# Basin Environmental Service Technologies, LLC

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



## **REMEDIATION SUMMARY &**

## SITE CLOSURE REQUEST

### SOUTHERN UNION GAS SERVICES TRUNK "O" #1 HISTORICAL RELEASE SITE Lea County, New Mexico Unit Letter "L" (NW/SW), Section 22, Township 22 South, Range 36 East Latitude 32° 22.460' North, Longitude 103° 15.588' West NMOCD Reference # 1RP-1507

Prepared For:

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

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

### December 2012

Joel W. Lowry Project Manager

### **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
2.0	NMOCD SITE CLASSIFICATION	1
	SUMMARY OF SOIL REMEDIATION ACTIVITIES	
4.0	QA/QC PROCEDURES	3
	4.1 Soil Sampling	3
	4.2 Decontamination of Equipment	
	4.3 Laboratory Protocol	4
	SITE CLOSURE REQUEST	4
6.0	LIMITATIONS	5
7.0	DISTRIBUTION	6

### FIGURES

Figure 1 – Site Location Map Figure 2 – Site & Sample Location Map

### TABLES

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

### **APPENDICES**

Appendix A – Photographs

Appendix B – Laboratory Analytical Reports

Appendix C – Copies of Transporter's Manifest

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

### 1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this *Remediation Summary & Site Closure Request* for the Trunk "O" #1 Historical Release Site (1RP-1507). The legal description of the release site is Unit Letter "L" (NW/SW), Section 22, Township 22 South, Range 36 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 22.460' North latitude and 103° 15.588' West longitude. The property affected by the release is owned by Dasco Land and Cattle Company. Please reference Figure 1 for a "Site Location Map".

On July 21, 2007, Southern Union discovered a release had occurred on the Trunk "O" Pipeline. The "Release Notification and Corrective Action Form" (Form C-141) indicated failure of a section of thirty-inch (30") low-pressure pipeline resulted in the release of approximately sixty barrels (60 bbls) of crude oil and produced water mixture along with one thousand, two hundred fifteen (1,215) Mcf of natural gas. During initial response activities approximately forty barrels (40 bbls) of free standing fluid was recovered with a vacuum truck. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on discovery. The Form C-141, filed August 2, 2007, indicated the release affected approximately two thousand, four hundred square feet (2,400  $\text{ft}^2$ ) of pasture land and nine hundred square feet (900  $\text{ft}^2$ ) of caliche lease road. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix D.

Between July 26, and August 10, 2007, remediation activities were conducted at the Trunk "O" #1 Release Site by an environmental contractor that is no longer affiliated with the site. The nature and extent of the aforementioned activities remains unclear, as environmental reports and work records are not readily available. Transporter's manifests indicate at least two hundred fifty-two cubic yards (252 yd<sup>3</sup>) of impacted material was transported to Southern Union Gas Services' Landfarm (Discharge Permit # NM-02-0019) for treatment during this time. Copies of transport's manifests are provided as Appendix C.

On June 22, 2012, at the request of Southern Union, Basin assumed remediation responsibilities at the Trunk "O" #1 Historical Release Site.

### 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Unit Letter L, Section 22, Township 22 South, Range 36 East. A depth to groundwater reference map utilized by the NMOCD indicated groundwater should be encountered at approximately two hundred fifty feet (250') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

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

NMOCD guidelines indicate the Trunk "O" #1 Historical Release Site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene -10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) 5,000 mg/Kg (ppm)

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

### 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On October 30, 2012, Basin responded to the Trunk "O" #1 Historical Release Site. An initial investigation indicated previous remediation activities had been conducted at the release site. A series of six (6) test trenches were advanced within the historical release flowpath in an effort to determine if impacted soil containing BTEX, TPH, and chloride concentrations above NMOCD regulatory standards remained in-situ.

Test Trench #1 was advanced to approximately eight feet (8') bgs near the northwest margin of the historical release flowpath. During the advancement of the test trench, select soil sample were field-screened using a photo-ionization detector (PID) and chloride field test kit. Three (3) soil samples (TT-1 @ 3', TT-1 @ 6' and TT-1 @ 8') were collected and submitted to Xenco Laboratories, of Odessa, Texas, for determination of chloride concentrations in accordance with EPA Method 300.1. Laboratory analytical results indicated chloride concentrations ranged from 30.9 mg/Kg for soil sample TT-1 @ 8' to 343 mg/Kg for soil sample TT-1 @ 6'. Soil samples TT-1 @ 3' and TT-1 @ 8' were also analyzed for concentrations of TPH in accordance with EPA Method SW 846-8015M. Analytical results indicated TPH concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the submitted soil samples. Table 1 summarizes the "Concentrations of Benzene, BTEX, TPH & Chloride in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix B.

Test Trench #2 was advanced to approximately six feet (6') bgs approximately ten feet (10') northeast of the inferred release point, within the historical release flowpath. During the advancement of the test trench, two (2) soil samples (TT-2 @ 3' and TT-2 @ 6') were collected and submitted to the laboratory for analysis of chloride and TPH concentrations. Laboratory analytical results indicated chloride concentrations ranged from 10.4 mg/Kg for soil sample TT-2 @ 3' to 33.9 mg/Kg in soil sample TT-2 @ 6'. Analytical reports indicated TPH concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted.

Test Trench #3 was advanced to approximately eight feet (8') begs near the inferred center of the historical release pooling area. During the advancement of the test trench, three (3) soil samples

(TT-3 @ 3, TT-3 @ 6', and TT-3 @ 8') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from 181 mg/Kg for soil sample TT-3 @ 8' to 309 mg/Kg in soil sample TT-3 @ 3'. Soil samples TT-3 @ 3' and TT-3 @ 8' were also analyzed for concentrations of TPH. Analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted.

Test Trench #4 was advanced to approximately eight feet (8') bgs adjacent to the inferred release point, west of the Trunk "O" Pipeline. During the advancement of the test trench, three (3) soil samples (TT-4 @ 3', TT-4 @ 6' and TT-4 @ 8') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from 65.7 mg/Kg for soil sample TT-4 @ 3' to 219 mg/Kg for soil sample TT-4 @ 6'. Soil samples TT-4 @ 3' and TT-4 @ 8' were also analyzed for concentrations of TPH. Analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted. Soil sample TT-4 @ 8' was also analyzed for BTEX constituent concentrations in accordance with EPA Method SW 846-821B. Analytical results indicated the BTEX concentration was less than the appropriate laboratory MDL for each constituent.

Test Trench #5 was advanced to approximately thirteen and one-half feet (13.5') bgs near the inferred center of the historical release flowpath. During the advancement of the test trench, three (3) soil samples (TT-5 @ 3', TT-5 @ 8' and TT-5 @ 13.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from 242 mg/Kg for soil sample TT-5 @ 15.5' to 535 mg/Kg in soil sample TT-5 @ 8'. Soil samples TT-5 @ 3' and TT-5 @ 15.5' were also analyzed for concentrations of TPH. Analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted. Soil sample TT-5 @ 13.5' was also analyzed for BTEX constituent concentrations. Analytical results indicated the BTEX concentration was less than the appropriate laboratory MDL for each constituent.

Test Trench #6 was advanced to approximately six feet (6') bgs near the inferred southern terminus of the historical release flowpath. During the advancement of the test trench, two (2) soil samples (TT-6 @ 3' and TT-6 @ 6') were collected and submitted to the laboratory for chloride and TPH analysis. Laboratory analytical results indicated chloride concentrations ranged from 15.6 mg/Kg for soil sample TT-6 @ 6' to 322 mg/Kg in soil sample TT-6 @ 3'. Analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted.

### 4.0 QA/QC PROCEDURES

### 4.1 Soil Sampling

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

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

### 4.2 Decontamination of Equipment

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

### 4.3 Laboratory Protocol

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

### 5.0 SITE CLOSURE REQUEST

Confirmation soil samples collected from the six (6) on-site test trenches suggested previous remediation activities at the Trunk "O" #1 Release Site met the requirements of the NMOCD's "Guidelines for Remediation of Leaks, Spills and Releases". Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels in each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Trunk "O" #1Historical Release Site.

