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

State of New Mexico
Energy Minerals and Natural Resources

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

HOBBS OCD
NOV 0 3 2011
RECEIVED

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repor

Name of Company	Southern Union Gas Services	Contact	Rose Slade
Address	801 S. Loop 464, Monahans, TX 79756	Telephone No.	432-940-5147
Facility Name	Line #290 (East of Jal South)	Facility Type	Natural Gas Pipeline

Surface Owner George Willis		Lease No. 30-025-38822

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	34	25S	37E					Lea

Latitude North 32 degrees 05.467' **Longitude** West 103 degrees 09.406

NATURE OF RELEASE

Type of Release Natural Gas, Crude Oil and Produced Water	Volume of Release 20 BBLS	Volume Recovered None
Source of Release Natural Gas Pipeline	Date and Hour of Occurrence October 26, 2011 – Time Unknown	Date and Hour of Discovery October 26, 2011 – 1345 hours (CDT)
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A twelve (12)-inch low pressure natural gas pipeline developed a leak, resulting in a release of natural gas, crude oil and produced water. During initial response activities the pipeline was fitted with a temporary pipeline clamp to mitigate the release. Following initial response activities, the affected pipeline segment was replaced with poly pipe.

Describe Area Affected and Cleanup Action Taken.*
The affected area measures approximately 350 feet in length and 5 to 10 feet in width. The release will be remediated according to NMOCD regulatory guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Rose Slade

Printed Name: Rose Slade

Title: EHS Compliance Specialist

E-mail Address: rose.slade@sug.com

Date: November 3, 2011 Phone: 432-940-5147

OIL CONSERVATION DIVISION

ENV ENGINEER :
~~Approved by District Supervisor:~~ Geoff Leking

Approval Date: 11/3/11 Expiration Date: 01/04/12

Conditions of Approval: SUBMIT FINAL C-141 BY 01/04/12

Attached ☐
IRP-11-11-2752

* Attach Additional Sheets If Necessary

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260
bjarguijo@basinenv.com
Office: (575) 396-2378 Fax: (575) 396-1429

Effective Solutions

REMEDIATION SUMMARY &

RISK-BASED SITE CLOSURE PROPOSAL

SOUTHERN UNION GAS SERVICES
LINE #290 (EAST OF JAL SOUTH)
Lea County, New Mexico
Unit Letter "D" (NW/NW), Section 34, Township 25 South, Range 37 East
Latitude 32° 05.467' North, Longitude 103° 09.406' West 80' GW

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

April 2012

Ben J. Arguijo
Project Manager

Approved w/ condition
- LINE & BACKFILL AFTER 10' EXCAVATION THEN PERFORM SOIL BORINGS AND INSTALL AT LEAST 2 MONITOR WELLS

Geoff Leking, Env. Specialist, NMOCD DIST 1 - 4/30/12

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

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 & Risk-Based Site Closure Proposal* for the release site known as Line #290 (East of Jal South). The legal description of the release site is Unit Letter "D" (NW/NW), Section 34, Township 25 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 05.467' North latitude and 103° 09.406' West longitude. The property affected by the release is owned by Mr. George Willis. Please reference Figure 1 for a "Site Location Map".

On October 26, 2011, Southern Union discovered a release had occurred on the Line #290 pipeline. Failure of a section of the 12-inch (12") steel, low-pressure natural gas pipeline resulted in the release of approximately twenty barrels (20 bbls) of a mixture of natural gas, crude oil, and produced water. During initial response activities, the pipeline was fitted with a temporary pipeline clamp to mitigate the release. Following initial response activities, the affected pipeline segment was replaced with poly pipe.

The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on November 3, 2011. The "Release Notification and Corrective Action" (Form C-141) indicated the release affected an area measuring approximately three hundred and fifty feet (350') in length and approximately five feet (5') to ten feet (10') in width. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix D.

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 34, Township 25 South, Range 37 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately eighty-five feet (85') to ninety feet (90') below ground surface (bgs). Based on the NMOCD ranking system, ten (10) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within 1,000 feet 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 1,000 feet 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 Line #290 (East of Jal South) release site has an initial ranking score of ten (10) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 1,000 mg/Kg (ppm)

Based on the analytical results of soil samples collected during the advancement of soil boring "SB-1" (discussed in the "Summary of Soil Remediation Activities" below), the NMOCD site classification must be modified. Laboratory analytical results indicated the soil sample collected at

fifty-five feet (55') bgs exhibited a Total Petroleum Hydrocarbon (TPH) concentration of 1,300 mg/Kg. The distance between the soil sample collected at fifty-five feet (55') bgs and the estimated depth to groundwater (85 to 90 feet) is less than fifty feet (50'). An additional ten (10) points must be added to the depth to groundwater criterion.

NMOCD guidelines indicate the Line #290 (East of Jal South) release has a modified 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)
- BTEX – 50 mg/Kg (ppm)
- 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 November 10, 2011, four (4) delineation trenches (Trench 1 through Trench 4) were advanced at the site to investigate the vertical and horizontal extent of impacted soil. Selected soil samples were submitted to Xenco Laboratories, Inc., in Odessa, Texas, for analysis of TPH and chloride concentrations using EPA Methods SW 846-8015M and 300.1, respectively. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chlorides in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix C.

Delineation trench "Trench 1" was located at the release point, adjacent to, and to the south of, the Line #290 pipeline. The delineation trench was advanced to a total depth of approximately seven feet (7') bgs. Following the excavation of the delineation trench, one (1) soil sample (Sample 1) was collected from the floor of the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated a TPH concentration of 18,800 mg/Kg and a chloride concentration of 676 mg/Kg in soil sample "Sample 1".

Delineation trench "Trench 2" was located approximately fifty feet (50') to the west of the release point. The delineation trench was advanced to a total depth of approximately eighteen inches (18") bgs. Following the excavation of the delineation trench, one (1) soil sample (Sample 2) was collected from the floor of the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated a TPH concentration of 14,800 mg/Kg and a chloride concentration of 1,150 mg/Kg in soil sample "Sample 2".

Delineation trench "Trench 3" was located approximately one hundred and ninety feet (190') to the northwest of the release point, in a pooling area near the terminus of the flow path of the release. The delineation trench was advanced to a total depth of approximately fourteen feet (14') bgs. Following the excavation of the delineation trench, one (1) soil sample (Sample 3) was collected from the floor of the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated a TPH concentration of 39,900 mg/Kg and a chloride concentration of 6 mg/Kg in soil sample "Sample 3".

Delineation trench "Trench 4" was located approximately two hundred and fifteen feet (215') to the northwest of the release point, at the terminus of the flow path of the release. The delineation trench

was advanced to a total depth of approximately six feet (6') bgs. Following the excavation of the delineation trench, one (1) soil sample (Sample 4) was collected from the floor of the trench and submitted to the laboratory for analysis. Laboratory analytical results indicated a TPH concentration of 20,400 mg/Kg and a chloride concentration less than the laboratory method detection limit (MDL) of 4.42 mg/Kg in soil sample "Sample 4".

On November 15, 2011, one (1) soil boring (SB-1) was advanced at the site to further delineate the vertical extent of impacted soil. Soil boring "SB-1" was located at the terminus of the flowpath of the release, in the area defined by delineation trenches "Trench 3" and "Trench 4". The soil boring was advanced to a total depth of approximately eighty-five feet (85') bgs. Soil samples were collected at five-foot (5') drilling intervals and field screened using a Photo-Ionization Detector (PID) and/or chloride test kit. A soil boring log is provided as Appendix B.

