



# AE Order Number Banner

## Report Description

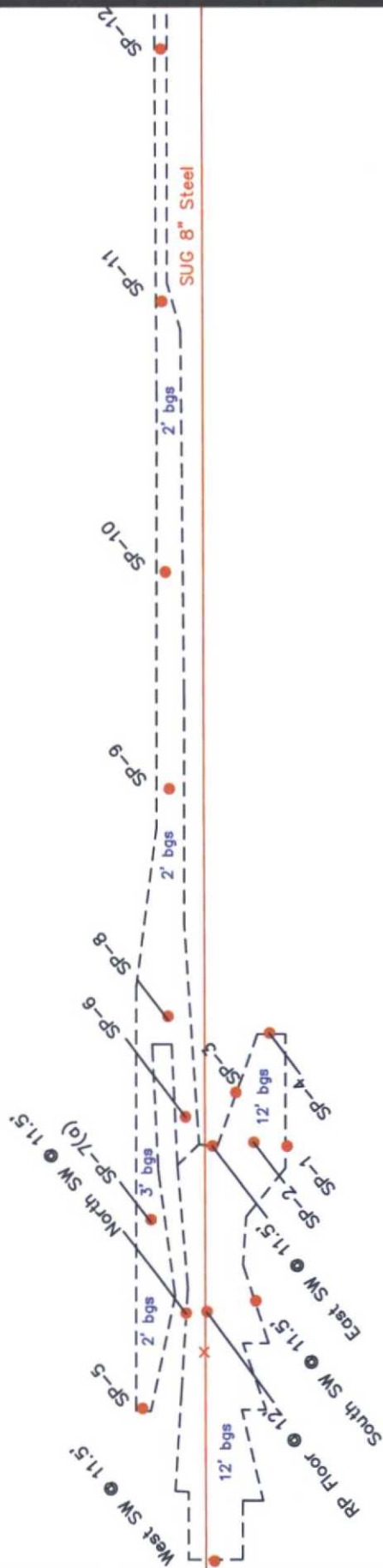
This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



**App Number:** pGRL0905637054

**1RP - 2086**

**SOUTHERN UNION GAS COMPANY**



#### Legend

- Sample Location
- - - Excavation Extent
- Pipeline

Figure 2  
Site & Sample Location Map  
Southern Union Gas Services  
L-5 (8" Line)  
NMOCD Ref RP-2086  
Lea County, New Mexico

## Basin Environmental Services

Prep By: JWL  
September 5, 2012  
Checked By: BJA  
Scale 1"=40'

10/5

TABLE 1

## CONCENTRATIONS OF BENZENE, BTEX, TPH &amp; CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES

L-5 (8" LINE)

LEA COUNTY, NEW MEXICO

NMOCD REF# 1RP-2334

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M				TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	SM 4500-CL B CHLORIDE (mg/Kg)
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>13</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>29</sub> -C <sub>35</sub> (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	<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	<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	0.090	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	67.0	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	699.6	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*	
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				10				50				100	250	

- = Not analyzed.

\* Denotes Laboratory Analytical Results in accordance with EPA 300/300.1

10/5





# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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.

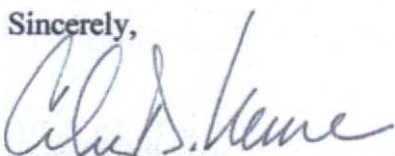
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

This report conforms with NELAP requirements.





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

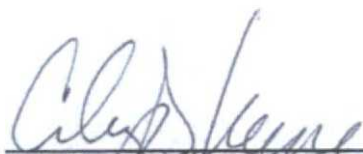
Receiving Date: 01/12/10  
Reporting Date: 01/18/10  
Project Number: 2009-055 (SUG)  
Project Name: 8-INCH LATERAL L-5  
Project Location: LEA CO., NM

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 (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	DRO ext. (>C <sub>28</sub> -C <sub>35</sub> ) (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
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

  
\_\_\_\_\_  
Date

H19041 TPHextBTEX BASIN

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



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ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL CONSULTING, LLC  
ATTN: CAMILLE BRYANT  
P.O. BOX 381  
LOVINGTON, NM 88260  
FAX TO: (575) 396-1429