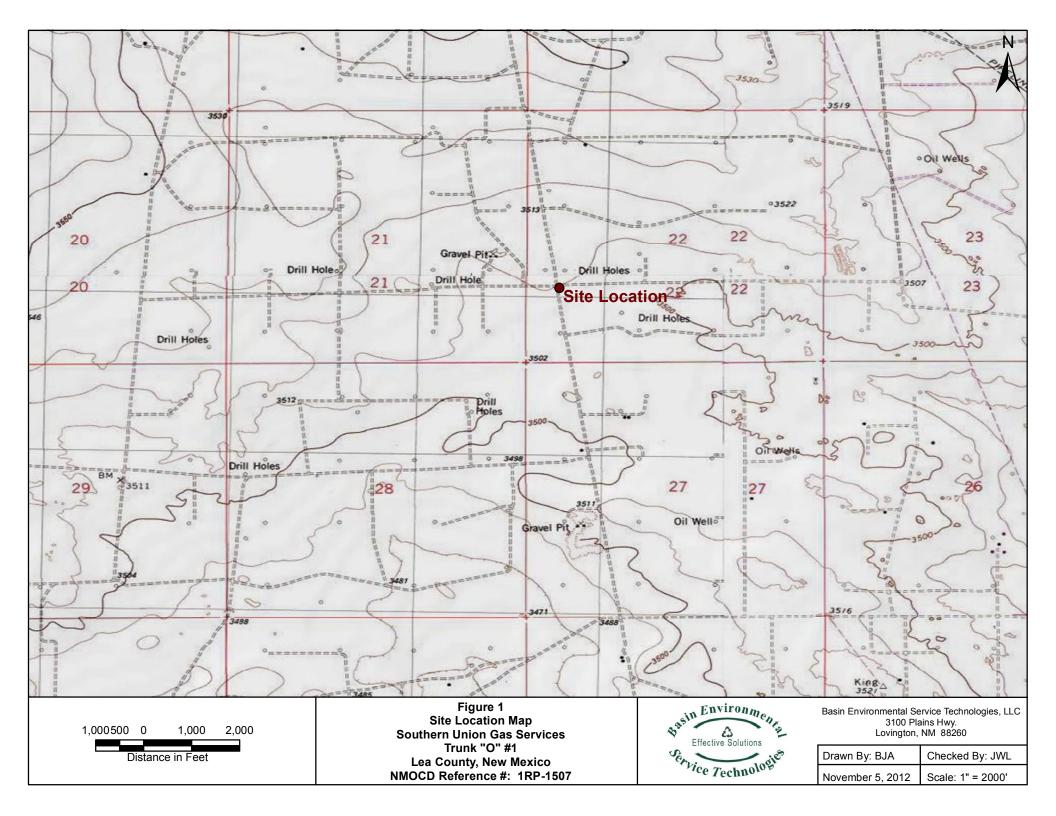
### 6.0 LIMITATIONS

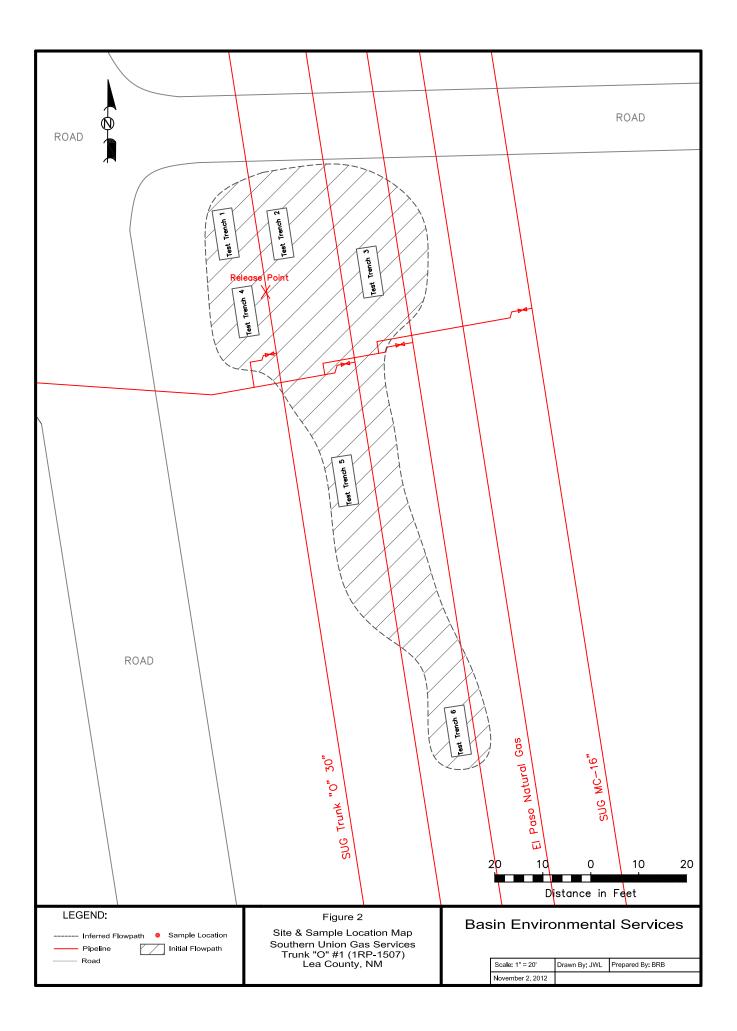
Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by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

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

### 7.0 **DISTRIBUTION**

- Copy 1: Geoffrey Leking New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, NM 88240 GeoffreyR.Leking@state.nm.us
- Copy 2: Rose Slade Southern Union Gas Services 801 S. Loop 464 Monahans, Texas 79756 rose.slade@sug.com
- Copy 3: Basin Environmental Service Technologies, LLC P.O. Box 301 Lovington, New Mexico 88260





#### TABLE 1

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

#### SOUTHERN UNION GAS SERVICES TRUNK "O" #1 HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD REFERENCE NO: 1RP-1507

					Μ	ETHOD: EPA	SW 846-802	1B, 5030			ME	THOD: 801	5M	TOTAL	E 300
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	M.P XYLENES (mg/Kg)	O- XYLENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	CHLORIDE (mg/Kg)
TT-1 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-		-	<16.8	<16.8	<16.8	<16.8	204
TT-1 @ 6'	6'	10/30/2012	In-Situ	-	-	-	-	-	-	-	-	-	-	-	343
TT-1 @ 8'	8'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<19.2	<19.2	<19.2	<19.2	30.9
TT-2 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<17.7	<17.7	<17.7	<17.7	10.4
TT-2 @ 6'	6'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<16.9	<16.9	<16.9	<16.9	33.9
TT-3 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<17.7	<17.7	<17.7	<17.7	309
TT-3 @ 6'	6'	10/30/2012	In-Situ	-	-	-	-	-	-	-	-	-	-	-	191
TT-3 @ 8'	8'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<16.0	<16.0	<16.0	<16.0	181
TT-4 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<20.0	<20.0	<20.0	<20.0	65.7
TT-4 @ 6'	6'	10/30/2012	In-Situ	-	-	-	-	-	-	-	-	-	-	-	219
TT-4 @ 8'	8'	10/30/2012	In-Situ	<0.00106	<0.00212	<0.00106	< 0.00212	< 0.00106	< 0.00106	<0.00212	<15.8	<15.8	<15.8	<15.8	142
TT-5 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<16.5	<16.5	<16.5	<16.5	294
TT-5 @ 8'	8'	10/30/2012	In-Situ	-	-	-	-	-	-	-	-	-	-	-	535
TT-5 @ 13.5'	13.5'	10/30/2012	In-Situ	<0.00110	<0.00219	<0.00110	<0.00219	<0.00110	<0.00219	<0.00219	<16.5	<16.5	<16.5	<16.5	242
TT-6 @ 3'	3'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<16.5	<16.5	<16.5	<16.5	322
TT-6 @ 6'	6'	10/30/2012	In-Situ	-	-	-	-	-	-	-	<19.3	<19.3	<19.3	<19.3	15.6
MOCD Regulatory Standa	rd			10				50						5,000	1,000

- = Not analyzed.