Soil samples collected from soil boring "SB-1" at drilling depths of five feet (5'), fifteen feet (15'), twenty-five feet (25'), thirty-five feet (35'), forty-five feet (45'), fifty-five feet (55'), sixty-five feet (65'), seventy-five feet (75'), eighty feet (80'), and eighty-five feet (85') bgs were submitted to the laboratory for analysis of TPH and/or chloride concentrations. Selected soil samples were also analyzed for benzene, ethylbenzene, toluene, and xylene (BTEX) using EPA Method SW 846-8021b. Laboratory analytical results indicated benzene concentrations ranged from 0.00720 mg/Kg in soil sample SB-1 @ 45' to 1.70 mg/Kg in soil sample SB-1 @ 15'. BTEX concentrations ranged from 0.0440 mg/Kg in soil sample SB-1 @ 45' to 177 mg/Kg in soil sample SB-1 @ 15'. TPH concentrations ranged from 119 mg/Kg in soil sample SB-1 @ 45' to 8,240 mg/Kg in soil sample SB-1 @ 15'. Chloride concentrations ranged from less than the appropriate laboratory MDL in soil samples SB-1 @ 15' and SB-1 @ 25' to 490 mg/Kg in soil sample SB-1 @ 5'.

4.0 PROPOSED ACTIVITIES

Southern Union proposes the following limited risk-based closure strategy to advance the Line #290 (East of Jal South) release site toward an NMOCD-approved closure:

- The release site will be excavated to a total depth of approximately ten feet (10') bgs. A 20-mil polyurethane liner will be installed on the floor of the excavation prior to backfilling. A cushion of sand will be installed approximately one foot (1') below and one foot (1') above the liner to protect the liner from damage during installation and backfilling activities. This engineered control will inhibit vertical migration of contaminants from below the polyurethane liner to the surface, protecting the vegetative zone. In addition, the polyurethane liner will shed moisture to the edge of the liner and beyond the maximum horizontal extent of underlying impacted soil.

- The horizontal extent of the excavation will be determined by field screening using a PID and chloride test kit. Confirmation soil samples will be collected at approximately fifty-foot (50') intervals from the excavation sidewalls. The soil samples will be submitted to Xenco Laboratories for analysis of BTEX, TPH, and/or chloride using EPA methods SW-846 8021b, SW-846 8015M, and 300.1, respectively. Excavation will continue until laboratory analytical results indicate benzene concentrations are less than 10 mg/Kg, BTEX concentrations are less than 50 mg/Kg, TPH concentrations are less than 100 mg/Kg, and chloride concentrations are less than the regulatory remediation action level established for the site by the NMOCD.

- Excavated soil will be transported to Sundance Services, Inc. (NMOCD Permit # NM-01-0003), for disposal.

- When laboratory analytical results have confirmed that all contaminants are less than the required remediation action levels for the site (as determined by the NMOCD), the excavation will be backfilled in eighteen-inch (18") lifts with non-impacted soil purchased from the landowner, compacted, and contoured to fit the surrounding topography.

- Reseeding of the site with vegetation acceptable to the NMOCD and the landowner will take place at the conclusion of the proposed remediation activities.

5.0 REPORTING

On review and approval of this proposal by the NMOCD, Southern Union is prepared to begin field activities and perform the corrective actions summarized in this *Remediation Summary & Risk-Based Site Closure Proposal*. On completion of the corrective actions, Southern Union will submit a *Remediation Summary & Risk-Based Site Closure Request* to the NMOCD, documenting remediation activities and the laboratory analytical results of confirmation soil samples.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based Site Closure Proposal* 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.

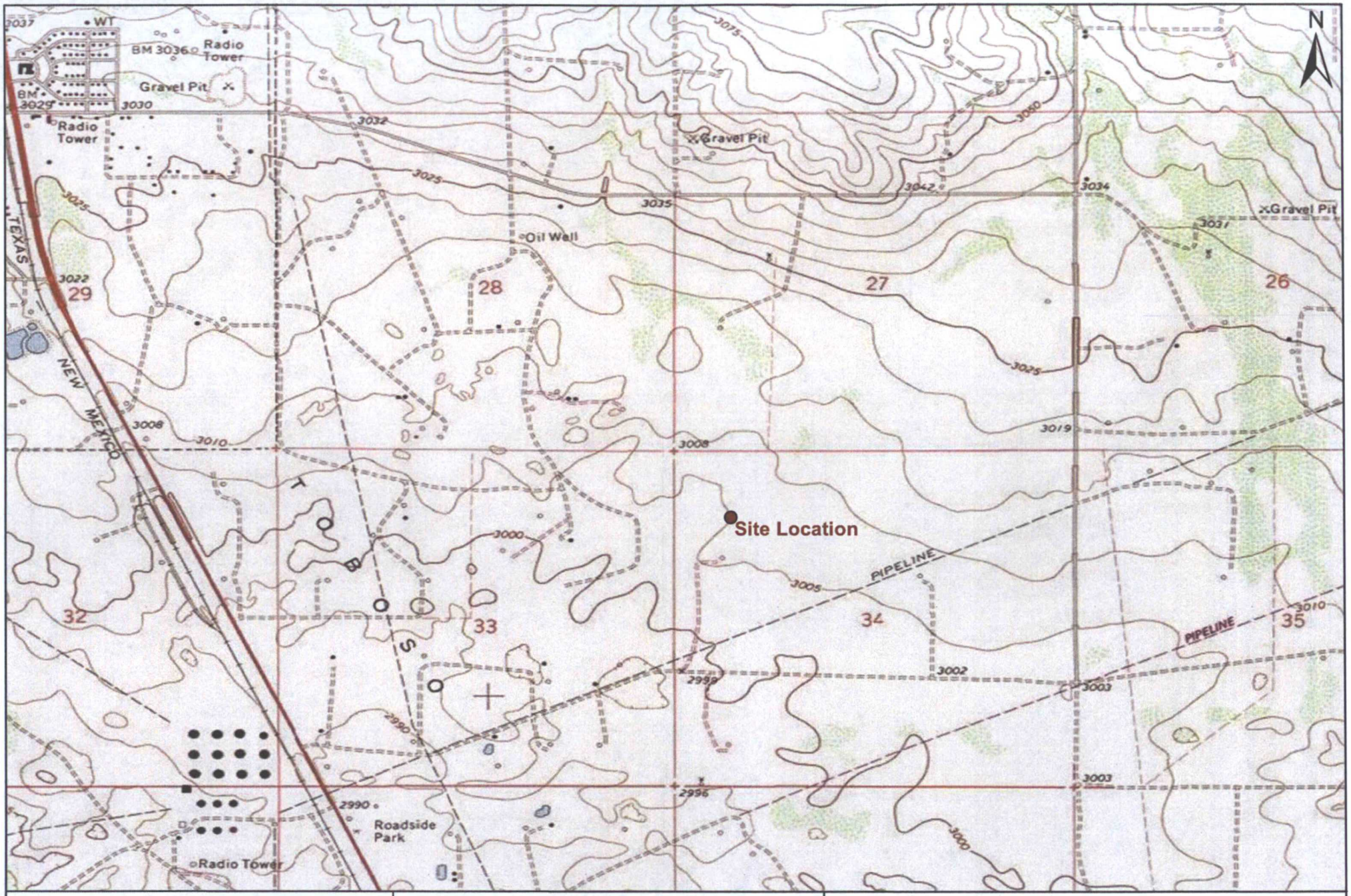
This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Southern Union Gas Services.