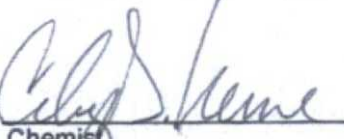
Receiving Date: 01/12/10  
Reporting Date: 01/14/10  
Project Number: 2009-055 (SUG)  
Project Name: 8 INCH LATERAL L-5  
Project Location: LEA CO., NM

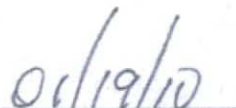
Analysis Date: 01/13/10  
Sampling Date: 01/12/10  
Sample Type: SOIL  
Sample Condition: INTACT @ 9°C  
Sample Received By: JH  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H19041-1	SP-7A	< 16
H19041-2	STOCKPILE EAST	< 16
H19041-3	STOCKPILE WEST	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl <sup>-</sup> B
--------------------------	------------------------

Note: Analyses performed on 1:4 w:v aqueous extracts.  
Not accredited for Chloride.

  
Chemist

  
Date

#### H19041 Basin Environmental

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**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



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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):

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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)

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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

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## 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)*

*Work Order Number: 449054*

*Report Date: 18-SEP-12*

*Date Received: 09/14/2012*

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**Sample receipt non conformances and comments:**

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**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



# Certificate of Analysis Summary 449054

## Southern Union Gas Services- Monahans, Monahans, TX



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

**Date Received in Lab:** Fri Sep-14-12 03:30 pm  
**Report Date:** 18-SEP-12  
**Project Manager:** Nicholas Straccione

Analysis Requested		Lab Id:	449054-001				
		Field Id:	Stockpile				
		Depth:					
		Matrix:	SOIL				
		Sampled:	Sep-14-12 13:00				
BTEX by EPA 8021B		Extracted:	Sep-18-12 12:20				
		Analyzed:	Sep-18-12 15:41				
		Units/RL:	mg/kg 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				
Inorganic Anions by EPA 300/300.1 SUB: E871002		Extracted:	Sep-15-12 13:30				
		Analyzed:	Sep-15-12 19:18				
		Units/RL:	mg/kg RL				
	Chloride		22.4 1.09				
Percent Moisture		Extracted:					
		Analyzed:	Sep-17-12 12:45				
		Units/RL:	% RL				
	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 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

*Nicholas Straccione*

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 quantitation 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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(770) 449-8800	(770) 449-5477
(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 [D]	Control Limits %R	Flags
Analytes					
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 [D]	Control Limits %R	Flags
Analytes					
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: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/17/12 11:58

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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 [D]	Control Limits %R	Flags
Analytes					
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	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	53.9	50.1	108	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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

## Form 2 - Surrogate Recoveries

Project Name: L-5 (8" line)

Work Orders : 449054,

Project ID: (RP-2334)

Lab Batch #: 896763

Sample: 627327-1-BKS / BKS

Batch: 1 Matrix: Solid

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 [D]	Control Limits %R	Flags
Analytes						
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: 1 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 [D]	Control Limits %R	Flags
Analytes						
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: 1 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 [D]	Control Limits %R	Flags
Analytes						
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: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/17/12 12:28

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/18/12 15:26

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0302	0.0300	101	80-120	
4-Bromofluorobenzene		0.0300	0.0300	100	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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

## 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

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0344	0.0300	115	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

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



**Project Name: L-5 (8" line)**

Work Order #: 449054

Analyst: KEB

Lab Batch ID: 896763

Sample: 627327-1-BKS

Date Prepared: 09/18/2012

Batch #: 1

Project ID: (RP-2334)

Date Analyzed: 09/18/2012

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Units: mg/kg										
	BTEX by EPA 8021B										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Benzene	<0.00100	0.100	0.0940	94	0.100	0.0940	94	0	70-130	35
	Toluene	<0.00200	0.100	0.0935	94	0.100	0.0928	93	1	70-130	35
	Ethylbenzene	<0.00100	0.100	0.0907	91	0.100	0.0904	90	0	71-129	35
	m,p-Xylenes	<0.00200	0.200	0.196	98	0.200	0.199	100	2	70-135	35
o-Xylene	<0.00100	0.100	0.0940	94	0.100	0.0969	97	3	71-133	35	