Photograph of the initial release at the Trunk "O" #1 Historical Release Site.



Photograph of the initial release at the Trunk "O" #1 Historical Release Site.



Photograph of the disturbed area Trunk "O" #1 Historical Release Site.



Photograph of the disturbed area Trunk "O" #1 Historical Release Site.



Photograph of delineation activities at the Trunk "O" #1 Historical Release Site.



Photograph of delineation activities at the Trunk "O" #1 Historical Release Site.

# Analytical Report 451912

for

Southern Union Gas Services- Monahans

**Project Manager: Joel Lowry** 

Trunk ''O'' #1

(RP-1507)

15-NOV-12

Collected By: Client





### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

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

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



15-NOV-12



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

Reference: XENCO Report No: **451912 Trunk ''O'' #1** 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 451912. 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. 451912 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully

Nicholas Straccione Project Manager

> Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



## Sample Cross Reference 451912



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

Trunk "O" #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @ 3'	S	10-30-12 09:45	- 3 ft	451912-001
TT-1 @ 6'	S	10-30-12 09:50	- 6 ft	451912-002
TT-1 @ 8'	S	10-30-12 09:55	- 8 ft	451912-003
TT-2 @ 3'	S	10-30-12 10:05	- 3 ft	451912-004
TT-2 @ 6'	S	10-30-12 10:10	- 6 ft	451912-005
TT-3 @ 3'	S	10-30-12 10:25	- 3 ft	451912-006
TT-3 @ 6'	S	10-30-12 10:30	- 6 ft	451912-007
TT-3 @ 8'	S	10-30-12 10:35	- 8 ft	451912-008
TT-4 @ 3'	S	10-30-12 10:50	- 3 ft	451912-009
TT-4 @ 6'	S	10-30-12 10:55	- 6 ft	451912-010
TT-4 @ 8'	S	10-30-12 11:00	- 8 ft	451912-011
TT-5 @ 3'	S	10-30-12 11:20	- 3 ft	451912-012
TT-5 @ 8'	S	10-30-12 11:40	- 8 ft	451912-013
TT-5 @ 13.5'	S	10-30-12 12:10	- 13.5 ft	451912-014
TT-6 @ 3'	S	10-30-12 13:40	- 3 ft	451912-015
TT-6 @ 6'	S	10-30-12 13:50	- 6 ft	451912-016





Client Name: Southern Union Gas Services- Monahans Project Name: Trunk ''O'' #1



Project ID: (RP-1507) Work Order Number: 451912 *Report Date:* 15-NOV-12 *Date Received:* 11/05/2012

## Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



## Certificate of Analysis Summary 451912

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #1



Date Received in Lab: Mon Nov-05-12 10:04 am

Report Date: 15-NOV-12

Project Id: (RP-1507) Contact: Joel Lowry Project Location: Lea County,NM

roject Location: Lea County,NM								-					
								Project Mar	nager:	Nicholas Strac	ccione		
	Lab Id:	451912-0	01	451912-0	02	451912-0	03	451912-0	004	451912-0	05	451912-0	06
Analysis Page estad	Field Id:	TT-1 @	3'	TT-1 @	6'	TT-1 @	8'	TT-2 @	3'	TT-2 @	6'	TT-3 @	3'
Analysis Requested	Depth:	3 ft		6 ft		8 ft		3 ft		6 ft		3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-30-12 0	9:45	Oct-30-12 0	9:50	Oct-30-12 0	9:55	Oct-30-12 1	0:05	Oct-30-12 1	0:10	Oct-30-12 1	0:25
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-10-12	21:28	Nov-10-12 2	21:45	Nov-10-12 2	22:33	Nov-10-12	22:49	Nov-10-12	23:05	Nov-10-12 2	23:21
SUB: TX104704215	Analyzed:	Nov-10-12	21:28	Nov-10-12 2	21:45	Nov-10-12 2	22:33	Nov-10-12	22:49	Nov-10-12	23:05	Nov-10-12 2	23:21
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		204	1.12	343	1.08	30.9	1.28	10.4	1.19	33.9	1.13	309	1.18
Percent Moisture	Extracted:												
	Analyzed:	Nov-09-12	12:30	Nov-09-12 1	2:30	Nov-09-12	12:30	Nov-09-12	12:30	Nov-09-12	12:30	Nov-09-12 1	2:35
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		9.52	1.00	6.18	1.00	21.0	1.00	16.6	1.00	10.7	1.00	14.9	1.00
TPH By SW8015 Mod	Extracted:	Nov-12-12	07:45			Nov-12-12 (	07:45	Nov-12-12	07:45	Nov-12-12	07:45	Nov-12-12 1	2:00
	Analyzed:	Nov-12-12	19:24			Nov-12-12	19:54	Nov-12-12	20:24	Nov-12-12	20:53	Nov-13-12 (	01:07
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	16.8			ND	19.2	ND	17.7	ND	16.9	ND	17.7
C12-C28 Diesel Range Hydrocarbons		ND	16.8			ND	19.2	ND	17.7	ND	16.9	ND	17.7
C28-C35 Oil Range Hydrocarbons		ND	16.8			ND	19.2	ND	17.7	ND	16.9	ND	17.7
Total TPH		ND	16.8			ND	19.2	ND	17.7	ND	16.9	ND	17.7

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

Ch Nul

Nicholas Straccione Project Manager



## Certificate of Analysis Summary 451912

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #1



Date Received in Lab: Mon Nov-05-12 10:04 am

Report Date: 15-NOV-12

Project Id: (RP-1507) Contact: Joel Lowry Project Location: Lea County,NM

								Project Mai	nager:	Nicholas Strac	cione		
	Lab Id:	451912-0	07	451912-0	08	451912-0	09	451912-0	10	451912-0	11	451912-0	12
Analusia Degraded	Field Id:	TT-3 @	6'	TT-3 @ 8	8'	TT-4 @ 3	3'	TT-4 @	6'	TT-4 @	8'	TT-5 @ 3	3'
Analysis Requested	Depth:	6 ft		8 ft		3 ft		6 ft		8 ft		3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-30-12	0:30	Oct-30-12 1	0:35	Oct-30-12 1	0:50	Oct-30-12 1	0:55	Oct-30-12 1	1:00	Oct-30-12 1	1:20
BTEX by EPA 8021B	Extracted:									Nov-15-12 (	)8:15		
	Analyzed:									Nov-15-12 (	)9:49		
	Units/RL:									mg/kg	RL		
Benzene										ND	0.00106		
Toluene										ND	0.00212		
Ethylbenzene										ND	0.00106		
m_p-Xylenes										ND	0.00212		
o-Xylene										ND	0.00106		
Total Xylenes										ND	0.00106		
Total BTEX										ND	0.00106		
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-10-12	23:37	Nov-10-12 2	23:53	Nov-11-12 0	00:09	Nov-11-12	00:26	Nov-11-12 (	00:42	Nov-11-12 (	00:58
SUB: TX104704215	Analyzed:	Nov-10-12	23:37	Nov-10-12 2	3:53	Nov-11-12 0	00:09	Nov-11-12	00:26	Nov-11-12 (	00:42	Nov-11-12 (	00:58
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		191	1.05	181	1.07	65.7	1.34	219	1.12	142	1.06	294	1.10
Percent Moisture	Extracted:												
	Analyzed:	Nov-09-12	12:35	Nov-09-12 1	2:35	Nov-09-12 1	2:35	Nov-09-12	12:35	Nov-09-12	12:35	Nov-09-12 1	12:35
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.55	1.00	5.71	1.00	25.5	1.00	9.84	1.00	5.09	1.00	9.01	1.00
TPH By SW8015 Mod	Extracted:			Nov-12-12 1	2:00	Nov-12-12 1	2:00			Nov-12-12	12:00	Nov-12-12 1	12:00
	Analyzed:			Nov-13-120	02:30	Nov-13-12 0	02:57			Nov-13-12 (	03:24	Nov-13-12 (	03:51
	Units/RL:			mg/kg	RL	mg/kg	RL			mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons	'			ND	16.0	ND	20.0			ND	15.8	ND	16.5
C12-C28 Diesel Range Hydrocarbons				ND	16.0	ND	20.0			ND	15.8	ND	16.5
C28-C35 Oil Range Hydrocarbons				ND	16.0	ND	20.0			ND	15.8	ND	16.5
Total TPH				ND	16.0	ND	20.0			ND	15.8	ND	16.5

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.