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 & Curt Stanley
Southern Union Gas Services
801 S. Loop 464
Monahans, Texas 79756
rose.slade@sug.com
curt.stanley@sug.com

Copy 3: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, New Mexico 88260



1,000500 0 1,000 2,000

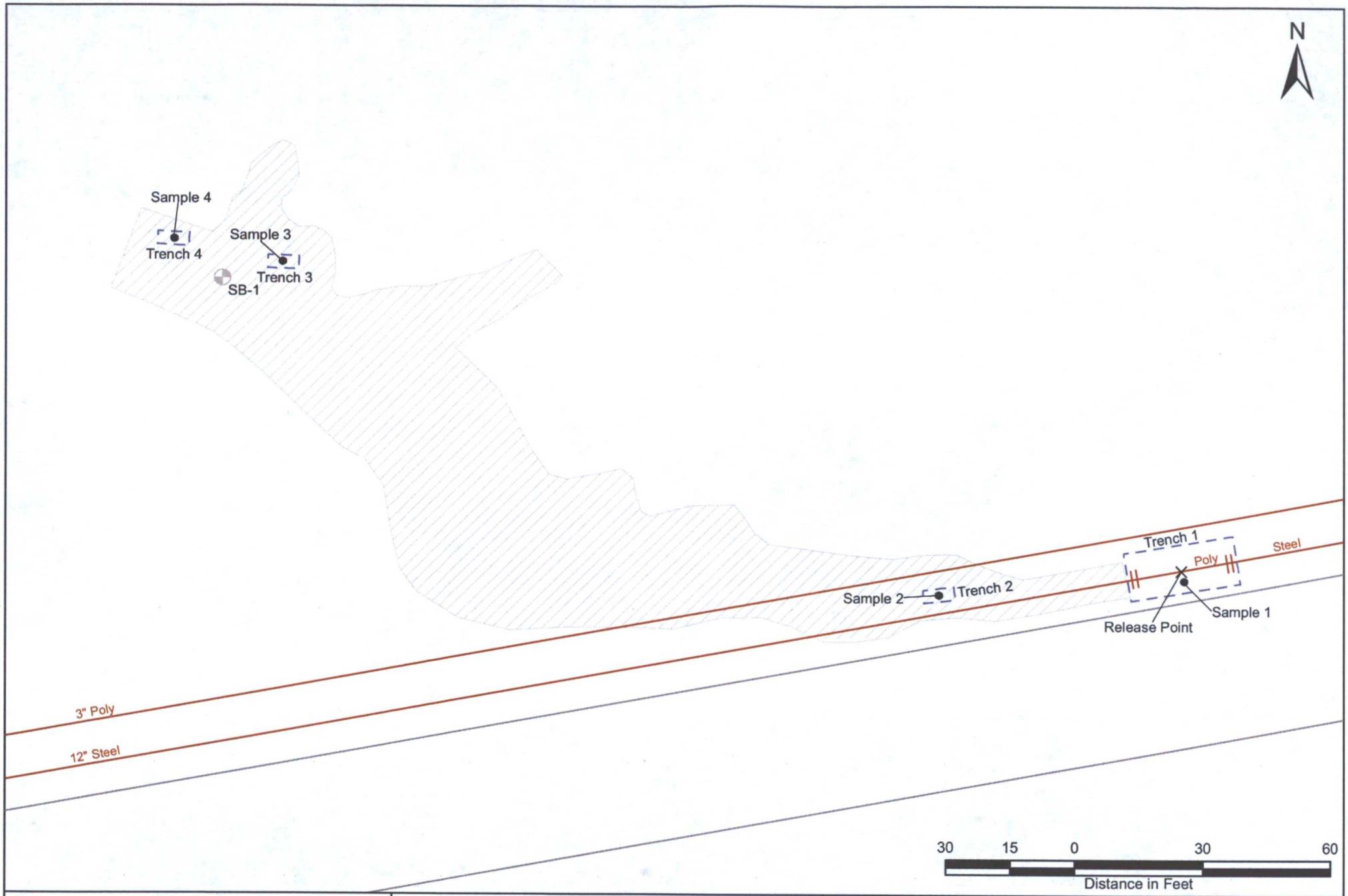
Distance in Feet

Figure 1
Site Location Map
Southern Union Gas Services
Line #290 (East of Jal South)
Lea County, New Mexico

Basin Environmental Service Technologies
Effective Solutions

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
April 6, 2012	Scale: 1" = 2000'



Legend

- Excavation Extent
- Pipeline
- Road
- Soil Bore
- Sample Location
- Spill Margins

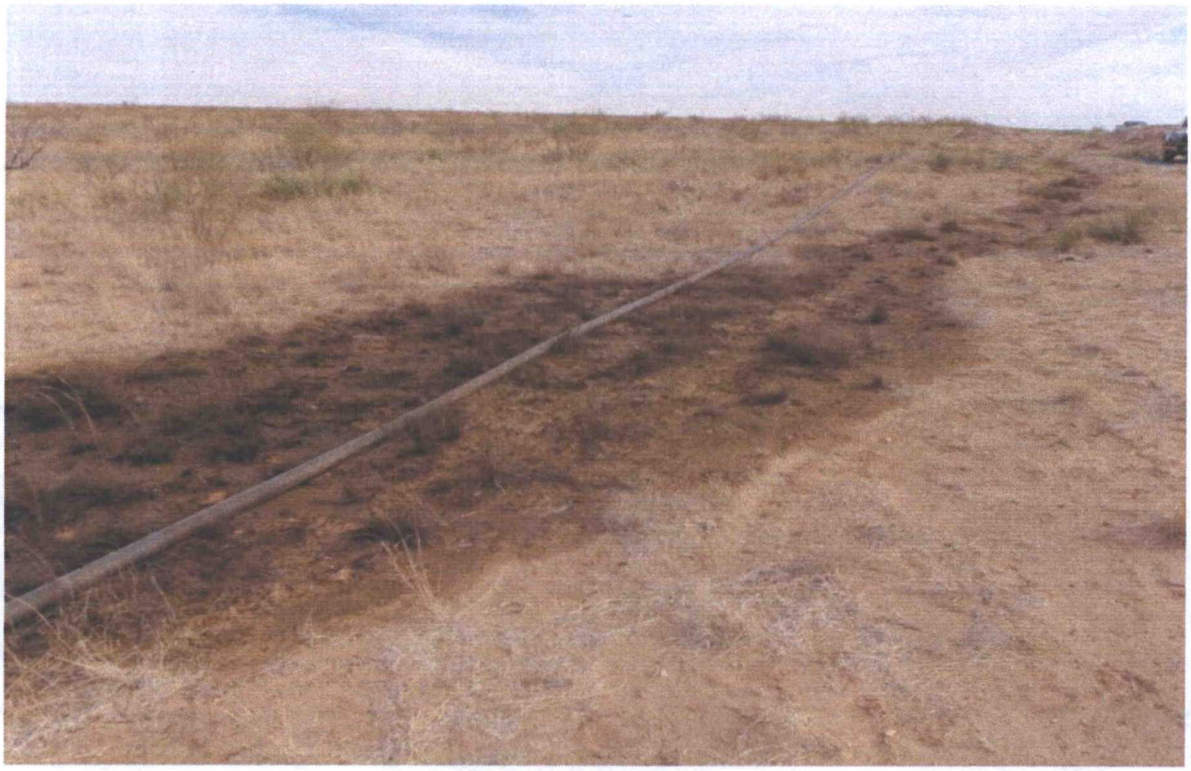
Figure 2
Site & Sample Location Map
Southern Union Gas Services
Line #290 (East of Jal South)
Lea County, New Mexico