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

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.977	97.7	97.9	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

Project Name: L-5 (8" line)

Work Order #: 449054

Analyst: KEB

Lab Batch ID: 896685

Sample: 627274-1-BKS

Date Prepared: 09/17/2012

Batch #: 1

Project ID: (RP-2334)

Date Analyzed: 09/17/2012

Matrix: Solid

Units: mg/kg

Units: mg/kg											
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	TPH By SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
	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

Date Analyzed: 09/15/2012

Date Prepared: 09/15/2012

Project ID: (RP-2334)

Analyst: TTE

QC- Sample ID: 449054-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

### MATRIX / MATRIX SPIKE RECOVERY STUDY

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	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$   
Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$   
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: 896□63

Date Analyzed: 09/18/2012

Reporting Units: mg/kg

Project ID: (RP-2334)

**Batch #:** 1 **Matrix:** Soil

**Analyst:** □EB

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Analytes	BTEX by EPA 8021B										
	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	0.0912	93	6	□0-130	35	
Toluene	□0.00208	0.104	0.0826	□9	0.104	0.0826	□9	0	□0-130	35	
Ethylbenzene	□0.00104	0.104	0.0614	59	0.104	0.061□	59	0	□-129	35	□
m,p-xylenes	□0.00208	0.208	0.124	60	0.208	0.124	60	0	□0-135	35	□
o-xylene	□0.00104	0.104	0.0649	62	0.104	0.0645	62	1	□-133	35	□

Lab Batch ID: 896685

Date Analyzed: 09/11/2012

Reporting Units: mg/kg

Batch #: 1 Matrix: Soil

**Analyst:** □EB

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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 %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	5.2	1010	924	91	1010	842	83	9	0-135	35	
C12-C28 Diesel Range Hydrocarbons	520	1010	1210	124	1010	1180	65	1	0-135	35	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$

Relative Percent Difference  $RPD = 200 \cdot (C - \bar{C}) / (C + \bar{C})$

$\square D = \square \text{ot Detected} \square = \text{Present Below Reporting Limit} \square B = \text{Present in Blank} \square R = \square \text{ot Re} \square \text{uested} \square = \square \text{nterference} \square A = \square \text{ot}$

Applicable ☐ = See ☐ Narrative ☐ EQL = Estimated Quantitation Limit

Matrix Spike Duplicate Percent Recovery  $[\square] = 100 * (\square - A) / E$

Project Name: L-5 (8" line)

Work Order #: 449054

Lab Batch #: 896699

Project ID: (RP-2334)

Date Analyzed: 09/11/2012 12:45

Date Prepared: 09/11/2012

Analyst: ☐ R ☐

QC- Sample ID: 449054-001 D

Batch #: 1

Matrix: Soil

Reporting Units: ☐

## SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	3.93	4.02	2	15	

Spike Relative Difference RPD  $200 * \frac{(B-A)}{(B+A)}$  ☐  
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit







# XENCO Laboratories



## Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

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

Work Order #: 449054

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

### Sample Receipt Checklist

### Comments

#1 *Temperature of cooler(s)?	7.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles/ container?	Yes
#6 *Custody Seals Signed and dated for Containers/coolers	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 when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved 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 in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: \_\_\_\_\_

Checklist reviewed by:

Date: \_\_\_\_\_



# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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 through 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

This report conforms with NELAP requirements.



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

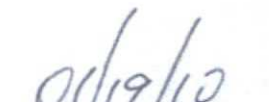
LAB NO.	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	DRO ext. (>C <sub>28</sub> -C <sub>35</sub> ) (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		01/15/10	01/15/10	01/15/10	01/13/10	01/13/10	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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.





PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL CONSULTING, LLC  
ATTN: CAMILLE BRYANT  
P.O. BOX 381  
LOVINGTON, NM 88260  
FAX TO: (575) 396-1429

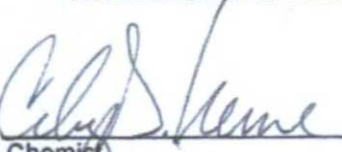
Receiving Date: 01/12/10  
Reporting Date: 01/14/10  
Project Number: 2009-055 (SUG)  
Project Name: 8 INCH LATERAL L-5  
Project Location: LEA CO., NM


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

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H19041-1	SP-7A	< 16
H19041-2	STOCKPILE EAST	< 16
H19041-3	STOCKPILE WEST	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-Cl <sup>-</sup> B
--------------------------	------------------------

Note: Analyses performed on 1:4 w:v aqueous extracts.  
Not accredited for Chloride.