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Nicholas Straccione Project Manager

Page 6 of 22



Project Id: (RP-1507)

Contact: Joel Lowry

## Certificate of Analysis Summary 451912

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #1



Date Received in Lab: Mon Nov-05-12 10:04 am

**Report Date:** 15-NOV-12

oject Location: Lea County,NM								Report	Date:	15-NOV-12	
								Project Mar	nager:	Nicholas Straccione	
	Lab Id:	451912-0	013	451912-0	14	451912-0	15	451912-0	16		
Amaluaia Dogwootod	Field Id:	TT-5 @	8'	TT-5 @ 13	3.5'	TT-6 @ 3	3'	TT-6 @ (	6'		
Analysis Requested	Depth:	8 ft		13.5 ft		3 ft		6 ft			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Oct-30-12	11:40	Oct-30-12 1	2:10	Oct-30-12 1	3:40	Oct-30-12 1	3:50		
BTEX by EPA 8021B	Extracted:			Nov-15-12 (	08:15						
	Analyzed:			Nov-15-12 1	10:05						
	Units/RL:			mg/kg	RL						
Benzene	1			ND	0.00110						
Toluene				ND	0.00219						
Ethylbenzene				ND	0.00110						
m_p-Xylenes				ND	0.00219						
o-Xylene					0.00110						
Total Xylenes					0.00110						
Total BTEX				ND	0.00110						
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-11-12	01:46	Nov-11-12 (	02:02	Nov-11-12 0	02:18	Nov-11-12 (	02:34		
SUB: TX104704215	Analyzed:	Nov-11-12	01:46	Nov-11-12 (	02:02	Nov-11-12 0	02:18	Nov-11-12 (	02:34		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		535	1.11	242	1.10	322	1.10	15.6	1.29		
Percent Moisture	Extracted:										
	Analyzed:	Nov-09-12	12:35	Nov-09-12 1	12:35	Nov-09-12 1	12:35	Nov-09-12 1	2:35		
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture	·	9.32	1.00	8.92	1.00	7.38	1.00	21.2	1.00		
TPH By SW8015 Mod	Extracted:			Nov-12-12 1	12:00	Nov-12-12 1	12:00	Nov-12-12 1	2:00		
	Analyzed:			Nov-13-12 (	04:19	Nov-13-12 1	11:39	Nov-13-12 (	)5:13		
	Units/RL:			mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons				ND	16.5	ND	16.5	ND	19.3		
C12-C28 Diesel Range Hydrocarbons				ND	16.5	ND	16.5	ND	19.3		
C28-C35 Oil Range Hydrocarbons				ND	16.5	ND	16.5	ND	19.3		
Total TPH				ND	16.5	ND	16.5	ND	19.3		

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.

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Nicholas Straccione Project Manager

Page 7 of 22



## **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
- **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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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Final 1.001



Project Name: Trunk "O" #1

7 <b>ork Orders :</b> 451912 Lab Batch #: 900705	2, Sample: 451912-001 / SMP	Bate		<b>D:</b> (RP-1507)	1	
Units: mg/kg	Date Analyzed: 11/12/12 19:24		RROGATE R		STUDY	
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
1-Chlorooctane		86.9	100	87	70-135	
o-Terphenyl		43.6	50.0	87	70-135	
Lab Batch #: 900705	Sample: 451912-003 / SMP		h: <sup>1</sup> Matrix		~~~~~	
Units: mg/kg	Date Analyzed: 11/12/12 19:54	st	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Anaryus	87.5	100	88	70-135	
o-Terphenyl		44.3	50.0	89	70-135	
Lab Batch #: 900705	Sample: 451912-004 / SMP					
	Ť F	Bate SI	RROGATE R		STUDY	
Units: mg/kg	Date Analyzed: 11/12/12 20:24				1	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Anaryus	88.0	99.5	88	70-135	
o-Terphenyl		44.8	49.8	90	70-135	
	S1 451012.005 / SMD				10 155	
Lab Batch #: 900705	Sample: 451912-005 / SMP	Bate SI	h: 1 Matrix		STUDY	
Units: mg/kg	Date Analyzed: 11/12/12 20:53		1		1	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		87.4	99.8	88	70-135	
o-Terphenyl		44.4	49.9	89	70-135	
Lab Batch #: 900743	Sample: 451912-006 / SMP	Bato	ch: 1 Matrix	Soil		
Units: mg/kg	Date Analyzed: 11/13/12 01:07	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
4.011	Analytes			[D]		
1-Chlorooctane		89.8	99.7	90	70-135	
o-Terphenyl		45.7	49.9	92	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #1

York Orders : 451912 Lab Batch #: 900743	2, Sample: 451912-008 / SMP	Bate		<b>D:</b> (RP-1507) • Soil	)	
Units: mg/kg	Date Analyzed: 11/13/12 02:30		JRROGATE R		STUDY	
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		89.8	99.8	90	70-135	
o-Terphenyl		45.4	49.9	91	70-135	
Lab Batch #: 900743	Sample: 451912-009 / SMP		ch: 1 Matrix			
Units: mg/kg	Date Analyzed: 11/13/12 02:57	SU	JRROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Anarytes	89.4	99.6	90	70-135	
o-Terphenyl		45.0	49.8	90	70-135	
Lab Batch #: 900743	Sample: 451912-011 / SMP	Bate	h: <sup>1</sup> Matrix	soil		
Units: mg/kg	Date Analyzed: 11/13/12 03:24		JRROGATE R		STUDY	
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
	Analytes			[D]		
1-Chlorooctane		89.1	99.6	89	70-135	
o-Terphenyl		44.4	49.8	89	70-135	
Lab Batch #: 900743	Sample: 451912-012 / SMP	Bate	ch: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/13/12 03:51	SU	JRROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		89.0	99.7	89	70-135	
o-Terphenyl		45.2	49.9	91	70-135	
Lab Batch #: 900743	Sample: 451912-014 / SMP	Bate	ch: 1 Matrix	Soil		
Units: mg/kg	Date Analyzed: 11/13/12 04:19	SU	<b>RROGATE R</b>	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.011	Analytes					
1-Chlorooctane		87.3	99.6	88	70-135	
o-Terphenyl		44.5	49.8	89	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #1