Basin Environmental Service Technologies
Effective Solutions

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
April 19, 2012	Scale: 1" = 30'

ON	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030							METHOD: 8015M			T
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M.P. - XYLENES (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL XYLENE (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)	((n
	7'	11/10/2011	In-Situ	-	-	-	-	-	-	-	13,800	4,550	418	1
	1.5'	11/10/2011	In-Situ	-	-	-	-	-	-	-	10,700	3,770	280	1
	14'	11/10/2011	In-Situ	-	-	-	-	-	-	-	30,500	8,840	519	3
	6'	11/10/2011	In-Situ	-	-	-	-	-	-	-	14,800	5,110	466.0	2
	5'	11/15/2011	In-Situ	0.273	3.56	7.00	21.5	9.33	30.8	41.7	1,440	2,010	75.6	
	15'	11/15/2011	In-Situ	1.70	16.0	28.3	95.2	35.3	131	177	4,640	3,410	186	
	25'	11/15/2011	In-Situ	0.719	4.38	9.03	28.5	11.1	39.6	53.7	1,550	1,460	65.5	
	35'	11/15/2011	In-Situ	0.0118	0.0459	0.216	0.0260	0.0414	0.0674	0.341	30.9	182	<15.8	
	45'	11/15/2011	In-Situ	0.00720	<0.0102	0.00643	0.0213	0.00904	0.0303	0.0440	<15.3	119	<15.3	
	55'	11/15/2011	In-Situ	<0.0207	0.219	0.619	2.03	0.816	2.85	3.68	360	885	52.1	
	65'	11/15/2011	In-Situ	0.00907	0.0235	0.0636	0.246	0.0903	0.336	0.432	109	412	43.4	
	75'	11/15/2011	In-Situ	0.00954	<0.0105	0.00755	0.0449	0.0159	0.0608	0.0779	41.5	246	22.0	
	80'	11/15/2011	In-Situ	0.00785	0.0254	0.0839	0.264	0.108	0.372	0.489	94.7	444	24.9	
	85'	11/15/2011	In-Situ	0.00955	<0.0106	0.00591	0.0269	0.00976	0.0367	0.0521	25.7	178	<15.9	
				10						**50**				

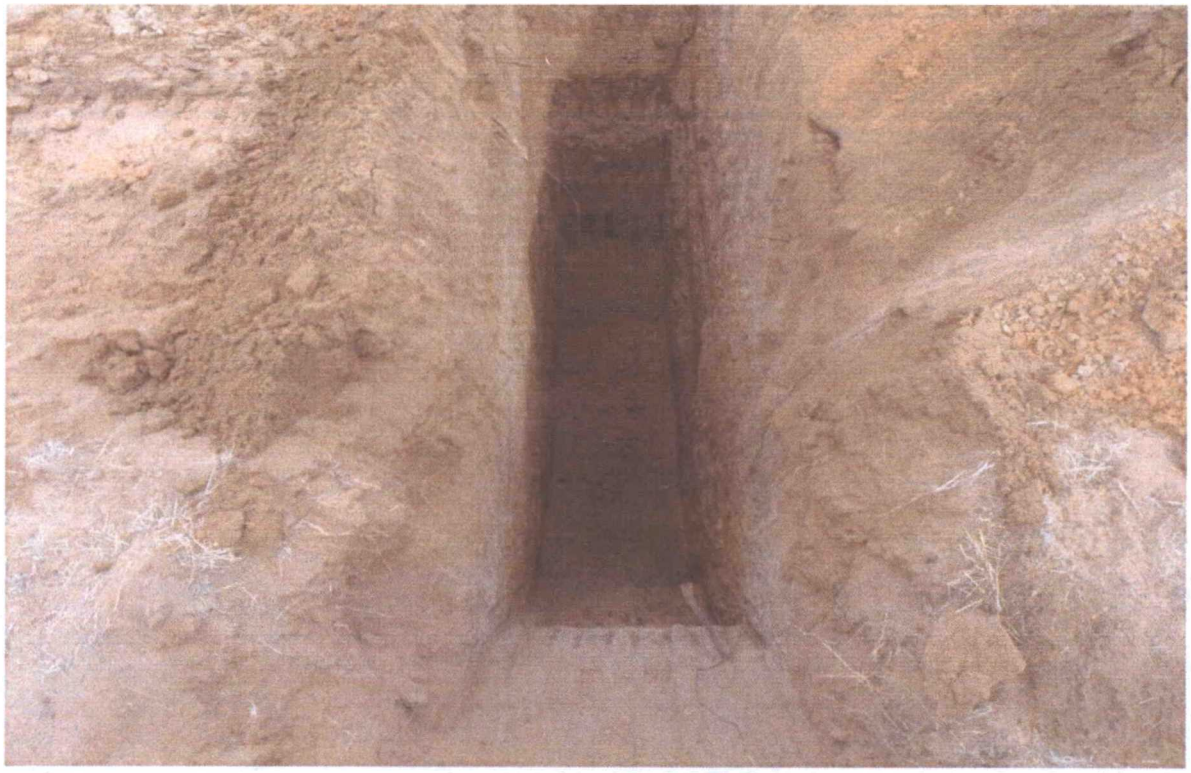


Line #290 (East of Jal South) - Release Site (Looking East-northeast)

Line #290 (East of Jal South) - Release Site (Looking South)

Line #290 (East of Jal South) - Release Site (Looking East)

Line #290 (East of Jal South) - Initial Response Activities (Pipeline Clamp)

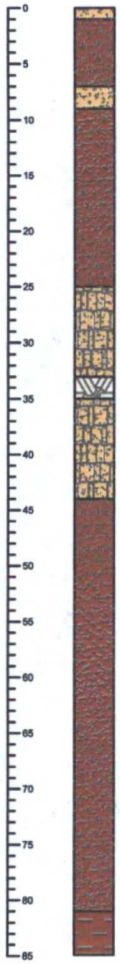


Line #290 (East of Jal South) - Delineation Trench

Line #290 (East of Jal South) - Advancement of Soil Boring SB-1

Line #290 (East of Jal South) - Soil Boring SB-1 (following P&A)

Soil Boring SB-1



Depth Below Ground Surface	Chloride Field Test	PID Reading	Petroleum Odor	Petroleum Stain	Soil Description
0					0' - 1' - Tan fine sand
5	632	267	Slight	None	1' - 7' - Red fine sand
10	168		None	None	7' - 9' - Tan fine sand
15	<120	1,518	None	None	9' - 25' - Red fine sand
20	<120		None	None	
25		1,415	None	None	
30		1,921	None	None	25 - 33' - Tan fine sand, calcified sandstone
35		835	None	None	33' - 35' - Gypsum
40		456	None	None	35' - 44' - Tan fine sand, sandstone
45			None	None	
50		373	None	None	
55		2,352	None	None	
60			None	None	
65		1,605	None	None	44' - 81' - Red very fine to fine sand
70			None	None	
75		864	None	None	
80			None	None	
85		1,109	None	None	81' - 85' - Red silty clay

Boring SB-1

Date Drilled November 15, 2011
Thickness of Bentonite Seal 85 Ft
Depth of Exploratory Boring 85 Ft bgs
Depth to Groundwater _____
Ground Water Elevation _____

▼ Indicates the PSH level measured on _____
▼ Indicates the groundwater level measured on _____
⬭ Indicates samples selected for Laboratory Analysis.
PID Head-space reading in ppm obtained with a photo-ionization detector.

