Approval Da	te: %	UR Steam	-DeRi	MX		
E-mail Addre	ess: rose.sla	de@sug.com				Conditions o	f Approval:	Environmen	al Specialis	. 0		
Date: (h-	-18-17	p	hone: 432	2-940-5147(cell)	i	RP-09	-11-233	4	1011	8/12		

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

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NUV US / Ital

Form C-141 Revised October 10, 2003

District III
1000 Rio Brazos Road, Aztec. NM 87410 HOBBSOCD Conservation Division
District IV

District IV

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

IRP.(19.11.2334

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

Santa Fe, NM 87505

Release Notification and Corrective Action OPERATOR Final Report Rose Slade Southern Union Gas Services, Ltd. Name of Company Contact 432-940-5147 P.O. Box 1226 Jal, N.M. 88252 Telephone No. Address Natural Gas Gathering Lea County Field Dept. Facility Type L-5 8" **Facility Name** Lease No. Surface Owner: Millard Deck Estates Mineral Owner: LOCATION OF RELEASE East/West Line Feet from the North/South Line Feet from the County Unit Letter Section Township Range Lea 21 218 37F Latitude N32 27.436 Longitude W103 09.935 NATURE OF RELEASE Type of Release: Crude Oil, Produced water and Natural Gas Volume of Release: 5bbls. Volume Recovered NONE Source of Release: 8" Natural Gas Pipeline Date and Hour of Occurrence Date and Hour of Discovery 10/14/09 12:15 p.m. not known Was Immediate Notice Given? If YES, To Whom? Jeff Lecking ☑ Yes ☐ No ☐ Not Required Date and Hour: 10/14/09 at 2:50 p.m. By Whom? Rose Slade Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* WATER @ 51 Describe Cause of Problem and Remedial Action Taken.* The 8" Natural gas pipeline developed a leak operating at approximately 7-8 psi on the pipeline. The line was clamped and will be replaced at a later time. Describe Area Affected and Cleanup Action Taken. Approximately 30x30 sq.ft. of pasture land was affected by the leak and temporary repair was done on the pipeline with replacement of pipeline to be done at a later date. Remediation started on 10/30/09 completed deleniation on 11/3/09 and will sample per OCD guidelines. Final remediation will follow the NMOCD recommended guidelines for leaks and spills. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Approved by District Supervisor. Signature Staffron Bask Printed Name: Rose L. Slade Expiration Date: 12 28 09 Title: EHS Compliance Specialist Approval Date: 10 26/69 CONDITIONS OF APPROVAL: DELINEATE TO CLEAN +1. SUBMIT FINAL C-141 E-mail Address: rose.slade@sug.com Attached

Attach Additional Sheets If Necessary

Date: 10/21/09

FARL 0931037520

Phone: 432-940-5147 (cell)

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
L-5 (8" Line) (1RP-2334)
HISTORICAL RELEASE SITE
Lea County, New Mexico
Unit Letter "O" (SW/SE), Section 21, Township 21 South, Range 37 East
Latitude 32° 27.436' North, Longitude 103° 09.935' West
NMOCD Reference # 1RP-2334

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

October 2012

OCI & ZU12

RECEIVED

Joel W. Lowry Project Manager

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Figure 2 – Site & Sample Location Map

TABLES

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

APPENDICES

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 L-5 (8' Line) Historical Release Site (1RP-2334). The legal description of the release site is Unit Letter "O" (SW/SE), Section 21, Township 21 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 27.436' North latitude and 103° 09.935' West longitude. The property affected by the release is owned by the Millard Deck Estate. Please reference Figure 1 for a "Site Location Map".

On October 14, 2009, Southern Union discovered a release had occurred on the L-5 Pipeline. The Release Notification and Corrective Action Form (Form C-141) indicated failure of a section of an eight-inch (8") low-pressure pipeline resulted in the release of approximately five barrels (5 bbls) of a crude oil, produced water and natural gas mixture. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on October 15, 2009. The C-141 indicated the release affected approximately nine hundred square feet (900 ft²) of pasture land. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix C.

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 Section 21, Township 21 South, Range 36 East. An NMOCD representative indicated the depth to groundwater is approximately fifty-one feet (51') below ground surface (bgs) on the initial C-141. Based on the NMOCD ranking system and presence of impacted medium existing below two feet (2') bgs, twenty (20) 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 L-5 (8" Line) Historical Release Site has an initial ranking score of twenty (20) points. The soil remediation levels for a site with a ranking score of twenty (20) points are as follows:

- Benzene 10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) − 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) 100 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 October 30, 2009, Basin began remediation activities at the L-5 (8" Line) Historical Release Site. Visually impacted material was excavated and stockpiled on location, pending final disposition. The excavation was advanced until photo-ionization detector (PID) readings and chloride field test results suggested soil containing concentrations of BTEX, TPH and chloride above NMOCD regulatory standards had been removed.

On November 19, 2009, seventeen (17) confirmation soil samples (West SW @ 11.5', South SW @ 11.5' North SW @ 11.5' East SW @ 11.5' RP Floor @ 12', SP-1, SP-2, SP-3, SP-4, SP-5, SP-6, SP-7, SP-8, SP-9, SP-10, SP-11, and SP-12) were collected from the floor and sidewalls of the excavation. Collected soil samples were submitted to Cardinal Laboratories of Hobbs, New Mexico for analysis of BTEX, TPH and chloride concentrations in accordance with EPA Methods SW 846-8021b, SW 846-8015M and SM 4500 Cl-B, respectively. analytical results indicated benzene concentrations were less than the laboratory method detection limit (MDL) of 0.050 mg/Kg for each of the submitted soil samples. Analytical results indicated BTEX concentrations were less than the laboratory MDL for each of the submitted soil samples with the exception of soil sample SP-7, which exhibited a concentration of 0.468 mg/Kg. TPH concentrations ranged from less than the laboratory MDL for soil samples West SW @ 11.5', South SW @ 11.5' and SP-12 to 267 mg/Kg for soil sample SP-7. Chloride concentrations ranged from less than the laboratory MDL of 16.0 mg/Kg for soil samples North SW @ 11.5', East SW @ 11.5', SP-1, SP-2, SP-3, SP-4, SP-5, SP-6, SP-8, SP-9, SP-10, SP-11 and SP-12 to 112 mg/Kg for soil sample RP Floor @ 12'. Concentrations of BTEX, TPH and chloride were less than NMOCD regulatory remediation action levels in each of the submitted soil samples, with the exception of soil sample SP-7, which exhibited a TPH concentration of 267 mg/Kg. The excavation was advanced in the area represented by soil sample SP-7.

A five-point composite soil sample (Stockpile Baseline) was collected from the stockpiled material and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated the BTEX concentration was 1.445 mg/KG, the TPH concentration was 1,157 mg/Kg and the chloride concentration was less than the laboratory MDL.