7 <b>ork Orders :</b> 451912 Lab Batch #: 900743	2, Sample: 451912-016 / SMP	Bate		<b>D:</b> (RP-1507) a: Soil		
Units: mg/kg	Date Analyzed: 11/13/12 05:13		RROGATE R		STUDY	
TPH ]	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		89.4	99.6	90	70-135	
o-Terphenyl		45.0	49.8	90	70-135	
Lab Batch #: 900743	Sample: 451912-015 / SMP	Batc	h: <sup>1</sup> Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/13/12 11:39	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		89.7	100	90	70-135	
o-Terphenyl		44.9	50.0	90	70-135	
Lab Batch #: 900976	Sample: 451912-011 / SMP	Batc	h: <sup>1</sup> Matrix	:Soil	1	
Units: mg/kg	Date Analyzed: 11/15/12 09:49	SU	RROGATE R	ECOVERY	STUDY	
BTEZ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
	Analytes			[D]		
1,4-Difluorobenzene		0.0251	0.0300	84	80-120	
4-Bromofluorobenzene		0.0243	0.0300	81	80-120	
Lab Batch #: 900976	Sample: 451912-014 / SMP	Bate	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/15/12 10:05	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0244	0.0300	81	80-120	
4-Bromofluorobenzene		0.0247	0.0300	82	80-120	
Lab Batch #: 900705	Sample: 629844-1-BLK / BL	K Bate	h: 1 Matrix	:Solid		
Units: mg/kg	Date Analyzed: 11/12/12 10:31	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	· · · · · · · · · · · · · · · · · · ·	83.0	100	83	70-135	
· · · · · · · · ·		00.0				

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #1

Lab Batch #: 900743	Sample: 629866-1-BLK / Bl		-			
Units: mg/kg	Date Analyzed: 11/13/12 00:40	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		88.6	99.9	89	70-135	
o-Terphenyl		44.7	50.0	89	70-135	
Lab Batch #: 900976	Sample: 630013-1-BLK / Bl		-			
Units: mg/kg	<b>Date Analyzed:</b> 11/15/12 09:33	SU	RROGATE R	ECOVERY	STUDY	
BTEZ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1.4-Difluorobenzene		0.0258	0.0300	86	80-120	
4-Bromofluorobenzene		0.0242	0.0300	81	80-120	
Lab Batch #: 900705	Sample: 629844-1-BKS / Bl	KS Batc	h: <sup>1</sup> Matrix	r• Solid	1	
Units: mg/kg	Date Analyzed: 11/12/12 09:31		RROGATE R		STUDY	
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
	Analytes			[D]		
1-Chlorooctane		100	99.9	100	70-135	
o-Terphenyl		54.9	50.0	110	70-135	
Lab Batch #: 900743	Sample: 629866-1-BKS / BI	KS Bate	h: 1 Matrix	:Solid		
Units: mg/kg	Date Analyzed: 11/12/12 23:44	SU	RROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooctane		90.9	99.8	91	70-135	
o-Terphenyl		51.4	49.9	103	70-135	
Lab Batch #: 900976	Sample: 630013-1-BKS / BI	KS Batc	h: 1 Matrix	c:Solid		
Units: mg/kg	Date Analyzed: 11/15/12 09:01	SU	RROGATE R	ECOVERY	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
	Analytes		1	1		
1.4-Difluorobenzene	-	0.0298	0.0300	99	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #1

<b>'ork Orders :</b> 451912 Lab Batch #: <sup>900705</sup>	2, <b>Sample:</b> 629844-1-BSD / B	SD Bate		<b>D:</b> (RP-1507) ::Solid		
Units: mg/kg	Date Analyzed: 11/12/12 10:00	SU	<b>RROGATE R</b>	ECOVERYS	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		97.3	99.9	97	70-135	
o-Terphenyl		52.5	50.0	105	70-135	
Lab Batch #: 900743	Sample: 629866-1-BSD / B					
Units: mg/kg	Date Analyzed: 11/13/12 00:12	SU	<b>JRROGATE R</b>	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane		93.3	100	93	70-135	
o-Terphenyl		51.5	50.1	103	70-135	
Lab Batch #: 900976	Sample: 630013-1-BSD / B	SD Bate	h: <sup>1</sup> Matrix	: Solid	1 1	
Units: mg/kg	Date Analyzed: 11/15/12 09:17		JRROGATE R		STUDY	
BTEZ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
	Analytes			[D]		
1,4-Difluorobenzene		0.0332	0.0300	111	80-120	
4-Bromofluorobenzene		0.0315	0.0300	105	80-120	
Lab Batch #: 900705	Sample: 451911-003 S / MS	S Bate	ch: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/12/12 21:21	SU	JRROGATE R	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooctane		90.9	100	91	70-135	
o-Terphenyl		51.6	50.1	103	70-135	
Lab Batch #: 900743	Sample: 451912-006 S / MS	S Bato	ch: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/13/12 01:35	SU	JRROGATE R	ECOVERY	STUDY	
TPH ]	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	· • • • • • • • • • • • • • • • • • • •	93.9	100	94	70-135	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #1

<b>Vork Orders :</b> 451912		9		<b>D:</b> (RP-1507)	)	
Lab Batch #: 900976	Sample: 451912-011 S / M		-			
Units: mg/kg	Date Analyzed: 11/15/12 12:34	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1.4-Difluorobenzene	1 mary 0.5	0.0318	0.0300	106	80-120	
4-Bromofluorobenzene		0.0316	0.0300	112	80-120	
Lab Batch #: 900705	Sample: 451911-003 SD / 1	MSD Batc	h: <sup>1</sup> Matrix	: Soil	I	
<b>Units:</b> mg/kg	Date Analyzed: 11/12/12 21:50		RROGATE R		STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		89.7	100	90	70-135	
o-Terphenyl		50.7	50.1	101	70-135	
Lab Batch #: 900743	Sample: 451912-006 SD / 1	MSD Bate	h: <sup>1</sup> Matrix	:Soil		
Units: mg/kg	Date Analyzed: 11/13/12 02:02	SU	RROGATE R	ECOVERY S	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
	Analytes			[D]		
1-Chlorooctane		93.2	100	93	70-135	
o-Terphenyl		52.3	50.1	104	70-135	
Lab Batch #: 900976	Sample: 451912-011 SD / I	MSD Bate	h: 1 Matrix	<b>:</b> Soil		
Units: mg/kg	Date Analyzed: 11/15/12 12:51	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0311	0.0300	104	80-120	
4-Bromofluorobenzene		0.0333	0.0300	111	80-120	

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution





## Project Name: Trunk "O" #1

Work Order #: 451912							Pro	ject ID: (	RP-1507)		
Analyst: KEB	Da	ate Prepar	ed: 11/15/201	2			Date A	nalyzed: 1	1/15/2012		
Lab Batch ID: 900976 Sample: 630013-1-E	SKS	Batch	n#: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	JCATE 1	RECOVE	ERY STUD	Y	
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	0.105	105	0.100	0.106	106	1	70-130	35	
Toluene	< 0.00200	0.100	0.110	110	0.100	0.113	113	3	70-130	35	
Ethylbenzene	<0.00100	0.100	0.106	106	0.100	0.110	110	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.224	112	0.200	0.234	117	4	70-135	35	
o-Xylene	<0.00100	0.100	0.108	108	0.100	0.114	114	5	71-133	35	
Analyst: TTE	Da	ate Prepar	ed: 11/10/201	2			Date A	nalyzed: 1	1/10/2012		
Lab Batch ID: 900611 Sample: 629781-1-E	SKS	Batch	n#: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	JCATE 1	RECOVE	ERY STUD	Y	
Inorganic Anions by EPA 300/300.1 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	<1.00	100	105	105	100	104	104	1	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: Trunk "O" #1

Work Order #: 451912								Pro	ject ID: (	RP-1507)		
Analyst: KEB		Da	ate Prepar	ed: 11/12/201	2			Date A	nalyzed: 1	1/12/2012		
Lab Batch ID: 900705 Sa	mple: 629844-1-BKS		Batcl	h#: 1					Matrix: S	Solid		
Units: mg/kg			BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE	RECOVI	ERY STUD	Y	
TPH By SW8015 M Analytes	Samp	Blank ple 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	999	948	95	999	915	92	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<	<15.0	999	946	95	999	912	91	4	70-135	35	
Analyst: KEB		Da	ate Prepar	ed: 11/12/201	2			Date A	nalyzed: 1	1/12/2012		
Lab Batch ID: 900743 Sa	mple: 629866-1-BKS		Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg			BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE	RECOVI	ERY STUD	Y	
TPH By SW8015 M Analytes	Samp	Blank ple 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												
C6-C12 Gasoline Range Hydrocarbons	<	<15.0	998	1000	100	1000	1000	100	0	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: Trunk "O" #1