Completion Notes

1.) The soil boring was advanced on date using air rotary drilling techniques.
2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring SB-1

Southern Union Gas Services
Line #290 (East of Jal South)
Lea County, New Mexico

Basin Environmental Service Technologies
Effective Solutions

Basin Environmental Service Technologies, LLC
3100 Plains Hwy.
Lovington, NM 88260

Prep By: BJA	Checked By: BRB
April 19, 2012	

Analytical Report 431344

for

Southern Union Gas Services- Monahans

Project Manager: Rose Slade

Line # 290 (East of Jal South)

21-NOV-11

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)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
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)

21-NOV-11

Project Manager: **Rose Slade**
Southern Union Gas Services- Monahans
1507 W. 15th Street
Monahans, TX 79756

Reference: XENCO Report No: **431344**
Line # 290 (East of Jal South)
Project Address: Lea County, New Mexico

Rose Slade:

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 431344. 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. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. 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. 431344 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,

Brent Barron II
Odessa Laboratory Manager

Sample Cross Reference 431344

Southern Union Gas Services- Monahans, Monahans, TX

Line # 290 (East of Jal South)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Sample # 1	S	11-10-11 12:00		431344-001
Sample # 2	S	11-10-11 13:00		431344-002
Sample # 3	S	11-10-11 14:00		431344-003
Sample # 4	S	11-10-11 15:00		431344-004

CASE NARRATIVE

XENCO Laboratories

Client Name: Southern Union Gas Services- Monahans
Project Name: Line # 290 (East of Jal South)

Project ID:
Work Order Number: 431344

Report Date: 21-NOV-11
Date Received: 11/11/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-874726 TPH By SW8015 Mod
SW8015MOD_NM

Batch 874726, 1-Chlorooctane recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 614073-1-BKS,614073-1-BLK.
o-Terphenyl recovered above QC limits Data not confirmed by re-analysis. Samples affected are: 614073-1-BLK.
o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 431344-003.

Certificate of Analysis Summary 431344

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Line # 290 (East of Jal South)

Project Id:
Contact: Rose Slade
Project Location: Lea County, New Mexico

Date Received in Lab: Fri Nov-11-11 10:45 am
Report Date: 21-NOV-11
Project Manager: Brent Barron II

Analysis Requested											
	Lab Id:	431344-001		431344-002		431344-003		431344-004			
	Field Id:	Sample # 1		Sample # 2		Sample # 3		Sample # 4			
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Nov-10-11 12:00		Nov-10-11 13:00		Nov-10-11 14:00		Nov-10-11 15:00			
Anions by E300	***Extracted:***										
	Analyzed:	Nov-14-11 12:20		Nov-14-11 12:20		Nov-14-11 12:20		Nov-14-11 12:20			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		676	8.79	1150	8.88	5.62	4.52	ND	4.42		
Percent Moisture	***Extracted:***										
	Analyzed:	Nov-11-11 14:35		Nov-11-11 14:35		Nov-11-11 15:15		Nov-11-11 15:15			
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		4.42	1.00	5.44	1.00	7.09	1.00	4.97	1.00		
TPH By SW8015 Mod	***Extracted:***	Nov-12-11 15:00		Nov-12-11 15:00		Nov-12-11 15:00		Nov-12-11 15:00			
	Analyzed:	Nov-14-11 16:48		Nov-14-11 17:18		Nov-14-11 17:53		Nov-14-11 18:24			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		13800	156	10700	159	30500	161	14800	158		
C12-C28 Diesel Range Hydrocarbons		4550	156	3770	159	8840	161	5110	158		
C28-C35 Oil Range Hydrocarbons		418	156	280	159	519	161	466	158		
Total TPH		18800	156	14800	159	39900	161	20400	158		

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

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

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line # 290 (East of Jal South)

Work Orders : 431344,

Project ID:

Lab Batch #: 874726 **Sample:** 431344-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/14/11 16:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.5	108	70-135	
o-Terphenyl	65.9	49.8	132	70-135	

Lab Batch #: 874726 **Sample:** 431344-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/14/11 17:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	64.1	50.0	128	70-135	

Lab Batch #: 874726 **Sample:** 431344-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/14/11 17:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	73.8	50.0	148	70-135	**

Lab Batch #: 874726 **Sample:** 431344-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/14/11 18:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	100	94	70-135	
o-Terphenyl	65.4	50.0	131	70-135	

Lab Batch #: 874726 **Sample:** 614073-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/13/11 12:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	136	100	136	70-135	*
o-Terphenyl	68.9	50.0	138	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line # 290 (East of Jal South)

Work Orders : 431344,

Project ID:

Lab Batch #: 874726 **Sample:** 614073-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/13/11 11:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	140	99.7	140	70-135	*
o-Terphenyl	65.8	49.9	132	70-135	

Lab Batch #: 874726 **Sample:** 614073-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/13/11 12:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	134	99.6	135	70-135	
o-Terphenyl	63.6	49.8	128	70-135	

Lab Batch #: 874726 **Sample:** 431054-025 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/13/11 22:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.9	124	70-135	
o-Terphenyl	58.0	50.0	116	70-135	

Lab Batch #: 874726 **Sample:** 431054-025 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/13/11 23:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	101	128	70-135	
o-Terphenyl	60.2	50.3	120	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.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Line # 290 (East of Jal South)

Work Order #: 431344 **Project ID:**

Analyst: BRB **Date Prepared:** 11/14/2011 **Date Analyzed:** 11/14/2011

Lab Batch ID: 874861 **Sample:** 874861-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	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
Chloride	<0.840	20.0	25.0	125	20.0	24.7	124	1	75-125	20	

Analyst: KTB **Date Prepared:** 11/12/2011 **Date Analyzed:** 11/13/2011

Lab Batch ID: 874726 **Sample:** 614073-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	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	997	942	94	996	833	84	12	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	1040	104	996	922	93	12	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: Line # 290 (East of Jal South)

Work Order #: 431344

Lab Batch #: 874861 **Project ID:**

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431074-001 S **Batch #:** 1 **Matrix:** Solid

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	4480	2220	7140	120	75-125	

Lab Batch #: 874861

Date Analyzed: 11/14/2011 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431209-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	12.2	102	121	107	75-125	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Line # 290 (East of Jal South)

Work Order # : 431344 **Project ID:**

Lab Batch ID: 874726 **QC- Sample ID:** 431054-025 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/13/2011 **Date Prepared:** 11/12/2011 **Analyst:** KTB

Reporting Units: mg/kg

	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	<15.0	999	764	76	1010	796	79	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	803	80	1010	853	84	6	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative 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: Line # 290 (East of Jal South)

Work Order #: 431344

Lab Batch #: 874861 **Project ID:**

Date Analyzed: 11/14/2011 12:20 **Date Prepared:** 11/14/2011 **Analyst:** BRB

QC- Sample ID: 431074-001 D **Batch #:** 1 **Matrix:** Solid

Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	4480	4510	1	20	

Lab Batch #: 874628

Date Analyzed: 11/11/2011 14:35 **Date Prepared:** 11/11/2011 **Analyst:** BRB

QC- Sample ID: 431073-001 D **Batch #:** 1 **Matrix:** Solid

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.79	9.81	0	20	

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

Environmental Lab of Texas

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: Rose Slade PAGE 01 OF 01 Project Name: MA #4 (11/9/11)