  
Chemist

  
Date

H19041 Basin Environmental

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.





**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

*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 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:**

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**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





# Certificate of Analysis Summary 449822

## Southern Union Gas Services- Monahans, Monahans, TX



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

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

<i>Analysis Requested</i>		Lab Id:	449822-001			
		Field Id:	Stockpile #2			
		Depth:				
		Matrix:	SOIL			
		Sampled:	Sep-25-12 13:30			
BTEX by EPA 8021B		Extracted:	Sep-28-12 12:05			
		Analyzed:	Sep-28-12 15:18			
		Units/RL:	mg/kg RL			
	Benzene		ND 0.00105			
	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:	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:	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: 1.0%

Alejandro Montoya  
Odessa Laboratory Director

## 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 quantitation 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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(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

## Form 2 - Surrogate Recoveries

Project Name: L-5(8"line)

Work Orders : 449822,

Project ID: (RP-2334)

Lab Batch #: 897637

Sample: 449822-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/28/12 15:18

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/01/12 16:31

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/28/12 14:12

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/01/12 14:32

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		93.7	99.9	94	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

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

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



## 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

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 897637

Sample: 627872-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/28/12 13:51

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0323	0.0300	108	80-120	

Lab Batch #: 897742

Sample: 627936-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/01/12 15:29

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
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: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/28/12 17:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

Lab Batch #: 897742

Sample: 449818-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/02/12 00:22

### 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	47.9	50.0	96	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 \times A / B$

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



## Form 2 - Surrogate Recoveries

Project Name: L-5(8"line)

Work Orders : 449822,

Project ID: (RP-2334)

Lab Batch #: 897637

Sample: 449822-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/28/12 17:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
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

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		100	99.8	100	70-135	
o-Terphenyl		46.8	49.9	94	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

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

**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**
**Units: mg/kg**

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
BTEX by EPA 8021B											
Benzene	<0.000998	0.0998	0.107	107	0.0998	0.0975	98	9	70-130	35	
Toluene	<0.00200	0.0998	0.108	108	0.0998	0.0971	97	11	70-130	35	
Ethylbenzene	<0.000998	0.0998	0.102	102	0.0998	0.0932	93	9	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.222	111	0.200	0.205	103	8	70-135	35	
o-Xylene	<0.000998	0.0998	0.109	109	0.0998	0.100	100	9	71-133	35	

**Analyst: KEB**
**Lab Batch ID: 897742**
**Sample: 627936-1-BKS**
**Date Prepared: 10/01/2012**
**Batch #: 1**
**Date Analyzed: 10/01/2012**
**Matrix: Solid**
**Units: mg/kg**

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Units: mg/kg											
Analytes	TPH By SW8015 Mod										
	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	991	99	1000	1020	102	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	980	98	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



# Form 3 - MS / MSD Recoveries

Project Name: L-5(8"line)

Work Order #: 449822

Lab Batch ID: 897637

Date Analyzed: 09/28/2012

Reporting Units: mg/kg

Project ID: (RP-2334)

QC- Sample ID: 449822-001 S

Date Prepared: 09/28/2012

Batch #: 1

Matrix: Soil

Analyst: KEB

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

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
BTEX by EPA 8021B											
Benzene	<0.00105	0.105	0.0897	85	0.105	0.0900	86	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	67	0.105	0.0710	68	0	71-129	35	X
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	

Lab Batch ID: 897742

Date Analyzed: 10/02/2012

Reporting Units: mg/kg

QC- Sample ID: 449818-001 S

Date Prepared: 10/01/2012

Batch #: 1

Matrix: Soil

Analyst: KEB

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

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
TPH By SW8015 Mod											
C6-C12 Gasoline Range Hydrocarbons	<18.8	1250	1230	98	1250	1220	98	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<18.8	1250	1250	100	1250	1240	99	1	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100 \cdot (C-A)/B$