Work Order #: 451912 Lab Batch #: 900611				Pro	oject ID:	(RP-1507)	
<b>Date Analyzed:</b> 11/10/2012	Date F	repared: 11/1	0/2012	A	nalyst: T	TE	
QC- Sample ID: 451783-001 S		<b>Batch #:</b> 1		I	Matrix: S	oil	
Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300		Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]				
Chloride		<1.04	104	110	106	80-120	
Lab Batch #: 900611							
<b>Date Analyzed:</b> 11/11/2012	Date F	repared: 11/1	1/2012	А	nalyst: T	TE	
QC- Sample ID: 451912-016 S		Batch #: 1		I	Matrix: S	oil	
Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300		Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes		[A]	[ <b>B</b> ]				
Chloride		15.6	129	148	103	80-120	

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

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries

### Project Name: Trunk "O" #1



<b>Work Order #:</b> 451912						Project II	<b>D:</b> (RP-15	07)			
Lab Batch ID: 900976	QC- Sample ID:	451912	-011 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
<b>Date Analyzed:</b> 11/15/2012	Date Prepared:	11/15/2	012	An	alyst:	KEB					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00105	0.105	0.105	100	0.106	0.100	94	5	70-130	35	
Toluene	<0.00100	0.105	0.108	103	0.106	0.109	103	1	70-130	35	
Ethylbenzene	<0.00105	0.105	0.105	100	0.106	0.101	95	4	71-129	35	
m_p-Xylenes	<0.00210	0.210	0.225	107	0.212	0.216	102	4	70-135	35	
o-Xylene	<0.00105	0.105	0.112	107	0.106	0.106	100	6	71-133	35	
Lab Batch ID: 900705 Date Analyzed: 11/12/2012	QC- Sample ID: Date Prepared:				itch #: alyst:	1 Matrix KEB	<b>x:</b> Soil				
Departing Uniter malles									~ ~ ~ ~ ~ ~		
Reporting Units: mg/kg		Ν	1		RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY	1	1
Reporting Units: mg/kg TPH By SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits %RPD	Flag
	Sample		Spiked Sample	Spiked		Duplicate	Spiked		Control		Flag
TPH By SW8015 Mod	Sample Result	Spike Added	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample	Spiked Dup. %R	RPD	Control Limits	Limits	Flag
TPH By SW8015 Mod Analytes	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	Limits %RPD	Flag
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons	Sample Result [A] <16.3	<b>Spike</b> Added [B] 1090 1090	Spiked Sample Result [C] 1070 1080	Spiked Sample %R [D] 98 99	Spike Added [E] 1090	Duplicate Spiked Sample Result [F] 1060 1070	Spiked Dup. %R [G] 97	<b>RPD</b> %	Control Limits %R 70-135	Limits %RPD 35	Flag
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons	Sample Result [A]           <16.3	Spike Added [B] 1090 1090 451912	Spiked Sample Result [C] 1070 1080 -006 S	Spiked Sample %R [D] 98 99 Ba	Spike Added [E] 1090 1090 tch #:	Duplicate Spiked Sample Result [F] 1060 1070	<b>Spiked</b> <b>Dup.</b> %R [G] 97 98	<b>RPD</b> %	Control Limits %R 70-135	Limits %RPD 35	Flag
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Lab Batch ID: 900743	Sample Result [A]           <16.3	Spike Added [B] 1090 1090 451912 11/12/2	Spiked Sample Result [C] 1070 1080 -006 S 012	Spiked Sample %R [D] 98 99 Ba An	Spike Added [E] 1090 1090 ttch #: alyst:	Duplicate Spiked Sample Result [F] 1060 1070 1 Matri:	Spiked Dup.           %R           [G]           97           98           x:         Soil	<b>RPD</b> %	Control Limits %R 70-135 70-135	Limits %RPD 35	Flag
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Lab Batch ID: 900743 Date Analyzed: 11/13/2012	Sample Result [A]           <16.3	Spike Added [B] 1090 1090 451912 11/12/2 N Spike	Spiked Sample Result [C] 1070 1080 -006 S 012 IATRIX SPIK Spiked Sample Result	Spiked Sample %R [D] 98 99 Ba An E / MAT Spiked Sample	Spike Added [E] 1090 1090 ttch #: alyst: RIX SPI Spike	Duplicate Spiked Sample Result [F] 1060 1070 1 Matrix KEB KE DUPLICA Duplicate Spiked Sample	Spiked Dup. %R [G] 97 98 x: Soil TE REC Spiked Dup.	<b>RPD</b> %	Control Limits %R 70-135 70-135	Limits %RPD 35 35 Control Limits	
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Lab Batch ID: 900743 Date Analyzed: 11/13/2012 Reporting Units: mg/kg	Sample Result [A] <16.3 <16.3 QC- Sample ID: Date Prepared: Parent Sample	Spike Added [B] 1090 1090 451912 11/12/2 N	Spiked Sample Result [C] 1070 1080 -006 S 012 IATRIX SPIK Spiked Sample	Spiked Sample %R [D] 98 99 Ba An E / MAT Spiked	Spike Added [E] 1090 1090 ttch #: alyst: RIX SPI	Duplicate Spiked Sample Result [F] 1060 1070 1 Matrix KEB KE DUPLICA Duplicate	Spiked Dup. %R [G] 97 98 x: Soil TE REC Spiked	RPD % 1 1 OVERY RPD	Control Limits %R 70-135 70-135 STUDY Control Limits	Limits %RPD 35 35 25	
TPH By SW8015 Mod Analytes C6-C12 Gasoline Range Hydrocarbons C12-C28 Diesel Range Hydrocarbons Lab Batch ID: 900743 Date Analyzed: 11/13/2012 Reporting Units: mg/kg TPH By SW8015 Mod	Sample Result [A] <16.3 <16.3 QC- Sample ID: Date Prepared: Parent Sample Result	Spike Added [B] 1090 451912 11/12/2 M Spike Added	Spiked Sample Result [C] 1070 1080 -006 S 012 IATRIX SPIK Spiked Sample Result	Spiked Sample %R [D] 98 99 Ba An E / MAT Spiked Sample %R	Spike Added [E] 1090 1090 atch #: alyst: RIX SPI Spike Added	Duplicate Spiked Sample Result [F] 1060 1070 1 Matrix KEB KE DUPLICA Duplicate Spiked Sample	Spiked Dup. %R [G] 97 98 x: Soil X: Soil TE REC Spiked Dup. %R	RPD % 1 1 OVERY RPD	Control Limits %R 70-135 70-135 STUDY Control Limits	Limits %RPD 35 35 Control Limits	Flag

Matrix Spike Percent Recovery  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}|(C-F)/(C+F)|$  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: Trunk "O" #1

Work Order #: 451912

Lab Batch #: 900569				Project I	<b>D:</b> (RP-150)	/)
Date Analyzed: 11/09/2012 12:05	Date Prepar	ed: 11/09/2012	2 Anal	yst:WRU		
QC- Sample ID: 451911-005 D	Batch	n#: 1	Mat	rix: Soil		
<b>Reporting Units:</b> %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Percent Moisture		8.51	9.46	11	20	
Lab Batch #: 900570						
Date Analyzed: 11/09/2012 12:35	Date Prepar	ed: 11/09/2012	2 Anal	yst: WRU		
QC- Sample ID: 451912-006 D	Batch	n#: 1	Mat	rix: Soil		
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[]	[ <b>B</b> ]			