Company Name: Southern Union Gas Sevices Project #:

Company Address: 801 S. Loop 464 Project Loc: Lea County, New Mexico

City/State/Zip: Monahans, Texas 79756 PO #:

Telephone No: 432-940-5147 Fax No: Report Format: [X] Standard [ ] TRRP [ ] NPDES

Sampler Signature: Bobby Blackwood e-mail: rose.slade @sug.com

(lab use only)
ORDER #: 431344

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl (VOA X 2)	H2SO4	NaOH	Na2S2O3	None (PAH)	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Asbestos	EPA Paint Filter Test	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Sample #1			11/10/2011	1200		1	X								Soil	X												X		X
02	Sample #2			11/10/2011	1300		1	X								Soil	X												X		X
03	Sample #3			11/10/2011	1400		1	X								Soil	X												X		X
04	Sample #4			11/10/2011	1500		1	X								Soil	X												X		X
05																															

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	11/11/11	1045			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Andrea Elam	11.11.11	10:45

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

402glass

Temperature Upon Receipt: 1.0 °C

XENCO Laboratories

XENCO Laboratories
Atlanta, Boca Raton, Corpus Christi, Dallas
Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist
Document No.: SYS-SRC
Revision/Date: No. 01, 5/27/2010
Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: S.U.G.S
Date/Time: 11.11.11 10:45
Lab ID # : 431344
Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	1.0 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

Analytical Report 431845

for

Southern Union Gas Services- Monahans

Project Manager: Rose Slade

Line #290 (East of Jal South)

05-DEC-11

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)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
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)

05-DEC-11

Project Manager: **Rose Slade**
Southern Union Gas Services- Monahans
1507 W. 15th Street
Monahans, TX 79756

Reference: XENCO Report No: **431845**
Line #290 (East of Jal South)
Project Address: Lea County, NM

Rose Slade:

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 431845. 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. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. 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. 431845 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,

Brent Barron II
Odessa Laboratory Manager

Sample Cross Reference 431845

Southern Union Gas Services- Monahans, Monahans, TX

Line #290 (East of Jal South)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1@5'	S	11-15-11 10:00		431845-001
SB-1@15'	S	11-15-11 10:10		431845-002
SB-1@25'	S	11-15-11 10:20		431845-003
SB-1@35'	S	11-15-11 10:30		431845-004
SB-1@45'	S	11-15-11 10:40		431845-005
SB-1@55'	S	11-15-11 10:50		431845-006
SB01@65'	S	11-15-11 11:00		431845-007
SB-1@75'	S	11-15-11 11:10		431845-008
SB-1@80'	S	11-15-11 11:15		431845-009
SB-1@85'	S	11-15-11 11:20		431845-010

CASE NARRATIVE

XENCO Laboratories

Client Name: Southern Union Gas Services- Monahans
Project Name: Line #290 (East of Jal South)

Project ID:
Work Order Number: 431845

Report Date: 05-DEC-11
Date Received: 11/18/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-875759 BTEX by EPA 8021B
SW8021BM

Batch 875759, Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike. m_p-Xylenes recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 431845-003, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes is within laboratory Control Limits

SW8021BM

Batch 875759, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 431845-003,431845-002.

Batch: LBA-875882 BTEX by EPA 8021B
SW8021BM

Batch 875882, Benzene, Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 431845-010, -001, -005, -006, -004, -009, -008, -007.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene is within laboratory Control Limits

SW8021BM

Batch 875882, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 431845-004,431845-005,431845-007,431845-006,431845-009,431845-010,431845-001,431845-008.
4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 431845-004,431845-005,431845-008,431845-010.

Certificate of Analysis Summary 431845

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Line #290 (East of Jal South)

Project Id:
Contact: Rose Slade
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-18-11 11:25 am
Report Date: 05-DEC-11
Project Manager: Brent Barron II

Analysis Requested		Lab Id:	431845-001		431845-002		431845-003		431845-004		431845-005		431845-006	
		Field Id:	SB-1@5'		SB-1@15'		SB-1@25'		SB-1@35'		SB-1@45'		SB-1@55'	
		Depth:												
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sampled:	Nov-15-11 10:00		Nov-15-11 10:10		Nov-15-11 10:20		Nov-15-11 10:30		Nov-15-11 10:40		Nov-15-11 10:50	
Anions by E300		Extracted:												
		Analyzed:	Nov-23-11 00:34		Nov-23-11 00:34		Nov-23-11 00:34				Nov-23-11 00:34			
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL		
Chloride			490	8.80	ND	4.38	ND	4.37			9.70	4.29		
BTEX by EPA 8021B		Extracted:	Nov-29-11 09:51		Nov-22-11 16:00		Nov-22-11 16:00		Nov-29-11 09:51		Nov-29-11 09:51		Nov-29-11 09:51	
		Analyzed:	Nov-29-11 16:14		Nov-25-11 19:27		Nov-25-11 20:12		Nov-29-11 13:51		Nov-29-11 14:20		Nov-29-11 17:23	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene			0.273	0.105	1.70	0.521	0.719	0.104	0.0118	0.00526	0.00720	0.00510	ND	0.0207
Toluene			3.56	0.209	16.0	1.04	4.38	0.207	0.0459	0.0105	ND	0.0102	0.219	0.0414
Ethylbenzene			7.00	0.105	28.3	0.521	9.03	0.104	0.216	0.00526	0.00643	0.00510	0.619	0.0207
m_p-Xylenes			21.5	0.209	95.2	1.04	28.5	0.207	0.0260	0.0105	0.0213	0.0102	2.03	0.0414
o-Xylene			9.33	0.105	35.3	0.521	11.1	0.104	0.0414	0.00526	0.00904	0.00510	0.816	0.0207
Total Xylenes			30.8	0.105	131	0.521	39.6	0.104	0.0674	0.00526	0.0303	0.00510	2.85	0.0207
Total BTEX			41.7	0.105	177	0.521	53.7	0.104	0.341	0.00526	0.0440	0.00510	3.68	0.0207
Percent Moisture		Extracted:												
		Analyzed:	Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00	
		Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture			4.55	1.00	4.04	1.00	3.80	1.00	4.87	1.00	2.05	1.00	3.48	1.00
TPH By SW8015 Mod		Extracted:	Nov-23-11 13:00		Nov-23-11 13:00		Nov-23-11 13:00		Nov-23-11 15:30		Nov-23-11 15:30		Nov-23-11 15:30	
		Analyzed:	Nov-24-11 23:28		Nov-25-11 00:04		Nov-25-11 00:41		Nov-26-11 00:46		Nov-26-11 01:20		Nov-26-11 01:54	
		Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons			1440	15.7	4640	15.6	1550	15.5	30.9	15.8	ND	15.3	360	15.5
C12-C28 Diesel Range Hydrocarbons			2010	15.7	3410	15.6	1460	15.5	182	15.8	119	15.3	885	15.5
C28-C35 Oil Range Hydrocarbons			75.6	15.7	186	15.6	65.5	15.5	ND	15.8	ND	15.3	52.1	15.5
Total TPH			3530	15.7	8240	15.6	3080	15.5	213	15.8	119	15.3	1300	15.5