On January 12, 2010, upon advancing the excavation in the area represented by soil sample SP-7, an additional confirmation soil sample (SP-7A) was collected and submitted to the laboratory for analysis. Analytical results indicated BTEX, TPH and chloride concentrations were less than the appropriate laboratory MDL.

Two (2) additional five-point composite soil samples (Stockpile East and Stockpile West) were collected from the stockpiled material and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the laboratory MDL for both samples. The TPH concentration was 937.9 mg/Kg for soil sample Stockpile East and 699.6 mg/Kg for soil sample Stockpile West. Chloride concentrations were less than the laboratory MDL for soil sample Stockpile East and 32.0 mg/Kg for soil sample Stockpile West.

On September 14, 2012, Basin revisited the L-5 (8" Line) Historical Release Site. One (1) five-point composite soil sample (Stockpile) was collected from the stockpiled material and submitted

to Xenco Laboratories, of Odessa, Texas, for analysis of BTEX, TPH and chloride concentrations in accordance with EPA Methods SW 846-8021b, SW 846-8015M and 300.0, respectively. Laboratory analytical results indicated the benzene and BTEX concentration were less than the appropriate laboratory MDL, the TPH concentration was 233 mg/Kg and the chloride concentration was 22.4 mg/Kg. The stockpiled material was blended on-site in an effort to facilitate aeration and bioremediation.

On September 25, 2012, one (1) five-point composite soil sample (Stockpile #2) was collected from the stockpiled material and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated the TPH concentration of the blended stockpile material was 72.0 mg/Kg. Based on these laboratory analytical results, the stockpiled soil was deemed suitable for use as backfill.

On October 8, 2012, on receiving approval from an NMOCD representative, the excavation was backfilled with the on-site stockpile material. Excavation backfill was compacted in twelve-inch (12") lifts and contoured to fit the surrounding topography. Prior to backfilling, the final dimensions of the excavation were approximately four hundred feet (400') in length, eight feet (8') to thirty feet (30') in width, and ranged in depth from approximately two feet (2') to twelve feet (12') bgs.

The site will be reseeded at the request of the landowner.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Cardinal Laboratories of Hobbs, New Mexico, and/or Xenco Laboratories, Inc., 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 SM 4500-Cl B and/of 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 the excavation floor and sidewalls indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory standards 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 L-5 (8" Line) 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

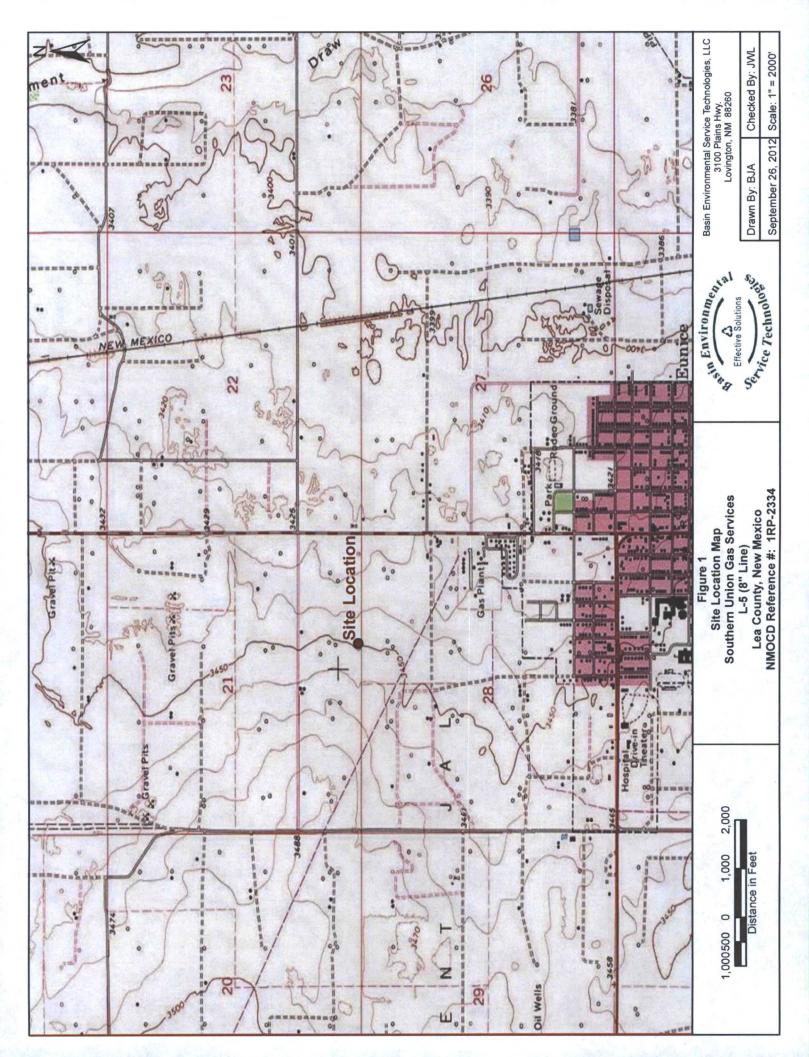
801 S. Loop 464

Monahans, Texas 79756 rose.slade@sug.com

Copy 3: Basin Environmental Service Technologies, LLC

P.O. Box 301

Lovington, New Mexico 88260



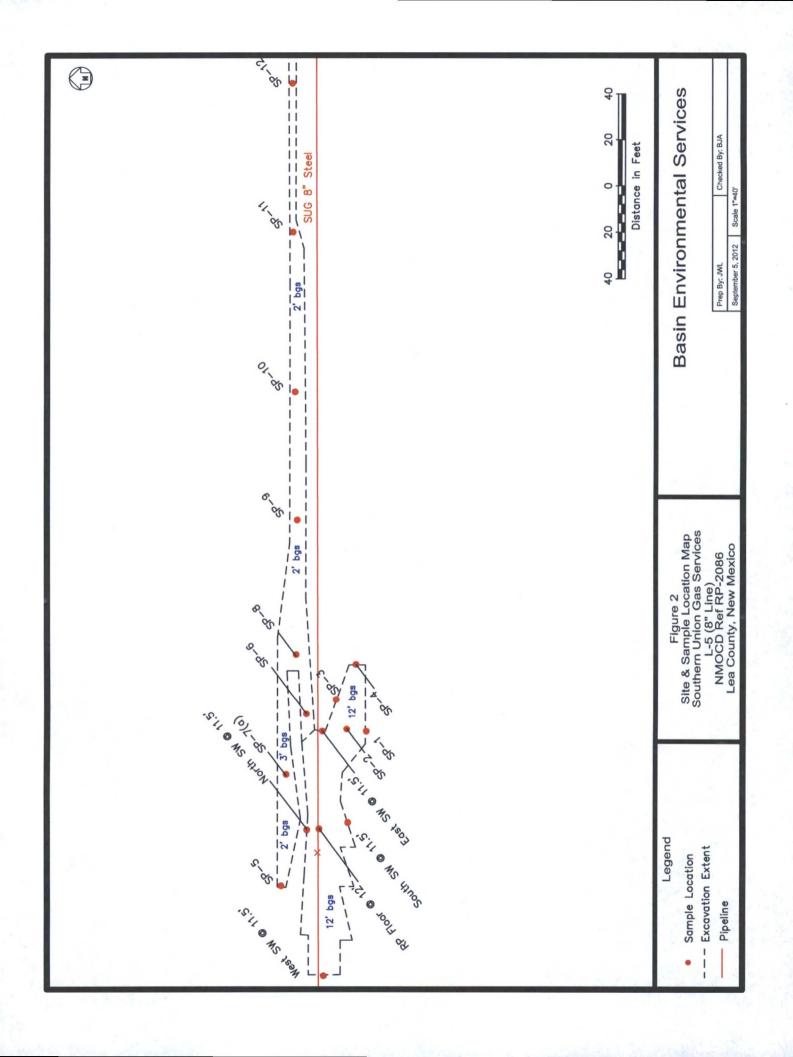


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES L-5 (8" LINE) LEA COUNTY, NEW MEXICO NMOCD REF# 1RP-2334

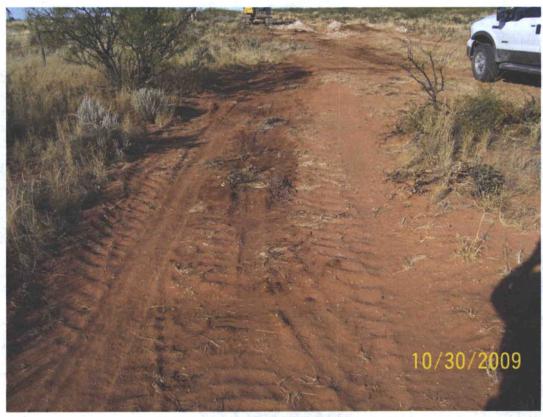
					METHOD: EF	METHOD: EPA SW 846-8021B, 5030	21B, 5030		MET	METHOD: 8015M	SM	TOTAL	SM 4500-CL B
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₃₅ (mg/Kg)	CHLORIDE (mg/Kg)
West SW @ 11.5'	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	64
South SW @ 11.5'	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	96
North SW @ 11.5'	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	28.4	<10.0	28.4	<16
East SW @ 11.5'	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	93.2	<10.0	93.2	<16
RP Floor @ 12'	12'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	25.2	<10.0	25.2	112
SP-1	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	24.2	<10.0	24.2	<16
SP-2	12'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	36.5	<10.0	36.5	<16
SP-3	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	37.4	<10.0	37.4	<16
SP-4	11.5'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	32.2	<10.0	32.2	<16
SP-5	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	15.8	<10.0	15.8	<16
SP-6	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	16.2	<10.0	16.2	<16
SP-7	2,	11/19/2009	Excavated	<0.050	<0.050	060'0	0.378	0.468	<10.0	267.0	<10.0	267.0	64
SP-8	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	17.2	<10.0	17.2	<16
SP-9	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	33.7	<10.0	33.7	<16
SP-10	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	30.7	<10.0	30.7	<16
SP-11	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	15.2	<10.0	15.2	<16
SP-12	2'	11/19/2009	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	<16
STOCKPILE BASE LINE	N/A	11/19/2009	Stockpiled	<0.050	<0.050	0.257	1.19	1.447	25.5	1,070	61.5	1,157	<16
SP-7A	3,	1/12/2010	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	<16
STOCKPILE EAST	N/A	1/12/2010	Stockpiled	<0.050	<0.050	<0.050	<0.300	<0.300	23.9	847	0.79	937.9	<16
STOCKPILE WEST	N/A	1/12/2010	Stockpiled	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	648	51.6	9.669	32
STOCKPILE	N/A	9/14/2012	Stockpiled	<0.00104	<0.00208	<0.00104	<0.00208	<0.00208	<15.6	217	16.4	233	22.4*
											State		
STOCKPILE #2	N/A	9/25/2012	Stockpiled	<0.00105	<0.00210	<0.00105	<0.00210	<0.00210	<15.8	72.0	<15.8	72.0	
NMOCD Standard		1		10				20				100	250

- = Not analyzed.

^{*} Denotes Laboratory Analytical Results in accordance with EPA 300/300.1



Photograph of initial release at the L-5 (8" Line) Historical Release Site.



Photograph of initial release at the L-5 (8" Line) Historical Release Site.



Photograph of excavation activities at the L-5 (8" Line) Historical Release Site.



Photograph of excavation activities at the L-5 (8" Line) Historical Release Site.



Photograph of excavation activities at the L-5 (8" Line) Historical Release Site.



Photograph of backfill activities at the L-5 (8" Line) Historical Release Site.



Photograph of backfill activities at the L-5 (8" Line) Historical Release Site.



Photograph of L-5 (8" Line) Historical Release Site after remediation activities.



December 1, 2009

Camille Bryant
Basin Environmental Consulting, LLC.
P.O. Box 381
Lovington, NM 88260

Re: 8 Inch Lateral L-5 (SUG)

Enclosed are the results of analyses for sample number H18775, received by the laboratory on 11/20/09 at 4:50 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021 Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260 Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005 Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.2 Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 5 (includes Chain of Custody)

Sincerely,

Celey D. Keene Laboratory Director



ANALYTICAL RESULTS FOR BASIN ENVIRONMENTAL ATTN: CAMILLE BRYANT 2800 PLAINS HWY LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 11/20/09

Sampling Date: 11/19/09

Reporting Date: 11/30/09

Sample Type: SOIL

Project Owner: SUG (2009-055) Project Name: 8-INCH LATERAL L-5 Sample Condition: COOL & INTACT @ 3.5°C

Project Location: LEA CO., NM

Sample Received By: ML

GRO

DRO DRO ext.

(C₆-C₁₀) (>C₁₀-C₂₈) (>C₂₈-C₃₅)

Analyzed By: AB

LAB NUMBE	R SAMPLE ID	(mg/kg)	(mg/kg)	(mg/kg)
ANALYSIS D	DATE	11/25/09	11/25/09	11/25/09
H18775-1	WEST SW @ 11.5'	<10.0	<10.0	<10.0
H18775-2	SOUTH SW @ 11.5'	<10.0	<10.0	<10.0
H18775-3	NORTH SW @ 11.5'	<10.0	28.4	<10.0
H18775-4	EAST SW @ 11.5'	<10.0	93.2	<10.0
H18775-5	RP FLOOR @ 12'	<10.0	25.2	<10.0
H18775-6	SP-1	<10.0	24.2	<10.0
H18775-7	SP-2	<10.0	36.5	<10.0
H18775-8	SP-3	<10.0	37.4	<10.0
H18775-9	SP-4	<10.0	32.2	<10.0
H18775-10	SP-5	<10.0	15.8	<10.0
H18775-11	SP-6	<10.0	16.2	<10.0
H18775-12	SP-7	<10.0	267	<10.0
H18775-13	SP-8	<10.0	17.2	<10.0
H18775-14	SP-9	<10.0	33.7	<10.0
H18775-15	SP-10	<10.0	30.7	<10.0
H18775-16	SP-11	<10.0	15.2	<10.0
H18775-17	SP-12	<10.0	<10.0	<10.0
H18775-18	STOCKPILE BASELINE	25.5	1,070	61.5*
Quality Cont	rol	447	585	-
True Value C	QC	500	500	-
% Recovery		89.4	117	-
Relative Per	cent Difference	10.1	0.4	-

METHODS: TPH GRO & DRO: EPA SW-846 8015 M extended. Reported on wet weight. *C35 peak less than 75% of C28 peak. Not accredited for GRO/DRO/EXT DRO.

Lab Director

H18775 TPHEXT BASIN



ANALYTICAL RESULTS FOR BASIN ENVIRONMENTAL ATTN: CAMILLE BRYANT

2800 PLAINS HWY LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 11/20/09
Reporting Date: 11/25/09

Reporting Date: 11/25/09 Project Owner: SUG (2009-055)

Project Name: 8-INCH LATERAL L-5
Project Location: LEA CO., NM

Sampling Date: 11/19/09 Sample Type: SOIL

Sample Condition: COOL & INTACT @ 3.5°C

Sample Received By: ML Analyzed By: ZL/HM ETHYL TOTAL

LAB NO. SAMPLE ID BENZENE TOLUENE BENZENE XYLENES CI*

	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
ANALYSIS DATE:	11/23/09	11/23/09	11/23/09	11/23/09	11/24/09
H18775-1 WEST SW @ 11.5'	< 0.050	<0.050	<0.050	< 0.300	64
H18775-2 SOUTH SW @ 11.5'	<0.050	<0.050	< 0.050	< 0.300	96
H18775-3 NORTH SW @ 11.5'	<0.050	<0.050	< 0.050	<0.300	< 16
H18775-4 EAST SW @ 11.5'	<0.050	< 0.050	<0.050	< 0.300	< 16
H18775-5 RP FLOOR @ 12'	<0.050	< 0.050	< 0.050	<0.300	112
H18775-6 SP-1	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-7 SP-2	<0.050	<0.050	< 0.050	< 0.300	< 16
H18775-8 SP-3	<0.050	<0.050	<0.050	<0.300	< 16
H18775-9 SP-4	<0.050	< 0.050	< 0.050	<0.300	< 16
H18775-10 SP-5	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-11 SP-6	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-12 SP-7	< 0.050	< 0.050	0.090	0.378	64
H18775-13 SP-8	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-14 SP-9	<0.050	<0.050	<0.050	<0.300	< 16
H18775-15 SP-10	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-16 SP-11	<0.050	< 0.050	< 0.050	< 0.300	< 16
H18775-17 SP-12	<0.050	< 0.050	<0.050	<0.300	< 16
H18775-18 STOCKPILE BASELINE	<0.050	<0.050	0.257	1.19	< 16
Quality Control	0.049	0.048	0.050	0.150	490
True Value QC	0.050	0.050	0.050	0.150	500
% Recovery	98.0	96.0	100	100	98.0
Relative Percent Difference	1.0	<1.0	<1.0	<1.0	2.0

METHODS: BTEX - SW-846 8021B; CI-: Std. Methods 4500-CI-B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,

AND TOTAL XYLENES. Not accredited for Chloride.

Lab Director

12/01/09 Date

H18775 BCL BASIN

^{*}Analyses performed on 1:4 w:v aqueous extracts. Reported on wet weight.

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 (575) 393-2326 Fax (575) 393-2476

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analyses. All claims including those for negligence and any other cause whateoever shall be deemed valued unless made in willing and received by Cardinal within 30 days after completion of the applicable applicable angular land Cardinal be liable for including consequental damages, including without limited unless interruptions, loss of use, or loss of profits incurred by others, its subsidiaries, and an examinated to include the mandamental of the consequence of control of the subsidiaries, and or subsidiaries and an examinated to include the control of the subsidiaries.

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† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240

101 East Marland, Hobbs, NM 88240 (575) 393-2326 Fax (575) 393-2476

Page 2 of 2

Company Name:	BASIN (BOSULLING)							****	7//8	BILL TO						AN	ANALYSIS	REQUEST	ST		-		_
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REMARKS: CHECKED BY: Sample Condition S. S. H.26 | No | No Temp. Time: 4:5Up Pate: 20.09 Time: Date: Sampler Relinquished: Delivered By: (Circle One) Sampler - UPS - Bus - Other: CAN DO

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.



January 19, 2010

Camille Bryant
Basin Environmental Consulting, LLC.
P.O. Box 381
Lovington, NM 88260

Re: SUG 2009-055 (8 inch lateral L-5)

Enclosed are the results of analyses for sample number H19041, received by the laboratory on 01/12/10 at 4:50 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021 Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260 Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005 Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.2 Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene Laboratory Director



ANALYTICAL RESULTS FOR BASIN ENVIRONMENTAL CONSULTING

ATTN: CAMILLE BRYANT 2800 PLAINS HWY LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 01/12/10 Reporting Date: 01/18/10

Project Number: 2009-055 (SUG)
Project Name: 8-INCH LATERAL L-5
Project Location: LEA CO., NM

Sampling Date: 01/12/10

Sample Type: SOIL

Sample Condition: INTACT @ 9°C

Sample Received By: JH Analyzed By: AB/ZL

LAB NO. SAMPLE ID GRO DRO DRO ext. ETHYL TOTAL (C_6-C_{10}) ($>C_{10}-C_{28}$) ($>C_{28}-C_{35}$) BENZENE TOLUENE BENZENE XYLENES (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg)

	(33)	(3 3)	(33)	((33)	(33)	(33)
ANALYSIS DATE:	01/15/10	01/15/10	01/15/10	01/13/10	01/13/10	01/13/10	01/13/10
H19041-1 SP-7A	<10.0	<10.0	<10.0	< 0.050	< 0.050	< 0.050	< 0.300
H19041-2 STOCKPILE EAST	23.9	847	67.0	< 0.050	< 0.050	< 0.050	0.501
H19041-3 STOCKPILE WEST	<10.0	648	51.6	<0.050	<0.050	<0.050	0.339
	_						
Quality Control	456	458	-	0.051	0.049	0.051	0.136
True Value QC	500	500	-	0.050	0.050	0.050	0.150
% Recovery	91.2	91.6	-	102	98.0	102	90.7
Relative Percent Difference	3.8	0.4		2.0	<1.0	2.0	1.9

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8021B.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight. Not accredited for GRO/DRO/DRO ext.

Lab Director

H19041 TPHextBTEX BASIN

Date



ANALYTICAL RESULTS FOR BASIN ENVIRONMENTAL CONSULTING, LLC

ATTN: CAMILLE BRYANT

P.O. BOX 381

LOVINGTON, NM 88260 FAX TO: (575) 396-1429

Receiving Date: 01/12/10 Reporting Date: 01/14/10

Project Number: 2009-055 (SUG)

Project Name: 8 INCH LATERAL L-5

Project Location: LEA CO., NM

Analysis Date: 01/13/10

Sampling Date: 01/12/10

Sample Type: SOIL

Sample Condition: INTACT @ 9°C

Sample Received By: JH

Analyzed By: HM

		Cl
LAB NO.	SAMPLE ID	(mg/kg)
H19041-1	SP-7A	< 16
H19041-2	STOCKPILE EAST	< 16
H19041-3	STOCKPILE WEST	32
Quality Co	ntrol	500
True Value	QC	500
% Recover	y	100
Relative P	ercent Difference	< 0.1

METHOD: Standard Methods 4500-Cl'B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Not accredited for Chloride.

Chemist

Date

ARDINAL LABORATORIES

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I, Hobbs, NM	15751 303_225 Eav (575) 302_2475
	101 East Marland, Hobbs, NM 88240

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No Add'l Phone #: No Add'l Fax #: Phone Result:
Fax Result:
REMARKS: Temple Sample Condition CHECKED BY:

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Cool In CHECKED BY: Time: UC Ampler Relinquished: Sampler - UPS - Bus - Other: Delivered By: (Circle One) Smoleria Relinquished By:

 \pm Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476. \pm

Analytical Report 449054

for Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

L-5 (8" line)

(RP-2334)

18-SEP-12

Collected By: Client



Celebrating 20 Years of commitment to excellence in Environmental Testing Services



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)





18-SEP-12

Project Manager: Ben Arguijo

Southern Union Gas Services- Monahans

801 South Loop 464 Monahans, TX 79756

Reference: XENCO Report No: 449054

L-5 (8" line)

Project Address: Lea County, NM

Ben Arguijo:

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 449054. 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. 449054 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 449054



Southern Union Gas Services- Monahans, Monahans, TX

L-5 (8" line)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile	S	09-14-12 13:00		449054-001



CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans

Project Name: L-5 (8" line)



Project ID:

(RP-2334)

Report Date: 18-SEP-12

Work Order Number: 449054

Date Received: 09/14/2012

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-896685 TPH By SW8015 Mod

SW8015MOD NM

Batch 896685, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix

Spike Duplicate.

Samples affected are: 449054-001.

The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory

Control Limits

Batch: LBA-896763 BTEX by EPA 8021B

SW8021BM

Batch 896763, Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix

Spike and Matrix Spike Duplicate.

Samples affected are: 449054-001.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory

Control Limits



Project Location: Lea County, NM Contact: Ben Arguijo Project Id: (RP-2334)

Certificate of Analysis Summary 449054

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: L-5 (8" line)

Date Received in Lab: Fri Sep-14-12 03:30 pm

Report Date: 18-SEP-12

7	Nicholas Straccione
10-3EL-17	Nicholas
neport Date:	Project Manager:

Analysis Requested	Lab Id:	449054-001		
Thursday Meynesten	Field Id:	Stockpile		
	Depth:			
	Matrix:	Nos		
	Sampled:	Sep-14-12 13:00		
BTEX by EPA 8021B	Extracted:	Sep-18-12 12:20		
	Analyzed:	Sep-18-12 15:41		
7	Units/RL:			
Benzene		ND 0.00104		
Toluene		ND 0.00208		
Ethylbenzene		ND 0.00104		
m,p-Xylenes		ND 0.00208		
o-Xylene		ND 0.00104		
Total Xylenes		ND 0.00104		
Total BTEX		ND 0.00104		
300/300.1	Extracted:	Sep-15-12 13:30		
SUB: E871002	Analyzed:	Sep-15-12 19:18		
2	Units/RL:	mg/kg RL		
Chloride		22.4 1.09		
Percent Moisture	Extracted:			
	Analyzed:	Sep-17-12 12:45		
2	Units/RL:	% RL	Υ.	
Percent Moisture		3.93 1.00		
TPH By SW8015 Mod	Extracted:	Sep-17-12 09:30		
	Analyzed:	Sep-17-12 19:23		
	Units/RL:	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.6		
C12-C28 Diesel Range Hydrocarbons		217 15.6		
C28-C35 Oil Range Hydrocarbons		16.4 15.6		
Total TPH		233 15.6		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpetations and results expressed throughout this analytical report repressed the best judgener 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.

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

Nicholas Straccione Project Manager



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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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	



Form 2 - Surrogate Recoveries

Project Name: L-5 (8" line)

Work Orders: 449054,

Project ID: (RP-2334)

Lab Batch #: 896685

Sample: 449054-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/17/12 19:23	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	()	[2]	[D]	7,011	
1-Chlorooctane	95.8	99.6	96	70-135	
o-Terphenyl	48.5	49.8	97	70-135	

Lab Batch #: 896763

Sample: 449054-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/18/12 15:41	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	0.0249	0.0300	83	80-120	

Lab Batch #: 896685

Sample: 627274-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg	Date Analyzed: 09/17/12 11:58	SURROGATE RECOVERY STUDY				
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		94.2	99.6	95	70-135	
o-Terphenyl		47.0	49.8	94	70-135	

Lab Batch #: 896763

Sample: 627327-1-BLK / BLK

Batch:

1

Matrix: Solid

Units: mg/kg Date Analyzed: 09/18/12 14:12	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0261	0.0300	87	80-120	

Lab Batch #: 896685

Sample: 627274-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 09/17/12 11:00	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	53.9	50.1	108	70-135	113

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

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

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: L-5 (8" line)

Work Orders: 449054,

Sample: 627327-1-BKS / BKS

Project ID: (RP-2334)

Lab Batch #: 896763

Matrix: Solid Batch:

Units: mg/kg Date Analyzed: 09/18/12 13:36	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes		, ,	[D]		
1,4-Difluorobenzene	0.0312	0.0300	104	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 896685

Sample: 627274-1-BSD / BSD

Batch: Matrix: Solid

Units: mg/kg Date Analyzed: 09/17/12 11:29	SURROGATE RECOVERY STUDY				
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	52.6	50.1	105	70-135	

Lab Batch #: 896763

Sample: 627327-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 09/18/12 13:51	SURROGATE RECOVERY STUDY				
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 896685

Sample: 448788-015 S / MS

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 09/17/12 12:28	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	100	91	70-135	
o-Terphenyl	49.9	50.2	99	70-135	

Lab Batch #: 896763

Sample: 449054-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 09/18/12 15:26	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	0.0202	0.0200		80-120	-
	0.0302	0.0300	101		
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

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

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: L-5 (8" line)

Work Orders: 449054,

Project ID: (RP-2334)

Lab Batch #: 896685

Sample: 448788-015 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/17/12 12:57	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	89.2	99.9	89	70-135	
o-Terphenyl	49.3	50.0	99	70-135	

Lab Batch #: 896763

Sample: 449054-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/18/12 15:55	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0344	0.0300	115	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

^{*} 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: L-5 (8" line)

Work Order #: 449054

Analyst: KEB Lab Batch ID: 896763

6763 Sample: 627327-1-BKS

Date Prepared: 09/18/2012

Batch #: 1

Project ID: (RP-2334)
Date Analyzed: 09/18/2012

Matrix: Solid

Flag Limits %RPD Control 35 35 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-135 70-130 70-130 71-129 71-133 RPD % 0 0 Blk. Spk Dup. %R [G] 93 100 94 06 16 Blank Spike Duplicate Result [F] 0.0940 0.0928 0.0969 0.0904 0.199 Spike Added 0.100 0.100 0.100 0.200 0.100 Ξ Blank Spike %R [D] 94 94 91 86 94 Blank Spike Result 0.0940 0.0935 0.0940 0.196 0.0907 [C] Spike Added 0.100 0.100 0.100 0.200 0.100 [B] Blank Sample Result <0.00200 <0.00100 <0.00100 <0.00200 <0.00100 [V BTEX by EPA 8021B Units: mg/kg Analytes Ethylbenzene m,p-Xylenes Benzene o-Xylene Toluene

Analyst: TTE

Lab Batch ID: 896628

Sample: 627250-1-BKS

Date Prepared: 09/15/2012

Batch #: 1

Date Analyzed: 09/15/2012 Matrix: Solid

Units: mg/kg		BLAN	SLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / B	LANKS	PIKE DUPL	ICATE 1	RECOVERY	RY STUD	Y	
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	BIK. Spk Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[0]	[D]	[E]	Result [F]	[6]				
Chloride	<0.977	7.76	6.76	100	102	105	103	7	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



BS / BSD Recoveries



Project Name: L-5 (8" line)

Work Order #: 449054

Analyst: KEB

Lab Batch ID: 896685

Sample: 627274-1-BKS

Date Prepared: 09/17/2012

Project ID: (RP-2334) Date Analyzed: 09/17/2012

Batch #: 1

Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / E	LANKS	PIKE DUPL	ICATE	RECOVE	RECOVERY STUDY	Y.	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	€	[B]	[C]	[D]	[3]	Result [F]	[6]	0/	Nev	/oNFD	
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	945	95	1000	934	93	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	925	93	1000	914	91	1	70-135	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



Form 3 - MS Recoveries

Project Name: L-5 (8" line)



Work Order #: 449054

Lab Batch #: 896628

Project ID: (RP-2334)

Date Analyzed: 09/15/2012

Date Prepared: 09/15/2012

Analyst: TTE

QC- Sample ID: 449054-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg	MATE	RIX / MA	TRIX SPIKE	RECOV	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	22.4	109	129	98	80-120	11

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



Form 3 - MS / MSD Recoveries



Project Name: L-5 (8" line)

Work Order #: 449054

Lab Batch ID: 896763

Date Analyzed: 09/18/2012

Project ID: (RP-2334)

Matrix: Soil KEB

Batch #: Analyst: QC-Sample ID: 449054-001 S **Date Prepared:** 09/18/2012

Reporting Units: mg/kg		M	ATRIX SPIK	E / MATI	RIX SPII	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY 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	<0.00104	0.104	0.0918	88	0.104	0.0972	93	9	70-130	35	
Toluene	<0.00208	0.104	0.0826	62	0.104	0.0826	62	0	70-130	35	
Ethylbenzene	<0.00104	0.104	0.0614	65	0.104	0.0617	59	0	71-129	35	X
m,p-Xylenes	<0.00208	0.208	0.124	09	0.208	0.124	09	0	70-135	35	×
o-Xylene	<0.00104	0.104	0.0649	62	0.104	0.0645	62	1	71-133	35	×

Date Analyzed: 09/17/2012 Lab Batch ID: 896685

QC-Sample ID: 448788-015 S Date Prepared: 09/17/2012

Matrix: Soil Analyst: KEB Batch #:

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DIPI ICATE PECOVERY STIPA	/ MAT	JIV CDIL	TE DITE ICA	re Deco	WEDV	TIDA		
		IAI	AINIASINIA	I INIVI	II IC VII	NE DOLDICA	TE NEC	VENI	10016		
TPH By SW8015 Mod	Parent Sample		Spiked Sample S Result S	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control	Control	Flag
	Result	Added	[2]	%R	Added	Result [F]	%R	%	%R	%RPD	0
Analytes	[A]	[B]		[Q]			[6]				
C6-C12 Gasoline Range Hydrocarbons	<15.2	1010	924	16	1010	842	83	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	520	1010	1270	74	1010	1180	65	7	70-135	35	×

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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: L-5 (8" line)

Work Order #: 449054

Lab Batch #: 896699

Project ID: (RP-2334)

Date Analyzed: 09/17/2012 12:45

Date Prepared: 09/17/2012

Analyst: WRU

QC-Sample ID: 449054-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

reporting onto:	STRIVIT ELE	DANII LL	DOI LIC	ATE REC	OVERI
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte	1-7	[B]			
Percent Moisture	3.93	4.02	2	15	100

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East

NPDES Phone: 432-563-1800 Fax: 432-563-1713 TRRP Analyze For: Project Loc: Lea County, NM X Standard Project Name: L-5 (8"line) Project #: (RP-2334) PO #: Report Format: pm@basinenv.com; Rose.Slade@SUG.com Odessa, Texas 79765 (575) 396-1429 e-mail: Fax No: Basin Environmental Service Technologies, LLC Lovington, NM 88260 (575)396-2378 Company Address: P.O. Box 301 Joel Lowry Sampler Signature: Project Manager: Company Name Telephone No: City/State/Zip:

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Laboratory Comments: Sample Containers. Infact? VOCs Free of Headshace?	Laboratory Comments: Sample Containers Integral VOCs Free of Headsbace?	Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace?	Sample Containers Intact? Sample Containers Intact? VOCs Free of Headspace?	Date Time Sample Hand Delivered Office of Sample Hand Delivered Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office Office of Sample Client Rep 7 by Courier UPS DHL FedEx Office	9/14/17 12.05 Ull 1	Required by:	0	9	(1			- 5	Dat 7	12	130		abels Sustoc	on C	ontain ils on	er(s) conts	iner(s	(× (2)
Time	Time	Time SQS	Time	1 Compensation Upon Receipt: 15.3 Temperature Upon Receipt: 1.05	THE PERSON NAMED IN		V		1					-	Dat	0	<u></u>		Sample by by	Samp Couri	id Del	ivere ent Re	A 18 18 18 18 18 18 18 18 18 18 18 18 18	¥	ب فارح/ها-		N N C
Laboratory Comments: Sample Containers Infact? VOCs Free of Headspace? Time Labels on container(s) Custody seals on container(s) Time Sample Hand Delivered by Sampler Hand Delivered by Sampler Hand Delivered by Sampler Hand Delivered	Laboratory Comments: Sample Containers Intract? VOCs Free of Headspace? Time Labels on container(s) Custody seals on container(s) Time Sample Hand Delivered Sample Hand Delivered by Sampler/Client Rep ? Custody Seals on Collect Sample Name of Sam	Laboratory Comments: Sample Containers Intect? VOCs Free of Headspace? Time Labels on container(s) Custody seals on container(s) Time Sample Hand Delivered Sample Hand Delivered by Sampler/Client Rep ? W. Coursel? UPS DHL Fedex	Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? Time Labels on container(s) Custody seals on container(s) Time Sample Hand Delivered by Sampler/Client Rep ? Custody Seals on Collect Sample Hand Delivered		Date Time Received by EL	Received by E	(C)	or CACA	7	Op	2	1/2		0	-/Cat	2	$\bar{\mathbb{F}}$	R	empe	aratun	е Иро	n Rec	seipt:		ت.	1/2	ပ္

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Final 1.000



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 09/14/2012 03:30:00 PM

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

ork Order #: 4490	054	remperature measuring device used :
	Sample Rece	ipt Checklist Comments
1 *Temperature of	cooler(s)?	7.5
2 *Shipping contain	iner in good condition?	Yes
3 *Samples receiv	red on ice?	Yes
44 *Custody Seals	intact on shipping container/ cooler?	Yes
5 Custody Seals in	ntact on sample bottles/ container?	Yes
6 *Custody Seals	Signed and dated for Containers/coolers	Yes
7 *Chain of Custo	dy present?	Yes
#8 Sample instructi	ons complete on Chain of Custody?	Yes
9 Any missing/ext	ra samples?	No
#10 Chain of Custo	dy signed when relinquished/ received?	Yes
#11 Chain of Custo	dy agrees with sample label(s)?	Yes
#12 Container labe	I(s) legible and intact?	Yes
#13 Sample matrix/	properties agree with Chain of Custody	y? Yes
#14 Samples in pro	oper container/ bottle?	Yes
#15 Samples prope	erly preserved?	Yes
#16 Sample contain	ner(s) intact?	Yes
#17 Sufficient samp	ole amount for indicated test(s)?	Yes
#18 All samples red	ceived within hold time?	Yes
#19 Subcontract of	sample(s)?	Yes
#20 VOC samples	have zero headspace (less than 1/4 incl	h bubble)? Yes
#21 <2 for all samp	les preserved with HNO3,HCL, H2SO4?	? Yes
#22 >10 for all sam	ples preserved with NaAsO2+NaOH, Zr	nAc+NaOH? Yes
Must be complete	d for after-hours delivery of samples _l	prior to placing in the refrigerator
Analyst:	PH Device/Lot#:	
Analyst:		prior to placing in the refrigerator
Check	list reviewed by:	Date:

Analytical Report 449822

for Southern Union Gas Services- Monahans

Project Manager: Joel Lowry

L-5(8"line)

(RP-2334)

03-OCT-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)





03-OCT-12

Project Manager: Joel Lowry

Southern Union Gas Services- Monahans

801 South Loop 464 Monahans, TX 79756

Reference: XENCO Report No: 449822

L-5(8"line)

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 449822. 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. 449822 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,

Alejandro Montoya

Odessa Laboratory Director

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Sample Cross Reference 449822



Southern Union Gas Services- Monahans, Monahans, TX

L-5(8"line)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile #2	S	09-25-12 13:30		449822-001

CASE NARRATIVE



Client Name: Southern Union Gas Services- Monahans

Project Name: L-5(8"line)



Project ID: (RP-2334) Work Order Number: 449822 Report Date: 03-OCT-12 Date Received: 09/27/2012

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-897637 BTEX by EPA 8021B

SW8021BM

Batch 897637, Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 449822-001.

The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits



Project Location: Lea County, NM Contact: Joel Lowry Project Id: (RP-2334)

Southern Union Gas Services- Monahans, Monahans, TX Certificate of Analysis Summary 449822

Project Name: L-5(8"line)

Date Received in Lab: Thu Sep-27-12 02:56 pm

Report Date: 03-OCT-12

Project Manager: Nicholas Straccione		
ject Manager: Nichola	Straccione	
Project Manager:	Nicholas	
	roject Manager:	

	Stockpile #2
Depth: Matrix: Sampled: Extracted:	
Matrix: Sampled: Extracted:	
Sampled: Extracted:	SOIL
Extracted:	Sep-25-12 13:30
	Sep-28-12 12:05
Analyzed: S	Sep-28-12 15:18
Units/RL:	mg/kg RL
Benzene	
Toluene	ND 0.00210
Ethylbenzene	ND 0.00105
m_p-Xylenes	ND 0.00210
o-Xylene	ND 0.00105
Total Xylenes	ND 0.00105
Total BTEX	ND 0.00105
Percent Moisture Extracted:	
Analyzed: C	Oct-01-12 14:30
Units/RL:	% RL
Percent Moisture	5.11 1.00
TPH By SW8015 Mod Extracted:	Oct-01-12 12:00
Analyzed: C	Oct-01-12 16:31
Units/RL:	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons	ND 15.8
C12-C28 Diesel Range Hydrocarbons	72.0 15.8
C28-C35 Oil Range Hydrocarbons	ND 15.8
Total TPH	72.0 15.8

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 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.

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

Version: 1.%

Odessa Laboratory Director Alejandro Montoya



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	



Form 2 - Surrogate Recoveries

Project Name: L-5(8"line)

Work Orders: 449822,

Sample: 449822-001 / SMP

Project ID: (RP-2334)

Lab Batch #: 897637

Batch: 1

Matrix: Soil

Units: mg/kg Date Analyzed: 09/28/12 15:18	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	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 897742

Sample: 449822-001 / SMP

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 10/01/12 16:31	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	()	1-7	[D]		
1-Chlorooctane	86.5	100	87	70-135	
o-Terphenyl	41.8	50.0	84	70-135	

Lab Batch #: 897637

Sample: 627872-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 09/28/12 14:12	SU	RROGATE RI	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 897742

Sample: 627936-1-BLK / BLK

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 10/01/12 14:32	SUI	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes 1-Chlorooctane	93.7	99.9	[D]	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 897637

Sample: 627872-1-BKS / BKS

Batch: 1

Matrix: Solid

Units: mg/kg Date Analyzed: 09/28/12 13:14	SU	RROGATE RI	ECOVERY S	STUDY	
BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
•	0.0210	0.0000		00.400	
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

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

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: L-5(8"line)

Work Orders: 449822,

Project ID: (RP-2334)

Lab Batch #: 897742

Sample: 627936-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 10/01/12 15:01	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	53.2	50.0	106	70-135	- De

Lab Batch #: 897637

Sample: 627872-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 09/28/12 13:51	SU	RROGATE R	ECOVERY	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes	()	,-,	[D]		
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	3

Lab Batch #: 897742

Sample: 627936-1-BSD / BSD

Batch:

Matrix: Solid

Units: mg/kg Date Analyzed: 10/01/12 15:29	SU	RROGATE RI	ECOVERY	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	56.7	50.0	113	70-135	

Lab Batch #: 897637

Sample: 449822-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 09/28/12 17:33	SU	RROGATE RE	ECOVERY S	STUDY	
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 897742

Sample: 449818-001 S / MS

Batch:

Matrix: Soil

Units: mg/kg Date Analyzed: 10/02/12 00:22	SU	RROGATE RI	ECOVERY S	STUDY	
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
Analytes			[D]		
1-Chlorooctane	101	100	101	70-135	No.
o-Terphenyl	47.9	50.0	96	70-135	

^{*} Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

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

^{***} Poor recoveries due to dilution



Form 2 - Surrogate Recoveries

Project Name: L-5(8"line)

Work Orders: 449822, Lab Batch #: 897637

Sample: 449822-001 SD / MSD

Project ID: (RP-2334)

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 09/28/12 17:33	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	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 897742

Sample: 449818-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 10/02/12 00:52	SU	RROGATE R	ECOVERY	STUDY	
TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.8	100	70-135	
o-Terphenyl	46.8	49.9	94	70-135	

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

^{*} 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: L-5(8"line)

Work Order #: 449822

Analyst: KEB

Lab Batch ID: 897637

Sample: 627872-1-BKS

Date Prepared: 09/28/2012

Batch #: 1

Project ID: (RP-2334) **Date Analyzed:** 09/28/2012

Matrix: Solid

Flag %RPD Control Limits 35 35 35 35 35 BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY Control Limits %R 70-130 70-130 70-135 71-133 71-129 RPD % Ξ 6 6 00 Blk. Spk Dup. %R [G] 100 86 103 16 93 Blank Spike Duplicate Result [F] 0.0975 0.0971 0.205 0.100 0.0932 Spike Added 8660.0 8660.0 0.0998 0.200 0.0998 Ξ Blank Spike %R [D] 108 109 107 102 111 Blank Spike Result 0.102 0.107 0.108 0.222 0.109 0.0998 Spike Added 8660.0 0.0998 0.200 0.0998 [B] Sample Result <0.000998 <0.000998 <0.000998 <0.00200 <0.00200 Blank <u>v</u> BTEX by EPA 8021B Units: mg/kg Analytes Ethylbenzene m_p-Xylenes o-Xylene Toluene Benzene

Analyst: KEB

Lab Batch ID: 897742

Date Prepared: 10/01/2012

Batch #: 1

Sample: 627936-1-BKS

Date Analyzed: 10/01/2012 Matrix: Solid

Units: mg/kg		BLAN	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE	PIKE / B	LANKS	PIKE DUPL	ICATE]	RECOVE	RECOVERY STUDY	Y	
TPH By SW8015 Mod	Blank Sample Result	Spike Added	Blank Spike	Blank	Spike Added	Blank Spike	Blk. Spk Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	[C]	%K [D]	[E]	Duplicate Result [F]	% K	%	%0K	%KFD	
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	166	66	1000	1020	102	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	086	86	1000	1010	101	3	70-135	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 Page 10 of 14



Form 3 - MS / MSD Recoveries

Project Name: L-5(8"line)



Work Order #: 449822

Lab Batch ID: 897637

Date Analyzed: 09/28/2012

Project ID: (RP-2334)

Matrix: Soil Batch #:

QC-Sample ID: 449822-001 S **Date Prepared:** 09/28/2012

KEB Analyst:

Reporting Units: mg/kg		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MAT	RIX SPII	KE DUPLICAT	TE REC	OVERY 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	Control Limits %RPD	Flag
Benzene	<0.00105	0.105	0.0897	85	0.105	0.0900	98	0	70-130	35	
Toluene	<0.00209	0.105	0.0844	80	0.105	0.0848	81	0	70-130	35	
Ethylbenzene	<0.00105	0.105	0.0707	29	0.105	0.0710	89	0	71-129	35	×
m_p-Xylenes	<0.00209	0.209	0.150	72	0.210	0.150	71	0	70-135	35	
o-Xylene	<0.00105	0.105	0.0750	71	0.105	0.0753	72	0	71-133	35	

Date Analyzed: 10/02/2012 Lab Batch ID: 897742

QC-Sample ID: 449818-001 S Date Prepared: 10/01/2012

Matrix: Soil Batch #:

Analyst: KEB

Reporting Units: mg/kg		M	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E / MATI	RIX SPII	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH By SW8015 Mod 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	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<18.8	1250	1230	86	1250	1220	86	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<18.8	1250	1250	100	1250	1240	66	1	70-135	35	

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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000



Sample Duplicate Recovery



Project Name: L-5(8"line)

Work Order #: 449822

Lab Batch #: 897752

QC-Sample ID: 449829-001 D

Project ID: (RP-2334)

Date Prepared: 10/01/2012 Date Analyzed: 10/01/2012 14:30

Analyst: WRU

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Triporting Canada		011111111111111111111111111111111111111			
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Percent Moisture	1.21	1.05	14	15	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

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: 09/27/2012 02:56:00 PM

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

Temperature Measuring device used :

1 *Temperature of coole	Sample Receipt Checklist	Comments
		Comments
2 *Shipping container in	er(s)?	4.8
E ompping 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
3 *Custody Seals Signe	ed and dated?	Yes
*Chain of Custody pro	esent?	Yes
Sample instructions of	complete on Chain of Custody?	Yes
Any missing/extra sar	mples?	No
0 Chain of Custody si	gned when relinquished/ received?	Yes
1 Chain of Custody aç	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
5 Samples properly pr	reserved?	Yes
16 Sample container(s)) intact?	Yes
17 Sufficient sample ar	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 p	reserved with HNO3,HCL, H2SO4?	Yes
22 >10 for all samples	preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes
	after-hours delivery of samples prior to placing	in the refrigerator
Analyst:	PH Device/Lot#:	
Checklist co	impleted by:	Date: 09/27/2012