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

1 of 2

	Project Manager:	Joel Lowry	11.11			· · · · ·										P	rojec	t Na	me:	Trun	ık "(	0" <u>#</u>	1			· · . ·	· .		· · ·
	Company Name	Basin Environmental Ser	rvice T	echnol	logies, LLC												P	rojec	:t #:	(RP-	150	7)				<u> </u>			
	Company Address	: <u>P.O. Box 301</u>															Proj	ect L	- .oc:	Lea C	Coun	ity, N	M						
	City/State/Zip:	Lovington, NM 88260																		Bill S				n Ga	5				
	Telephone No:	(575)396-2378				Fax No:		(575	5) 39	6-14	20					Repo	urt Ec		.	x s	tond	ord		Пт				NPDES	
	Sampler Signature		2 h			e-mail:	-		1			ose S	Slade@	กรมด			л ( F С	лпа	L- I	3	land	aiu		<u> </u>	ININE .		- <b></b> 1		2
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use only)			Beginning Depth	Ending Depth	Date Sampled	Time Sampled	tered	of Containers	Pres	serva	. :		f Con			E E	HUN-POLADIE SPECITY UTIN	05 TX 10	Cations (Ca, Mg, Na, K)	Anions (CI, SO4, Alkalinity) SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se		atiles	BTEX 8021B/5030 or BTEX 8260	ILES			TAT (Pre-Schedule) 24, 48,	
LAB # (lab	FIE	LD CODE	Begin	Indin	Date	Time	Field Filtered	ŧ.	e	°ONH HNO	HCI H,SO	NaOH	$Na_2S_2O_3$	None	Other (	0 = 0 0 = 0	TPH:		ations	vnions (	Aetals:	Volatiles	Semivolatiles	STEX 8	CHLORIDES			SUSH	Standa
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OJ	Π	-1@6'		6'	10/30/2012	950	. :	- 1	x						:	Soil		1							x				X
03	ТТ	-1 @ 8'		8'	10/30/2012	955		1	X							Soil	X								x .				x
OU	<u></u> π	-2 @ 3'		3'	10/30/2012	1005		1	X							Soil	X								x				X
05	ТТ	-2@6'		6'	10/30/2012	1010		1	X	н н. С					: ·	Soil	x	( 1 <sup>.1</sup>							x				x
06	TT	-3 @ 3'		3'	10/30/2012	1025		1	x							Soil	X								x				x
01	Π	-3@6'		6'	10/30/2012	1030		1	x							Soil									X				x
08	π	-3@8'		8'	10/30/2012	1035		1	X							Soil	X	ζ <sup>Γ</sup>	ŀ						x I				X
09	TT	-4 @ 3'		3'	10/30/2012	1050		1	x							Soil	X								x				X
<u>()</u>	ТТ	-4 @ 6'		6'	10/30/2012	1055		1	x			:				Soil									x				X
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						Pag	e 20 (	of 22	2						F	inal 1.0	01												

# 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

2012

	Project Manager:	Joel Lowry									÷		. :			Proje	ct Na	ame	Tru	unk	"0"	#1				·		
	Company Name	Basin Environmental Ser	vice T	echnol	ogies, LLC							- -		·			Proje	ct #	(RI	P-15	07)							
	Company Address:	P.O. Box 301													 -						inty,	NM						
	City/State/Zip:	Lovington, NM 88260													-					1.1	therr		on G	as				
	Telephone No:	(575)396-2378				Fax No:		(67	=) 20	6.44									<u> </u>		Idard	1.		TRRF				
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	• •	TROY Na	m	/						_						- C		2			Ana	lyze F	or:		_		Л	
(lab use ORDEF	IC A	ລໍ່														-				CLP: TAL:	:		x				, 72 hrs	
ORDER	(#: <u>)</u>	<u> </u>		1		<u></u>			Pre	serv	ation	& # Of	Cont	ainers							lg Se		8260				24, 48,	
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se only)			Beginning Depth	£	e e e	eq		ainers							ਰ ਤੋਂ			Ra,	Anions (CI, SO4, Alkalinity)	U U	Metals: As Ag Ba Cd Cr Pb Hg Se		BTEX 8021B/5030 or BTEX 8260				RUSH TAT (Pre-Schedule)	T 4 C
# (lab.use			ing D	Ending Depth	Date Sampled	Time Sampled	red	Total #. of Containers	:					None Other ( Specify	DW = Drinking Wate GW = Groundwater	Non-Potable	TX 1005	Cations (Ca, Mg,	3, SO4	SAR / ESP / CEC	s Ag B	tiles	21B/5(	DES			AT (P	rd TA
LAB#(			ginn	ding	ate S	<u>n</u> e	Field Filtered	al#.o	a	HNO3		NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None Other (S	/=Drin = Gr	Non		tions (	ions (C	R / ES	Metals: A	Semivolatiles	EX 80	CHLORIDES			I HSL	anda
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15	ТТ	-6 @ 3'		3'	10/30/2012	1340		_	х		-				So						•		·	x			$\square$	X
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Relinquis	hed by:	Date			Received by ELO	no (	28	XY	1	U	$\overline{\mathbf{h}}$				)ate 912		me []	Te	1	5.57	e Upc					2,0	°C	
						Pag	e 21	of 2	<u>ाप्</u> 2	; *	<u> </u>		<u></u>	F	Final	1.001	<u></u>	4	<u>- 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </u>	<u>- 2007) (</u>	264.455	ta ti ny t			<u></u>		<u></u>	<u>التستمر</u> .



### **XENCO** Laboratories



### Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- MonahanAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 11/05/2012 10:04:00 AMAir and Metal samples Acceptable Range: AmbientWork Order #: 451912Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	9.7
#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: \_\_\_\_\_

Checklist reviewed by:

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

TRUN	175#1 175#1 175#1	
3-Lond	STOCELLEZ.	
OCOTILLO E	ENVIRONMENTAL, LLC.	
	PER HOUR S	
TRUCKER L. Combs		-27-07
ADDRESS		
	7 TOTAL YDS. 36 RATE TOTAL	
ADDRESS	_ DATE PAID CN. NO	
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	an	
/-3	6.5 "0".30" LINE TE #1 31-07	
5-Logds 70		
	NVIRONMENTAL, LEC.	
HOURS WORKED IC g S	PER HOUR S	
	/2 YD. DUMP TRUCK 1805 DATE	-31-07
ADDRESS		
COMPANY SHES		
PIT OWNER TO SUGS LAND FARM	TOTAL YDS 60 RATE TOTAL	,
ADDRESS	DATE PAID CK. NO	
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X X X Y	17 18 19 20 21 22 23 24 25 26 27 28 29 30 RATE LOAD	STOTAL
	17 18 19 20 21 22 23 24 25 26 27 28 29 30 RATE LOAD	STOTAL

	TA TA	517E#1 517E#1 -26-07	LIME	
	3-40,	Bds To CELL	~ <u>2</u> _	•••
	OCOTILLO	ENVIRONMENT	AL, LLC.	
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TRUCKER	Ruiz	12 YD DUMP	TRUCK	_DATE 7-26-67
ADDRESS				
COMPANY 5				
PIT OWNER TE 54	16.5 LAND FARM	TOTAL YDS.	36 RATE	
	7 8 9 10 11 12 13 14 15			
	5-4	54165. RUNK "O" 30 31TE# 4 2-27-07 OR ds To CEL ENVIRONMENT.	1-2	
HOURS WORKED				
TRUCKER , 7	<u> </u>	12 YES THIMP	TRUCK THRE	DATE 7-27-07
COMPANY 5				
	65. LAND FAAM			
ARC 1 2 3 4 5 6	7 8 9 10 11 12 13 14 15			
				<u></u>

	2403. Runk "O" 3 517E# 2 7-31-07		
900	TILLO ENVIRO	NMENTAL, LLC.	
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TRUCKER L. Comps			
ADDRESS	· · · · · · · · · · · · · · · · · · ·		
COMPANY <u>S.U.C.S.</u>			
PU OWNER To SUGS LAND	FRAM TOTA	LYDS 60 RATE	TOTAL
ADDRESS	DATE	PAID	_CK_NO
<b>ARCES</b> 1 2 3 4 5 6 7 8 9 10 1 12 X X X X	13 14 15 16 17 18 19	20 21 22 23 24 25 26 27 28 29	30 RATE LOADS TOTAL

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District I			Sta	ate of	New Mex	31-1234				<b>F</b>
1625 N. French Dr., Hobbs, NM 88240 District II			State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division2007 1220 South Sty Francis Drived Santa Fe, NM 8750 Hotos			Form C-141 Revised October 10, 2003				
District III	venue, Artesia, NM 88210	)			/ N	vision2007	66	1	Submit 2 C	opies to appropriate Office in accordance
District IV	Road, Aztec, NM 87410		1220	Sout	h Sty Fran	Not 2007	011		District ( wi	Office in accordance th Rule 116 on back
1220 S. St. Franc	is Dr., Santa Fe, NM 8750	5	Sa	anta F	e, NM 875	0 Hobbs	12			side of form
Trunk "0" #	1	Rel	ease Notific	catio	n anđ Co	orrečtive A	ction			· · · · · · · · · · · · · · · · · · ·
					OPERA	LOR 14 91	> /	🖉 Initia	al Report)	Final Report
Name of Cor			n Gas Services,		Contact		(			Tony Savoie
Address Facility Nam			226 Jal, N.M. 88 County Field D		Telephone N Facility Typ				Natu	505-395-2116 ral Gas Gathering
								I )		ful Ous Guillering
Surface Own	er: DASCO Land and	1 Cattle C	Co. Mineral C	Jwner:	Federal			Lease N	NO.	
		n			N OF REI			7 . * *		
Unit Letter	Section Township 22 22S	Range 36E	Feet from the	North	n/South Line	Feet from the	East/W	Vest Line	County	Lea
					0 Longitud COFREL	e W103 15.58	8			
Type of Relea	se : Crude Oil, Produced	1 water, ar		UKE		Release: 60 Bbl	s	Volume F	Recovered	40 Bbls crude
Source of Dal	ease : 30" Natural Gas P	inalina				1215 MCF Nat. C			roduced wate	
		ipenne			Date and Hour of Occurrence not knownDate and Hour of Discovery7/21/07Time: 7:00 p.m.					
Was Immediat	te Notice Given?	Yes [	] No 🔲 Not Re	eauired	If YES, To Whom? NMOCD on call representative					
By Whom? To					Date and Hour: 7/21/07 7:15 p.m.					
	ourse Reached?		7. N			olume Impacting		rcourse.		
	L									
If a Watercour	rse was Impacted, Descr	ibe Fully.	*							
	use of Problem and Re				g. : 1 . 1. 1.		1	41 - 11		
and natural g	al Gas gathering line of as. Crews began shut	ting the l	ine in at 7:45 pm	xcess 1 n. vacu	ium trucks w	ere dispatched f	to the lea	the line t ak sites to	o pressure u start pickiu	ip and leak fluid
total of 40 bl	s of fluid was recover								, start protein	
Describe Area	Affected and Cleanup	Action Tal	en Annrovimate	ly 2400	Square feet o	f nasture land and	1 annrovi	mately QA	0 squara feet	of caliche lesse
Describe Area Affected and Cleanup Action Taken. Approximately 2400 Square feet of pasture land and approximately 900 square feet of caliche lease road was impacted by the release. Most of the heavily saturated soil was pushed up by a backhoe toward the point of release.								of earlier lease		
	diation will follow the ly that the information gives the second se						Inderstan	d that purs	suant to NMO	DCD rules and
regulations all	operators are required t	o report a	nd/or file certain r	elease 1	notifications a	nd perform correct	ctive action	ons for rel	eases which	may endanger
should their op	or the environment. The perations have failed to a	adequately	investigate and re	emedia	te contaminati	on that pose a thr	eat to gro	ound water	r, surface wa	ter, human health
	ment. In addition, NMC		otance of a C-141	report o	does not reliev	e the operator of	responsil	bility for c	ompliance w	ith any other
federal, state, or local laws and/or regulations.					OIL CONSERVATION DIVISION					
Signature:	Tony Savoie						-	·		
Printed Name: 1 Om Drume, John A. Savoie					Approved by	District Supervis	or:	$\square$		
Printed Name:	1 on 28mm	U	John A. Savole					<u>+ &amp; K</u>	لعف	
Title:		Reme	diation Supervisor	r	Approval Dat	e: B·Z·D7	E	Expiration	Date: 10	7.07
E-mail Addres	s:	tony.savoi	e@sug.com		Conditions of	Approval:			Attached	
Date: 7/31/07 Phone: 505-395-2116						1NA2 P: 141	<u></u>			
* Attach Additi	onal Sheets If Necess	ary			Docum	NAL P: 141 NENTATION	5 54	Contract	~	
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State of New Mexico Energy Minerals and Natural Resources

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

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 Report
Name of Company	Southern Union Ga	s Services, Ltd.	Contact	(	Crystal Callaway
Address	801 S. Loop 464, Monaha	ıns, TX, 79756	Telephone No.		(817) 302-9407
Facility Name: Trur	nk "O" #1 (RP-1507)		Facility Type	Natu	ral Gas Gathering
Surface Owner DA	SCO Land and Cattle Co.	Mineral Owner	Fodoral	Laaga Na	
Surface Owner DA	SCO Lanu and Cattle CO.	while a Owner.	receial	Lease No.	

Surface Owner DASCO Land and Cattle Co. | Mineral Owner: Federal

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	22	228	36E					Lea

#### Latitude N32 22.460

Longitude W103 15.588

NATURE	OF RELEASE		
Type of Release Crude Oil, Produced water, and Natural Gas	Volume of Release 60 Bbls	Volume Recovered 40 Bbls crude	
	Fluid and 1215 MCF Nat. Gas	Oil and produced water	
Source of Release 30" Natural Gas Pipeline	Date and Hour of Occurrence	Date and Hour of Discovery 7/21/07	
C3+	not known	Time: 7:00 p.m.	
Was Immediate Notice Given?	If YES, To Whom?		
🛛 Yes 🗌 No 🗌 Not Required	NMOCD on call representative		
By Whom? Tony Savoie	Date and Hour: 7/21/07 7:15 p.m.		
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.		
If a Watercourse was Impacted, Describe Fully.*			

Describe Cause of Problem and Remedial Action Taken:

A 30" Natural Gas gathering line developed a leak due to excess fluid delivered by a producer caused the line to pressure up and leak fluid and natural gas. Crews began shutting the line in at 7:45 pm, vacuum trucks were dispatched to the leak sites to start picking up fluid. A total of 40 bbls of fluid was recovered before the leak was temporarily repaired with a 30" leak repair clamp.

Describe Area Affected and Cleanup Action Taken. Approximately 2,400 square feet of pasture land and approximately 900 square feet of caliche lease road was impacted by the release. Most of the heavily saturated soil was pushed up by a backhoe toward the point of release.

Between July 26, and August 10, 2007, remediation activities were conducted at the Trunk "O" #1 Release Site by an environmental contractor that is no longer affiliated with the site. Transporter's manifests indicate at least 252 yd3 of impacted material was transported to SUG's Landfarm. On October 30, 2012, the site was revisited in an effort to determine if soil exhibiting benzene, BTEX, TPH and chloride concentrations above NMOCD regulatory standards remained in-situ and collect confirmation soil samples. Laboratory analytical reports from the confirmation soil samples suggested previous remediation activities met the requirements of the NMOCD.

#### Please see the attached Basin Environmental Services Technologies Remediation Summary and Site Closure Request for details of remedial activities and the site investigation.

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

	OIL CONSERVATION DIVISION		
Signature: MMel allener			
Printed Name: Crystal Callaway	Approved by District Supervisor:		
Title: Senior Environmental Remediation Specialist	Approval Date:	Expiration Date:	
E-mail Address: Crystal.Callaway@Regencygas.com	Conditions of Approval:		
Date: 10/27/14 Phone: (817) 302-9407			