Relative Percent Difference  $RPD = 200 \cdot (C-F)/(C+F)$

NID = 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

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



## Sample Duplicate Recovery



Project Name: L-5(8"line)

Work Order #: 449822

Lab Batch #: 897752

Project ID: (RP-2334)

Date Analyzed: 10/01/2012 14:30

Date Prepared: 10/01/2012

Analyst: ☐ R ☐

QC- Sample ID: 449829-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
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

Project Manager: Joel Lowry  
Company Name: Basin Environmental Service Technologies, LLC  
Company Address: P.O. Box 301  
City/State/Zip: Lovington, NM 88260  
Telephone No: (575) 396-2378  
Sampler Signature: Regy Nader  
Project Name: L-5 (8"line)  
Project #: (RP-2334)  
Project Loc: Lea County, NM  
PO #: \_\_\_\_\_

Report Format: ☒ Standard ☐ TRRP ☐ NPDES  
Fax No: (575) 396-1429  
e-mail: pm@basinenv.com; Rose.Stade@SUG.com

ORDER #: 449822

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Matrix	Preservation & # of Containers	Analyze For:
	Stockpile #2			9/25/2012	1330		1	Ice	<input checked="" type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> HCl <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> None <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> DW-Drinking Water GL-Sludge <input type="checkbox"/> GW - Groundwater S-Solid <input type="checkbox"/> NP-Non-Polyside Specify Other _____	TPH: 418.1 8015M 8015B TPH: TX 1005 TX 1006 Cations (Ca, Mg, Na, K) Anions (Cl, SO <sub>4</sub> , Alkalinity) SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles Semivolatiles BTEX 8021B/5030 or BTEX 8260 CHLORIDES RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Standard TAT 4 DAY

Special Instructions: Hold for BTEX

Laboratory Comments:  
 Sample Containers Intact? ☒  
 VOCs Free of Headspace? ☒  
 Labels on container(s) ☒  
 Custody seals on container(s) ☒  
 Custody seals on cooler(s) ☒  
 Sample Hand Delivered ☒  
 by Sampler/Client Rep. ? ☒  
 by Courier? ☐ UPS ☐ DHL  
 FedEx ☐ Lone Star  
 Temperature Upon Receipt: 4.8 °C

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Regy Nader</u>	9/26/12	0700	<u>Michael Manning</u>	9/26/12	13:00
<u>Michael Manning</u>	9/26/12	1300	<u>Michael Manning</u>	9/26/12	1300
<u>Michael Manning</u>	9/27/12	1450	<u>Michael Manning</u>	9/27/12	1450

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Final 1.000





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: Southern Union Gas Services- Monahan

Date/ Time Received: 09/27/2012 02:56:00 PM

Work Order #: 449822

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	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 when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved 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 in the refrigerator

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: \_\_\_\_\_

Date: 09/27/2012

Checklist reviewed by: \_\_\_\_\_

Date: 09/27/2012



# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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 through 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



# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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: 11/30/09  
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: AB

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	DRO ext. (C <sub>28</sub> -C <sub>35</sub> ) (mg/kg)
		11/25/09	11/25/09	11/25/09
ANALYSIS 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 Control		447	585	-
True Value QC		500	500	-
% Recovery		89.4	117	-
Relative Percent 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

Date

H18775 TPHEXT BASIN

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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  
 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

LAB NO. SAMPLE ID

 BENZENE TOLUENE BENZENE XYLENES Cl\*  
 (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; Cl-: Std. Methods 4500-Cl-B

\*Analyses performed on 1:4 w:v aqueous extracts. Reported on wet weight.

 TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
 AND TOTAL XYLENES. Not accredited for Chloride.