Brent Barron II
Odessa Laboratory Manager

Certificate of Analysis Summary 431845

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Line #290 (East of Jal South)

Project Id:
Contact: Rose Slade
Project Location: Lea County, NM

Date Received in Lab: Fri Nov-18-11 11:25 am
Report Date: 05-DEC-11
Project Manager: Brent Barron II

Analysis Requested									
	Lab Id:	431845-007		431845-008		431845-009		431845-010	
	Field Id:	SB01@65'		SB-1@75'		SB-1@80'		SB-1@85'	
	Depth:								
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-15-11 11:00		Nov-15-11 11:10		Nov-15-11 11:15		Nov-15-11 11:20	
Anions by E300	*Extracted:*								
	Analyzed:	Nov-23-11 00:34		Nov-23-11 00:34		Nov-23-11 00:34		Nov-23-11 00:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		55.3	4.43	19.2	4.42	15.6	4.43	12.8	4.46
BTEX by EPA 8021B	*Extracted:*	Nov-29-11 09:51		Nov-29-11 09:51		Nov-29-11 09:51		Nov-29-11 09:51	
	Analyzed:	Nov-29-11 14:43		Nov-29-11 15:05		Nov-29-11 15:28		Nov-29-11 15:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00907	0.00527	0.00954	0.00524	0.00785	0.00527	0.00955	0.00528
Toluene		0.0235	0.0105	ND	0.0105	0.0254	0.0105	ND	0.0106
Ethylbenzene		0.0636	0.00527	0.00755	0.00524	0.0839	0.00527	0.00591	0.00528
m_p-Xylenes		0.246	0.0105	0.0449	0.0105	0.264	0.0105	0.0269	0.0106
o-Xylene		0.0903	0.00527	0.0159	0.00524	0.108	0.00527	0.00976	0.00528
Total Xylenes		0.336	0.00527	0.0608	0.00524	0.372	0.00527	0.0367	0.00528
Total BTEX		0.432	0.00527	0.0779	0.00524	0.489	0.00527	0.0521	0.00528
Percent Moisture	*Extracted:*								
	Analyzed:	Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00		Nov-22-11 11:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.15	1.00	5.03	1.00	5.28	1.00	5.79	1.00
TPH By SW8015 Mod	*Extracted:*	Nov-23-11 15:30		Nov-23-11 15:30		Nov-23-11 15:30		Nov-23-11 15:30	
	Analyzed:	Nov-26-11 02:28		Nov-26-11 02:58		Nov-26-11 03:30		Nov-26-11 04:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		109	15.7	41.5	15.8	94.7	15.8	25.7	15.9
C12-C28 Diesel Range Hydrocarbons		412	15.7	246	15.8	444	15.8	178	15.9
C28-C35 Oil Range Hydrocarbons		43.4	15.7	22.0	15.8	24.9	15.8	ND	15.9
Total TPH		564	15.7	310	15.8	564	15.8	204	15.9

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

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

+ Outside XENCO's scope of NELAC Accreditation. ^ NELAC or State program does not offer Accreditation at this time.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875684 **Sample:** 431845-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/24/11 23:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	38.0	50.0	76	70-135	

Lab Batch #: 875684 **Sample:** 431845-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 00:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-135	
o-Terphenyl	43.0	50.0	86	70-135	

Lab Batch #: 875684 **Sample:** 431845-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 00:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	99.6	94	70-135	
o-Terphenyl	40.8	49.8	82	70-135	

Lab Batch #: 875759 **Sample:** 431845-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 19:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0220	0.0300	73	80-120	**
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

Lab Batch #: 875759 **Sample:** 431845-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 20:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0165	0.0300	55	80-120	**
4-Bromofluorobenzene	0.0355	0.0300	118	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875678 **Sample:** 431845-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 00:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	100	84	70-135	
o-Terphenyl	39.7	50.1	79	70-135	

Lab Batch #: 875678 **Sample:** 431845-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 01:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.6	106	70-135	
o-Terphenyl	48.8	49.8	98	70-135	

Lab Batch #: 875678 **Sample:** 431845-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 01:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	45.2	49.9	91	70-135	

Lab Batch #: 875678 **Sample:** 431845-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 02:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	99.5	115	70-135	
o-Terphenyl	52.8	49.8	106	70-135	

Lab Batch #: 875678 **Sample:** 431845-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 02:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	52.7	50.1	105	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875678 **Sample:** 431845-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 03:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.7	108	70-135	
o-Terphenyl	50.3	49.9	101	70-135	

Lab Batch #: 875678 **Sample:** 431845-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 04:04

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	99.9	96	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 875882 **Sample:** 431845-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 13:51

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0224	0.0300	75	80-120	**

Lab Batch #: 875882 **Sample:** 431845-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 14:20

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0202	0.0300	67	80-120	**
4-Bromofluorobenzene	0.0144	0.0300	48	80-120	**

Lab Batch #: 875882 **Sample:** 431845-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 14:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0193	0.0300	64	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875882 **Sample:** 431845-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 15:05

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0194	0.0300	65	80-120	**
4-Bromofluorobenzene	0.0181	0.0300	60	80-120	**

Lab Batch #: 875882 **Sample:** 431845-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 15:28

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0209	0.0300	70	80-120	**
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

Lab Batch #: 875882 **Sample:** 431845-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 15:51

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0219	0.0300	73	80-120	**
4-Bromofluorobenzene	0.0174	0.0300	58	80-120	**

Lab Batch #: 875882 **Sample:** 431845-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 16:14

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0231	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

Lab Batch #: 875882 **Sample:** 431845-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/29/11 17:23

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0228	0.0300	76	80-120	**
4-Bromofluorobenzene	0.0340	0.0300	113	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875684 **Sample:** 614623-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/24/11 12:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 875759 **Sample:** 614664-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/25/11 10:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 875678 **Sample:** 614615-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/26/11 00:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

Lab Batch #: 875882 **Sample:** 614743-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/29/11 11:57

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0246	0.0300	82	80-120	

Lab Batch #: 875684 **Sample:** 614623-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/24/11 11:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	44.5	50.0	89	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875759 **Sample:** 614664-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/25/11 09:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0279	0.0300	93	80-120	

Lab Batch #: 875678 **Sample:** 614615-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/25/11 23:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 875882 **Sample:** 614743-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/29/11 10:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 875684 **Sample:** 614623-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/24/11 11:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 875759 **Sample:** 614664-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/25/11 09:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875678 **Sample:** 614615-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/25/11 23:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 875882 **Sample:** 614743-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 11/29/11 10:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 875684 **Sample:** 431842-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 01:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.9	109	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

Lab Batch #: 875759 **Sample:** 431840-010 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 15:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 875678 **Sample:** 431845-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 09:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	52.1	50.0	104	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.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Line #290 (East of Jal South)

Work Orders : 431845,

Project ID:

Lab Batch #: 875882 **Sample:** 432217-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/30/11 00:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 875684 **Sample:** 431842-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 01:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	51.6	49.9	103	70-135	

Lab Batch #: 875759 **Sample:** 431840-010 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/25/11 15:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 875678 **Sample:** 431845-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/26/11 10:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	99.9	123	70-135	
o-Terphenyl	51.0	50.0	102	70-135	

Lab Batch #: 875882 **Sample:** 432217-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 11/30/11 00:58

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY 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	0.0301	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.