Lab Director

Date

H18775 BCL BASIN





# ARDINAL LABORATORIES

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

BILL TO										ANALYSIS REQUEST															
Company Name: Basin Consulting										P.O. #:															
Project Manager: Camille Bryant										Company: SUG															
Address: 2800 Plains Hwy										Attn:															
City: Lovington										State: NM Zip: 88260															
Phone #: (575) 605-7410										Fax #: 575-396-1429															
Project #: 2009-055										Project Owner: SUG															
Project Name: 8-Inch Lateral L-5										State: Zip:															
Project Location: Lea Co. NM										Phone #:															
Sampler Name: Camille Bryant										Fax #:															
FOR LAB USE ONLY																									
Lab I.D.		Sample I.D.		# CONTAINERS		GROUNDCWATER		WASTEWATER		SOIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		PRESERV.		SAMPLING	
H18775-1		West SW @ 11.5'		1		1		1		1		1		1		1		1		1		1		1	
-2		South SW @ 11.5'		1		1		1		1		1		1		1		1		1		1		1	
-3		North SW @ 11.5'		1		1		1		1		1		1		1		1		1		1		1	
-4		East SW @ 11.5'		1		1		1		1		1		1		1		1		1		1		1	
-5		KP Floor @ 12'		1		1		1		1		1		1		1		1		1		1		1	
-6		SP-1		1		1		1		1		1		1		1		1		1		1		1	
-7		SP-2		1		1		1		1		1		1		1		1		1		1		1	
-8		SP-3		1		1		1		1		1		1		1		1		1		1		1	
-9		SP-4		1		1		1		1		1		1		1		1		1		1		1	
-10		SP-5		1		1		1		1		1		1		1		1		1		1		1	

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Sampler Relinquished: Camille Bryant Date: 11-20-09 Time: 4:50p  
Relinquished By: Date: Time:

Received By: D. J. Bryant Date: 11-20-09 Time: 4:50p

Temp. 35.9°C Sample Condition Cool Intact Yes No  
Delivered By: (Circle One) Checked By: (Initials) DJB  
Sampler - UPS - Bus - Other:

Phone Result: ☐ No Add'l Phone #: ☐ No  
Fax Result: ☐ No Add'l Fax #: ☐ No

REMARKS: Chlaides 4000 cc TPT 8015M extended BTEX 80213





# ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 Fax (575) 393-2476

Page 2 of 2

Company Name: <b>Bain Consulting</b>		<b>BILL TO</b>		ANALYSIS REQUEST																																	
Project Manager: <b>Camille Bryant</b>		P.O. #:																																			
Address: <b>2800 Plains Hwy</b>		Company: <b>SUG</b>																																			
City: <b>Lorington</b>		Attn:																																			
Phone #: <b>(575) 405-7210</b>		Address:																																			
Project #: <b>2009-055</b>		City:																																			
Project Name: <b>8-Inch Lateral L-5</b>		State:																																			
Project Location: <b>Lea Co. NM</b>		Phone #:																																			
Sampler Name: <b>Camille Bryant</b>		Fax #:																																			
FOR LAB USE ONLY		MATRIX		PRESERV.		SAMPLING																															
Lab I.D.		# CONTAINERS		(G)RAB OR (C)OMP.		GROUNDWATER		WASTEWATER		SOIL		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:		DATE		TIME													
H187511 SP-6		G1								X						X		X				11/19		1510		X											
-12 SP-7		G1								X						X		X				11/19		1520		X											
-13 SP-8		G1								X						X		X				11/19		1530		X											
-14 SP-9		G1								X						X		X				11/19		1540		X											
-15 SP-10		G1								X						X		X				11/19		1550		X											
-16 SP-11		G1								X						X		X				11/19		1600		X											
-17 SP-12		G1								X						X		X				11/19		1610		X											
-18 Stockpile Baseline		G1								X						X		X				11/19		1620		X											

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Sampler Relinquished: <b>Camille Bryant</b>		Date: <b>11-20-09</b>		Received By: <b>Heather LeBut</b>		Phone Result: <input type="checkbox"/> No		Add'l Phone #: <input type="checkbox"/> No	
Relinquished By:		Time: <b>4:50P</b>		Received By:		Fax Result: <input type="checkbox"/> No		Add'l Fax #: <input type="checkbox"/> No	
Date:		Time:		Date:		REMARKS:			
Delivered By: (Circle One)		Temp.		Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other:		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		Cool <input type="checkbox"/> Intact <input type="checkbox"/>		(Initials)			
3.5P #26		Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>		HJB			