BS / BSD Recoveries

Project Name: Line #290 (East of Jal South)

Work Order #: 431845 **Project ID:**

Analyst: ASA **Date Prepared:** 11/22/2011 **Date Analyzed:** 11/25/2011

Lab Batch ID: 875759 **Sample:** 614664-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.0971	97	0.100	0.105	105	8	70-130	35	
Toluene	<0.00200	0.100	0.0976	98	0.100	0.106	106	8	70-130	35	
Ethylbenzene	<0.00100	0.100	0.100	100	0.100	0.109	109	9	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.196	98	0.200	0.213	107	8	70-135	35	
o-Xylene	<0.00100	0.100	0.0993	99	0.100	0.108	108	8	71-133	35	

Analyst: ASA **Date Prepared:** 11/29/2011 **Date Analyzed:** 11/29/2011

Lab Batch ID: 875882 **Sample:** 614743-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	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	0.103	103	0.100	0.0998	100	3	70-130	35	
Toluene	<0.00200	0.100	0.106	106	0.100	0.103	103	3	70-130	35	
Ethylbenzene	<0.00100	0.100	0.111	111	0.100	0.108	108	3	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.221	111	0.200	0.215	108	3	70-135	35	
o-Xylene	<0.00100	0.100	0.112	112	0.100	0.107	107	5	71-133	35	

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

XENCO Laboratories

BS / BSD Recoveries

Project Name: Line #290 (East of Jal South)

Work Order #: 431845 **Project ID:**

Analyst: BRB **Date Prepared:** 11/23/2011 **Date Analyzed:** 11/23/2011

Lab Batch ID: 875577 **Sample:** 875577-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	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
Chloride	<0.840	20.0	20.7	104	20.0	20.5	103	1	75-125	20	

Analyst: ASA **Date Prepared:** 11/23/2011 **Date Analyzed:** 11/25/2011

Lab Batch ID: 875678 **Sample:** 614615-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	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	778	78	1000	770	77	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	844	84	1000	839	84	1	70-135	35	

Analyst: ASA **Date Prepared:** 11/23/2011 **Date Analyzed:** 11/24/2011

Lab Batch ID: 875684 **Sample:** 614623-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	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	752	75	1000	770	77	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	810	81	1000	858	86	6	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: Line #290 (East of Jal South)

Work Order #: 431845

Lab Batch #: 875577 **Project ID:**

Date Analyzed: 11/23/2011 **Date Prepared:** 11/23/2011 **Analyst:** BRB

QC- Sample ID: 431837-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	83.1	104	193	106	75-125	

Lab Batch #: 875577

Date Analyzed: 11/23/2011 **Date Prepared:** 11/23/2011 **Analyst:** BRB

QC- Sample ID: 431845-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	490	210	712	106	75-125	

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

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Line #290 (East of Jal South)

Work Order # : 431845 **Project ID:**

Lab Batch ID: 875759 **QC- Sample ID:** 431840-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/25/2011 **Date Prepared:** 11/22/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	0.0736	71	0.104	0.0801	77	8	70-130	35	
Toluene	<0.00208	0.104	0.0714	69	0.104	0.0781	75	9	70-130	35	X
Ethylbenzene	<0.00104	0.104	0.0693	67	0.104	0.0835	80	19	71-129	35	X
m_p-Xylenes	<0.00208	0.208	0.110	53	0.208	0.125	60	13	70-135	35	X
o-Xylene	<0.00104	0.104	0.0745	72	0.104	0.0813	78	9	71-133	35	

Lab Batch ID: 875882 **QC- Sample ID:** 432217-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/30/2011 **Date Prepared:** 11/29/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<0.00101	0.101	0.0725	72	0.102	0.0695	68	4	70-130	35	X
Toluene	<0.00203	0.101	0.0726	72	0.102	0.0686	67	6	70-130	35	X
Ethylbenzene	<0.00101	0.101	0.0747	74	0.102	0.0692	68	8	71-129	35	X
m_p-Xylenes	0.00511	0.203	0.162	77	0.204	0.150	71	8	70-135	35	
o-Xylene	0.00322	0.101	0.0848	81	0.102	0.0778	73	9	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative 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

Form 3 - MS / MSD Recoveries

Project Name: Line #290 (East of Jal South)

Work Order # : 431845 **Project ID:**

Lab Batch ID: 875678 **QC- Sample ID:** 431845-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/26/2011 **Date Prepared:** 11/23/2011 **Analyst:** ASA

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	30.9	1050	875	80	1050	852	78	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	182	1050	1170	94	1050	1120	89	4	70-135	35	

Lab Batch ID: 875684 **QC- Sample ID:** 431842-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 11/25/2011 **Date Prepared:** 11/23/2011 **Analyst:** ASA

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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	<18.7	1250	920	74	1240	979	79	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<18.7	1250	1070	86	1240	1150	93	7	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative 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: Line #290 (East of Jal South)

Work Order #: 431845

Lab Batch #: 875577 **Project ID:**

Date Analyzed: 11/23/2011 00:34 **Date Prepared:** 11/23/2011 **Analyst:** BRB

QC- Sample ID: 431845-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by E300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	490	487	1	20	

Lab Batch #: 875468

Date Analyzed: 11/22/2011 11:00 **Date Prepared:** 11/22/2011 **Analyst:** BRB

QC- Sample ID: 431842-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.83	8.03	3	20	

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: Ben J. Arguijo

Company Name: Basin Environmental Service Technologies, LLC

Company Address: P.O. Box 301

City/State/Zip: Lovington, NM 88260

Telephone No: (575)396-2378 Fax No: (575) 396-1429

Sampler Signature:

e-mail: bjarguijo@basinenv.com; Rose.Slade@SUG.com

Project Name: Line #290 (East of Jal South)

Project #:

Project Loc: Lea County, NM

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 431845

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, 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
																TCLP:											
																TOTAL:								X			
1	SB-1 @ 5'			11/15/2011	1000		1	X								SOIL	X							X	X		X
2	SB-1 @ 15'			11/15/2011	1010		1	X								SOIL	X							X	X		X
3	SB-1 @ 25'			11/15/2011	1020		1	X								SOIL	X							X	X		X
4	SB-1 @ 35'			11/15/2011	1030		1	X								SOIL	X							X			X
5	SB-1 @ 45'			11/15/2011	1040		1	X								SOIL	X							X	X		X
6	SB-1 @ 55'			11/15/2011	1050		1	X								SOIL	X							X			X
7	SB-1 @ 65'			11/15/2011	1100		1	X								SOIL	X							X	X		X
8	SB-1 @ 75'			11/15/2011	1110		1	X								SOIL	X							X	X		X
9	SB-1 @ 80'			11/15/2011	1115		1	X								SOIL	X							X	X		X
10	SB-1 @ 85'			11/15/2011	1120		1	X								SOIL	X							X	X		X

Special Instructions:

	Date	Time		Date	Time
Relinquished by:	11/18/11	0700	Received by: Shannon Brown	11/18/11	700
Relinquished by: Shannon Brown	11/18/11	11:25	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	11/18/11	11:25

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.5 °C

XENCO Laboratories

XENCO Laboratories
Atlanta, Boca Raton, Corpus Christi, Dallas
Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist	
Document No.: SYS-SRC	
Revision/Date: No. 01, 5/27/2010	
Effective Date: 6/1/2010	Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Southern Union Gas

Date/Time: 11-18-11 11:25

Lab ID #: 431845

Initials: TB

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	(Yes)	No	N/A	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	(Yes) **	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	15 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis