## 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" #4 (1RP-1510) HISTORICAL RELEASE SITE Lea County, New Mexico Unit Letter "F" (SE/NW), Section 34, Township 22 South, Range 36 East Latitude 32° 20.921' North, Longitude 103° 15.296' West NMOCD Reference # 1RP-1510

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

### November 2012

Joel W. Lowry Project Manager

## **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
2.0	NMOCD SITE CLASSIFICATION	1
3.0	SUMMARY OF SOIL REMEDIATION ACTIVITIES	2
4.0	QA/QC PROCEDURES	4
	4.1 Soil Sampling	4
	4.2 Decontamination of Equipment	4
	4.3 Laboratory Protocol	4
5.0	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 – 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" #4 Historical Release Site (1RP-1510). The legal description of the release site is Unit Letter "F" (SE/NW), Section 34, Township 22 South, Range 36 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 20.921' North latitude and 103° 15.296' West longitude. The property affected by the release is owned by Wanda Jones. Please reference Figure 1 for a "Site Location Map".

On August 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 fifteen barrels (15 bbls) of crude oil and produced water mixture along with forty-five (45) mcf of natural gas. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on August 21, 2007. The Form C-141 indicated the release affected approximately six hundred square feet (600 ft<sup>2</sup>) of pasture land and forty-four square feet (44 ft<sup>2</sup>) of caliche lease road. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix C.

Previous remediation activities were conducted at the Trunk "O" #4 Release Site by an environmental contractor that is no longer affiliated with the site. The nature and extent of the aforementioned activities remains unclear, as environmental reports and work records are not readily available.

On June 22, 2012, at the request of Southern Union, Basin assumed remediation responsibilities at the Trunk "O" #4 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 Section 34, Township 22 South, Range 36 East. A depth to groundwater reference map utilized by the NMOCD indicated groundwater should be encountered at approximately three hundred feet (300') 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" #4 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 3, 2012, Basin responded to the Trunk "O" #4 Historical Release Site. An initial investigation indicated previous remediation activities had been conducted at the release site. A series of test trenches were advanced in the disturbed areas around the inferred release point 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 three and one-half feet (3.5') bgs near the center of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a photo-ionization detector (PID) and chloride field test kit. Two (2) soil samples (TT-1 @ Surface and TT-1 @ 3.5') 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 less than the laboratory MDL for soil sample TT-1 @ Surface to 4.14 mg/Kg in soil sample TT-1 @ 3.5'. Soil sample TT-1 @ 3.5' was also analyzed for concentrations of BTEX and TPH in accordance with EPA Methods SW 846-8021B, SW 846-8015M, respectively. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL. 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 three and one-half feet (3.5') bgs near the inferred release point, within the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-2 @ Surface and TT-2 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-2 @ Surface to 9.51 mg/Kg in soil sample TT-2 @ 3.5'. Soil sample TT-2 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #3 was advanced to approximately three and one-half feet (3.5') bgs near the northwest margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-3 @ Surface and TT-3 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-3 @ Surface to 6.51 mg/Kg in soil sample TT-3 @ 3.5'. Soil sample TT-3 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #4 was advanced to approximately three and one-half feet (3.5') bgs near the western margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-4 @ Surface and TT-4 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-4 @ Surface to 9.15 mg/Kg in soil sample TT-4 @ 3.5'. Soil sample TT-4 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #5 was advanced to approximately three and one-half feet (3.5') bgs near the southwest margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-5 @ Surface and TT-5 @ 3.5') were collected and submitted to the laboratory for analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-5 @ Surface to 18.60 mg/Kg in soil sample TT-5 @ 3.5'. Soil sample TT-5 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #6 was advanced to approximately three and one-half feet (3.5') bgs near the northeast margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-6 @ Surface and TT-6 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-6 @ Surface to 8.04 mg/Kg in soil sample TT-6 @ 3.5'. Soil sample TT-6 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #7 was advanced to approximately three and one-half feet (3.5') bgs near the eastern margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-7 @ Surface and TT-7 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-7 @ Surface to 3.41 mg/Kg in soil sample TT-7 @ 3.5'. Soil sample TT-7 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

Test Trench #8 was advanced to approximately three and one-half feet (3.5') bgs near the southeast margin of the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-8 @ Surface and TT-8 @ 3.5') were collected and submitted to the laboratory for chloride analysis. Laboratory analytical results indicated chloride concentrations ranged from less than the laboratory MDL for soil sample TT-8 @ Surface to 5.61 mg/Kg in soil sample TT-8 @ 3.5'. Soil sample TT-8 @ 3.5' was also analyzed for concentrations of BTEX and TPH. Analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL.

## 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 eight (8) on-site test trenches suggested previous remediation activities at the Trunk "O" #4 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 standards in each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Trunk "O" #4 Historical Release Site.

### 6.0 LIMITATIONS

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

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

## 7.0 **DISTRIBUTION**

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





#### TABLE 1

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

#### SOUTHERN UNION GAS SERVICES TRUNK "O" #4 HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD REF# 1RP-1510

				EPA SW 846-8021B, 5030					EPA SW 846-8015M			τοται	EPA 300/300.1
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>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 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.00
TT-1 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00108	<0.00216	<0.00108	<0.00216	<0.00216	<16.2	<16.2	<16.2	<16.2	4.14
TT-2 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.15
TT-2 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00107	<0.00214	<0.00107	<0.00214	<0.00214	<16.0	<16.0	<16.0	<16.0	9.51
TT-3 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.02
TT-3 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00104	<0.00208	<0.00104	<0.00208	<0.00208	<15.6	<15.6	<15.6	<15.6	6.51
TT-4 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.08
TT-4 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00106	<0.00212	<0.00106	<0.00212	<0.00212	<15.9	<15.9	<15.9	<15.9	9.15
TT-5 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.05
TT-5 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00106	<0.00212	<0.00106	<0.00212	<0.00212	<15.9	<15.9	<15.9	<15.9	18.60
TT-6 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<0.991
TT-6 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00102	<0.00204	<0.00102	< 0.00204	< 0.00204	<15.3	<15.3	<15.3	<15.3	8.04
TT-7 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.12
TT-7 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00104	<0.00208	<0.00104	<0.00208	<0.00208	<15.9	<15.9	<15.9	<15.9	3.41
TT-8 @ Surface	Surface	10/3/2012	In-Situ	-	-	-	-	-	-	-	-	-	<1.00
TT-8 @ 3.5'	3.5'	10/3/2012	In-Situ	<0.00106	<0.00212	<0.00106	<0.00212	<0.00212	<15.9	<15.9	<15.9	<15.9	5.61
NMOCD Standard				10				50				5,000	1,000

- = Not analyzed.



Photograph of the disturbed area at the Trunk "O" #4 Historical Release Site.



Photograph of delineation activities at the Trunk "O" #4 Historical Release Site.



Photograph of the eight (8) Test Trenches advanced at the Trunk "O" #4 Historical Release Site.



Photograph of the eight (8) Test Trenches advanced at the Trunk "O" #4 Historical Release Site.

## Analytical Report 450295

## for Southern Union Gas Services- Monahans

**Project Manager: Rose Slade** 

Trunk ''O'' #4 (RP-1510)

### **SUG Historical Releases**

## 12-OCT-12

Collected By: Client





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

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

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

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



12-OCT-12

TNI PACCREDUE

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

Reference: XENCO Report No: **450295 Trunk ''O'' #4 (RP-1510)** 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 450295. 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. 450295 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 450295



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

Trunk "O" #4 (RP-1510)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @ Surface	S	10-03-12 08:30		450295-001
TT-1 @ 3.5'	S	10-03-12 08:40		450295-002
TT-2 @ Surface	S	10-03-12 09:00		450295-003
TT-2 @ 3.5	S	10-03-12 09:10		450295-004
TT-3 @ Surface	S	10-03-12 09:30		450295-005
TT-3 @ 3.5'	S	10-03-12 09:40		450295-006
TT-4 @ Surface	S	10-03-12 10:00		450295-007
TT-4 @ 3.5	S	10-03-12 10:10		450295-008
TT-5 @ Surface	S	10-03-12 10:30		450295-009
TT-5 @ 3.5	S	10-03-12 10:40		450295-010
TT-6 @ Surface	S	10-03-12 11:00		450295-011
TT-6 @ 3.5	S	10-03-12 11:00		450295-012
TT-7 @ Surface	S	10-03-12 11:20		450295-013
TT-7 @ 3.5	S	10-03-12 11:30		450295-014
TT-8 @ Surface	S	10-03-12 11:50		450295-015
TT-8 @ 3.5	S	10-03-12 12:00		450295-016



## CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans Project Name: Trunk ''O'' #4 (RP-1510)



Project ID:SUG Historical ReleasesWork Order Number:450295

Report Date: 12-OCT-12 Date Received: 10/05/2012

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



## Certificate of Analysis Summary 450295

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #4 (RP-1510)



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

Date Received in Lab: Fri Oct-05-12 11:30 am

**Report Date:** 12-OCT-12

								Project Mai	nager:	Nicholas Strac	ccione		
	Lab Id:	450295-0	001	450295-0	02	450295-0	03	450295-0	04	450295-0	05	450295-	006
An alugia Dogwood ad	Field Id:	TT-1 @ Su	rface	TT-1 @ 3	.5'	TT-2 @ Sur	rface	TT-2 @ 3	3.5	TT-3 @ Su	rface	TT-3 @	3.5'
Analysis Kequesiea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOII	-
	Sampled:	Oct-03-12 (	08:30	Oct-03-12 0	8:40	Oct-03-12 0	9:00	Oct-03-12 0	9:10	Oct-03-12 (	9:30	Oct-03-12	09:40
BTEX by EPA 8021B	Extracted:			Oct-09-12 1	5:15			Oct-09-12 1	5:15			Oct-09-12	15:15
	Analyzed:			Oct-09-12 1	6:30			Oct-09-12 1	6:45			Oct-09-12	16:59
	Units/RL:			mg/kg	RL			mg/kg	RL			mg/kg	RL
Benzene				ND	0.00108			ND	0.00107			ND	0.00104
Toluene				ND	0.00216			ND	0.00214			ND	0.00208
Ethylbenzene				ND	0.00108			ND	0.00107			ND	0.00104
m,p-Xylenes				ND	0.00216			ND	0.00214			ND	0.00208
o-Xylene				ND	0.00108			ND	0.00107			ND	0.00104
Total Xylenes				ND	0.00108			ND	0.00107			ND	0.00104
Total BTEX				ND	0.00108			ND	0.00107			ND	0.00104
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-08-12	14:07	Oct-08-12 1	4:39	Oct-08-12 1	4:55	Oct-08-12 1	5:11	Oct-08-12 1	5:27	Oct-08-12	15:44
SUB: E871002	Analyzed:	Oct-08-12 14:07		Oct-08-12 14:39		Oct-08-12 1	4:55	Oct-08-12 1	5:11	Oct-08-12 15:27		Oct-08-12 15:4	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	1.00	4.14	1.10	ND	1.15	9.51	1.02	ND	1.02	6.51	1.04
Percent Moisture	Extracted:												
	Analyzed:	Oct-09-12	13:50	Oct-09-12 1	3:50	Oct-09-12 1	3:50	Oct-09-12 1	3:50	Oct-09-12 1	3:50	Oct-09-12	13:50
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.39	1.00	7.68	1.00	9.12	1.00	6.52	1.00	5.56	1.00	4.01	1.00
TPH By SW8015 Mod	Extracted:			Oct-09-12 1	5:10			Oct-09-12 1	5:10			Oct-11-12	08:30
	Analyzed:			Oct-10-12 1	0:24			Oct-10-12 1	0:52			Oct-11-12	12:50
	Units/RL:			mg/kg	RL			mg/kg	RL			mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons				ND	16.2			ND	16.0			ND	15.6
C12-C28 Diesel Range Hydrocarbons				ND	16.2			ND	16.0			ND	15.6
C28-C35 Oil Range Hydrocarbons				ND	16.2			ND	16.0			ND	15.6
Total TPH				ND	16.2			ND	16.0			ND	15.6

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

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

Nicholas Straccione Project Manager

Page 5 of 26



## Certificate of Analysis Summary 450295

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #4 (RP-1510)



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

Date Received in Lab: Fri Oct-05-12 11:30 am

**Report Date:** 12-OCT-12

Tojeet Location. Dea County, New Mexico								Project Ma	nager:	Nicholas Strac	ccione		
	Lab Id:	450295-0	07	450295-0	08	450295-0	09	450295-0	010	450295-0	011	450295-	012
Analysis Pogyostad	Field Id:	TT-4 @ Su	rface	TT-4 @ 3	3.5	TT-5 @ Sur	rface	TT-5 @ 3	3.5	TT-6 @ Su	rface	TT-6 @	3.5
Analysis Kequesiea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOII	<u>_</u>
	Sampled:	Oct-03-12	0:00	Oct-03-12 1	0:10	Oct-03-12 1	0:30	Oct-03-12 1	10:40	Oct-03-12 1	1:00	Oct-03-12	11:00
BTEX by EPA 8021B	Extracted:			Oct-09-12 1	5:15			Oct-09-12 1	15:15			Oct-09-12	15:15
	Analyzed:			Oct-09-12 1	7:14			Oct-09-12 1	17:29			Oct-09-12	17:44
	Units/RL:			mg/kg	RL			mg/kg	RL			mg/kg	RL
Benzene				ND	0.00106			ND	0.00106			ND	0.00102
Toluene				ND	0.00212			ND	0.00212			ND	0.00204
Ethylbenzene				ND	0.00106			ND	0.00106			ND	0.00102
m,p-Xylenes				ND	0.00212			ND	0.00212			ND	0.00204
o-Xylene				ND	0.00106			ND	0.00106			ND	0.00102
Total Xylenes				ND	0.00106			ND	0.00106			ND	0.00102
Total BTEX				ND	0.00106			ND	0.00106			ND	0.00102
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-08-12	16:00	Oct-08-12 1	6:16	Oct-08-12 1	6:32	Oct-08-12 1	17:20	Oct-08-12 1	17:36	Oct-08-12	17:52
SUB: E871002	Analyzed:	Oct-08-12 16:00		Oct-08-12 16:16		Oct-08-12 16:32		Oct-08-12 17:20		Oct-08-12 17:36		Oct-08-12 17:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		ND	1.08	9.15	1.04	ND	1.05	18.6	1.17	ND	0.991	8.04	0.881
Percent Moisture	Extracted:												
	Analyzed:	Oct-09-12	13:50	Oct-09-12 1	3:50	Oct-09-12 1	3:50	Oct-09-12 1	13:50	Oct-09-12 1	13:50	Oct-09-12	13:50
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		7.12	1.00	5.53	1.00	7.32	1.00	6.13	1.00	4.98	1.00	1.96	1.00
TPH By SW8015 Mod	Extracted:			Oct-09-12 1	5:10			Oct-09-12 1	15:10			Oct-11-12	08:30
	Analyzed:			Oct-10-12 1	2:27			Oct-10-12 1	12:56			Oct-11-12	13:49
	Units/RL:			mg/kg	RL			mg/kg	RL			mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons				ND	15.9			ND	15.9			ND	15.3
C12-C28 Diesel Range Hydrocarbons				ND	15.9			ND	15.9			ND	15.3
C28-C35 Oil Range Hydrocarbons				ND	15.9			ND	15.9			ND	15.3
Total TPH				ND	15.9			ND	15.9			ND	15.3

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.

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

Nicholas Straccione Project Manager

Page 6 of 26



## Certificate of Analysis Summary 450295

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #4 (RP-1510)



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

Date Received in Lab: Fri Oct-05-12 11:30 am

**Report Date:** 12-OCT-12

oject Docutoni Dea County, iten memeo								Project Ma	nager:	Nicholas Straccione	
	Lab Id:	450295-0	13	450295-0	14	450295-0	15	450295-0	)16		
An alvair Domonto I	Field Id:	TT-7 @ Su	rface	TT-7 @ 3	.5	TT-8 @ Su	rface	TT-8 @ 3	3.5		
Anaiysis Kequesiea	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	Oct-03-12 1	1:20	Oct-03-12 1	1:30	Oct-03-12 1	1:50	Oct-03-12	12:00		
BTEX by EPA 8021B	Extracted:			Oct-09-12 1	5:15			Oct-09-12	15:15		
	Analyzed:			Oct-09-12 1	7:59			Oct-09-12	18:14		
	Units/RL:			mg/kg	RL			mg/kg	RL		
Benzene				ND	0.00104			ND	0.00106		
Toluene				ND	0.00208			ND	0.00211		
Ethylbenzene				ND	0.00104			ND	0.00106		
m,p-Xylenes				ND	0.00208			ND	0.00211		
o-Xylene				ND	0.00104			ND	0.00106		
Total Xylenes				ND	0.00104			ND	0.00106		
Total BTEX				ND	0.00104			ND	0.00106		
Inorganic Anions by EPA 300/300.1	Extracted:	Oct-08-12	8:08	Oct-08-12 1	8:25	Oct-08-12 1	8:41	Oct-08-12	18:57		
SUB: E871002	Analyzed:	Oct-08-12	18:08	Oct-08-12 1	8:25	Oct-08-12 1	8:41	Oct-08-12	18:57		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		ND	1.12	3.41	1.02	ND	1.00	21.8	1.11		
Percent Moisture	Extracted:										
	Analyzed:	Oct-09-12	13:50	Oct-09-12 1	3:50	Oct-09-12 1	3:50	Oct-09-12	14:12		
	Units/RL:	%	RL	%	RL	%	RL	%	RL		
Percent Moisture		8.18	1.00	4.08	1.00	5.18	1.00	5.61	1.00		
TPH By SW8015 Mod	Extracted:			Oct-11-12 0	8:30			Oct-09-12	16:20		
	Analyzed:			Oct-11-12 1	4:19			Oct-09-12	18:50		
	Units/RL:			mg/kg	RL			mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons	1			ND	15.7			ND	15.9		1
C12-C28 Diesel Range Hydrocarbons				ND	15.7			ND	15.9		1
C28-C35 Oil Range Hydrocarbons				ND	15.7			ND	15.9		1
Total TPH				ND	15.7			ND	15.9		1

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

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

Nicholas Straccione Project Manager



## **Flagging Criteria**

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

ection
20

- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- **DL** Method Detection Limit
- NC Non-Calculable
- NELAC certification not offered for this compound.
- (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

#### 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 - San Antonio - Atlanta - Midland/Odessa - Tampa/Lakeland - Phoenix - Latin America

4143 Greenbriar Dr. Stafford, TX 77477 9701 Harry Hines Blvd , Dallas, TX 75220 5332 Blackberry Drive, San Antonio TX 78238 2505 North Falkenburg Rd, Tampa, FL 33619 12600 West I-20 East, Odessa, TX 79765 6017 Financial Drive, Norcross, GA 30071 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(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 1.000



Project Name: Trunk "O" #4 (RP-1510)

Vork Orders: 450295	, , ,		Project II	<b>):</b> SUG Histo	orical Releas	ses
Lab Batch #: 898398	Sample: 450295-002 / SMP	Batch	1: 1 Matrix:	Soil	STUDY	
Units: mg/kg	Date Analyzed: 10/09/12 16:30		KKUGALE KE			. <u> </u>
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes		ļ!	נען		L
1,4-Difluorobenzene		0.0299	0.0300	100	80-120	
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	<u>ı                                    </u>
Lab Batch #: 898398	Sample: 450295-004 / SMP	Batch	h: <u>1</u> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 10/09/12 16:45	SU	RROGATE RF	COVERY	STUDY	
ВТЕУ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0263	0.0300	88	80-120	
4-Bromofluorobenzene		0.0240	0.0300	80	80-120	
Lab Batch #: 898398	Sample: 450295-006 / SMP	Batcl	h: 1 Matrix	:Soil	<u>.</u>	
<b>Units:</b> mg/kg	Date Analyzed: 10/09/12 16:59	SU!	RROGATE RF	<b>COVERY</b>	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes					
1,4-Difluorobenzene		0.0268	0.0300	89	80-120	i
4-Bromofluorodenzene		0.0290	0.0300	97	80-120	
Lab Batch #: 898398	Sample: 450295-008 / SMP	Batch	a: 1 Matrix:	Soil		
Units: mg/kg	Date Analyzed: 10/09/12 17:14	501	RROGATE KE	COVERY 2	STUDY	
ВТЕУ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0256	0.0300	85	80-120	1
4-Bromofluorobenzene		0.0250	0.0300	83	80-120	. <u></u>
Lab Batch #: 898398	Sample: 450295-010 / SMP	Batcl	h: 1 Matrix	:Soil	<u>                                      </u>	
Units: mg/kg	Date Analyzed: 10/09/12 17:29	SU!	RROGATE RF	<b>ECOVERY</b> ?	STUDY	
ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0299	0.0300	100	80-120	i
4-Bromofluorobenzene		0.0283	0.0300	94	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" #4 (RP-1510)

Vork Orders : 450295 Lab Batch #: <sup>898398</sup>	, Sample: 450295-012 / SMP	Batel	Project II h: <sup>1</sup> Matrix:	<b>D:</b> SUG Histo Soil	orical Relea	ses
<b>Units:</b> mg/kg	Date Analyzed: 10/09/12 17:44	SU	RROGATE RI	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluorobenzene	Anarytes	0.0292	0.0300	07	80.120	
4-Bromofluorobenzene		0.0292	0.0300	88	80-120	
I ah Datah # 808308	Secondary 450295-014 / SMP	Batal	h. 1 Matrice	Soil	00 120	
Units: mg/kg	Date Analyzed: 10/09/12 17:59	SU	RROGATE RE	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
14 Diffuorshangana	Analytes	0.0240	0.0200	[D]	90.120	
4-Bromofluorobenzene		0.0249	0.0300	83	80-120	
	~	0.0202	0.0300	10	80-120	
Lab Batch #: 898398	Sample: 450295-016 / SMP	Batel	h: <sup>1</sup> Matrix:	Soil	OTUDY	
Units: mg/kg	Date Analyzed: 10/09/12 18:14	80.	KRUGATE RE			
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0284	0.0300	95	80-120	
4-Bromofluorobenzene		0.0285	0.0300	95	80-120	
Lab Batch #: 898390	Sample: 450295-016 / SMP	Batc	h: 1 Matrix:	Soil	1	
Units: mg/kg	Date Analyzed: 10/09/12 18:50	SU	RROGATE RI	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		95.9	99.8	96	70-135	
o-Terphenyl		44.9	49.9	90	70-135	
Lab Batch #: 898513	Sample: 450295-002 / SMP	Batcl	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 10/10/12 10:24	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	•	95.9	99.5	96	70-135	
o-Ternhenvl		45.1	49.8	91	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" #4 (RP-1510)

Lab Batch #: 000000         Date Analyzed:         10/10/12 10:52         SURROCATE RECOVERY STUDY           TPH By SW8015 Mod         Amount Found (B)         True (B)         Resourcy (B)         Control (B)         Flag           1-Chlorooctane         95.8         100         90         70:135         -           1-Chlorooctane         91.7         100         92         7	Vork Orders : 450295	Sample: 450295-004 / SMP	Bate	Project II	<b>D:</b> SUG Histo Soil	orical Relea	ises
TPH By SW8015 Mod Analytes         Amount IAI         True Amount IBI         True Recovery IBI         Control No.         Plag           1-Chlorooctane         95.8         100         96         70-135         -           0-Terphenyl         45.2         50.0         90         70-135         -           Lab Batch #: 898513         Sample: 450295-008 / SMP         Batch: 1         Matrix: Soil         -           TPH By SW8015 Mod Analytes         Amount [A]         True [B]         Recovery %R         Control 1.mits: Soil         Flag           1-Chlorooctane         91.7         100         92         70-135         -           1-Chlorooctane         91.7         100         92         70-135         -           1-Chlorooctane         91.7         100         92         70-135         -           Lab Batch #: 898513         Sample: 450295-010 / SMP         Batch: 1         Matrix: Soil         -           Units: mg/kg         Date Analyzed: 10/10/12 12:26         SURROGATE RECOVERY STUDY         -         Control Limits         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135	Units: mg/kg	Date Analyzed: 10/10/12 10:52	SU	RROGATE RI	ECOVERY	STUDY	
I-Chlorooctane         95.8         100         96         70-135           o-Terphenyl         45.2         50.0         90         70-135           Lab Batch #: 898513         Sample: 450295-008 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/10/12 12:27         SURROGATE RECOVERY STUDY           TPH By SW8015 Mod         Annount Found (A)         True (B)         Recovery %R (D)         Control %R (D)         Flag           1-Chlorooctane         91.7         100         92         70-135         Flag           o-Terphenyl         42.3         50.1         84         70-135         Flag           Units: mg/kg         Date Analyzed: 10/10/12 12:56         SURROGATE RECOVERY STUDY         Flag         Flag           TPH By SW8015 Mod         Amount Found (A)         True (A)         Recovery (D)         Control (A)         Flag           1-Chlorooctane         95.1         99.6         95         70-135         90-135           Lab Batch #: 89804         Sample: 450295-006 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/11/12 12:50         SURROGATE RECOVERY STUDY         100           I-Chlorooctane         95.1         <	TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
o-Terphenyl         45.2         50.0         90         70-135           Lab Batch #: 898513         Sample: 450295-008 / SMP         Batch: 1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/10/12 12:27         SURROGATE RECOVERY STUDY           TPH By SW8015 Mod         Amount Found         True Amount         Recovery (Al         Control IBI         Flag           1-Chlorooctane         91.7         100         92         70-135         -           c-Terphenyl         42.3         50.1         84         70-135         -           Lab Batch #: 898513         Sample: 450295-010 / SMP         Batch: 1         Matrix: Soil         -           TPH By SW8015 Mod         Amount Found         True (Al         IBI         Recovery (Linki: mg/kg         Control Linkis         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           -Terphenyl         43.8         49.8         88         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135         -           -Terphenyl         43.8         49.8         88         70-135         -           1-Chlorooctane         95.1         99.6	1-Chlorooctane	1 <b>11111</b> ; •••	95.8	100	96	70-135	
Lab Batch #:         Sample:         450295-008 / SMP         Batch:         1         Matrix:         Soil           Units: mg/kg         Date Analyzed:         10/10/12         12:27         SURROGATE         RECOVERY STUDY           TPH By SW8015 Mod         Amount [A]         True Amount [A]         Recovery [D]         Control Limits % R         Flag           1-Chlorooctane         91.7         100         92         70-135         -           o-Terphenyl         42.3         50.1         84         70-135         -           Lab Batch #:         898513         Sample:         450295-010 / SMP         Batch:         1         Matrix:         Soil           Units:         mg/kg         Date Analyzed:         10/10/12         12:56         SURROGATE         Recovery % R         Control Limits         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           <	o-Terphenyl		45.2	50.0	90	70-135	
Units:         mg/kg         Date Analyzed:         10/10/12 12:27         SURROGATE         RECOVERY STUDY           TPH By SW8015 Mod         Amount [A]         True Analytes         True Anount [A]         True Amount [B]         Recovery % R [D]         Control Limits % R [D]         Flag           1-Chlorooctane         91.7         100         92         70-135         -           o-Terphenyl         42.3         50.1         84         70-135         -           Lab Batch #:         898513         Sample: 450295-010 / SMP         Batch:         1         Matrix: Soil         -           Units:         mg/kg         Date Analyzed:         10/10/12 12:56         SURROGATE RECOVERY STUDY         -           TPH By SW8015 Mod         Amount [A]         True Amount [B]         Recovery % R [D]         Control Limits % R [D]         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.0         SURROGATE RECOVERY STUDY         -         -         -         -	Lab Batch #: 898513	Sample: 450295-008 / SMP	Batc	h: <sup>1</sup> Matrix:	Soil		1
TPH By SW8015 Mod Analytes         Amount Found [A]         True Amount [B]         Recovery %R [D]         Control Limits %R         Fag %R           1-Chlorooctane         91.7         100         92         70-135         -           o-Terphenyl         42.3         50.1         84         70-135         -           Lab Batch #: 898513         Sample: 450295-010 / SMP Units: mg/kg         Batch: 1         Matrix:Soil         -         -           TPH By SW8015 Mod Analytes         Amount [A]         True Amount [A]         Recovery %CR [D]         Control Limits         Fag %R           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135         -           1-Chlorooctane         95.1         99.6         95         70-135         -           0-Terphenyl         43.8         49.8         88         70-135         -           Lab Batch #: 898604         Sample: 450295-006 / SMP Units: mg/kg         Batch: 1         Matrix: Soil         -           I-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         89.0         99.9         89         70	Units: mg/kg	Date Analyzed: 10/10/12 12:27	SU	RROGATE RI	ECOVERY	STUDY	
Individes         Image         Image <thimage< th="">         Image         Image</thimage<>	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
orTerphenyl         John	1-Chlorooctane	Anarytes	91.7	100	92	70-135	
Lab Batch #: 898513         Sample: 450295-010 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/10/12 12:56         SURROGATE RECOVERY STUDY           TPH By SW8015 Mod         Amount [A]         True Found [A]         Manount [B]         Recovery %R [D]         Control Linnits %R [D]         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           o-Terphenyl         43.8         49.8         88         70-135         -           Lab Batch #: 898604         Sample: 450295-006 / SMP Units: mg/kg         Batch:         1         Matrix: Soil         -           TPH By SW8015 Mod Analytes         Amount [A]         True Found [A]         Recovery [D]         Control Linnits %R [D]         Flag           1-Chlorooctane         89.0         99.9         89         70-135         -           TPH By SW8015 Mod Analytes         Amount [A]         True Analytes         Recovery %R [D]         Control Linnits %R [D]         Flag           1-Chlorooctane         89.0         99.9         89         70-135         -           Lab Batch #: 898604         Sample: 450295-012 / SMP Linits mg/kg         Batch:         1         Matrix: Soil         -           Lab Batch	o-Terphenyl		42.3	50.1	84	70-135	
Units:         mg/kg         Date Analyzed:         10/10/12         12:56         SURROGATE RECOVERY STUDY           TPH By SW8015 Mod         Amount Found [A]         True Amount [B]         Recovery %R [D]         Control Limits %R         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           o-Terphenyl         43.8         49.8         88         70-135         -           Lab Batch #:         898604         Sample:         450295-006 / SMP         Batch:         1         Matrix: Soil         -           Units:         mg/kg         Date Analyzed:         10/11/12         12:50         SURROGATE RECOVERY STUDY         -           TPH By SW8015 Mod         Amount [A]         True Found [A]         Matrix: Soil         -         -           1-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         Sample:         43.9         50.0         88         70-135           Lab Batch #:         Bate Analyzed:	Lah Batch #: 898513	Sample: 450295-010 / SMP	Batc	h: 1 Matrix	: Soil		
TPH By SW8015 Mod         Amount Found [A]         True Amount [B]         True %R [D]         Control Limits %R         Flag           1-Chlorooctane         95.1         99.6         95         70-135         -           o-Terphenyl         43.8         49.8         88         70-135         -           Lab Batch #; 898604         Sample: 450295-006 / SMP         Batch:         1         Matrix: Soil         -           Units: mg/kg         Date Analyzed: 10/11/12 12:50         SURROGATE RECOVERY STUDY         -         Control Limits         Flag           TPH By SW8015 Mod         Amount [A]         True [B]         Recovery %R         Control Limits         Flag           1-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         89.0         99.9         89         70-135         -           1-Chlorooctane         89.0         99.9         89         70-135         -           0-Terphenyl         43.9         50.0         88         70-135         -           1-Chlorooctane         Sample: 450295-012 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/11/12 13:49         SURROGATE RECOVERY STUDY         <	Units: mg/kg	Date Analyzed: 10/10/12 12:56	SU	RROGATE RI	ECOVERY	STUDY	
Analytes         IDI         IDI           1-Chlorooctane         95.1         99.6         95         70-135           o-Terphenyl         43.8         49.8         88         70-135           Lab Batch #: 898604         Sample: 450295-006 / SMP         Batch: 1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/11/12 12:50         SURROGATE RECOVERY STUDY           TPH By SW8015 Mod         Amount Found [A]         True Amount [B]         Recovery %R         Control Limits w?R         Flag           1-Chlorooctane         89.0         99.9         89         70-135            0-Terphenyl         43.9         50.0         88         70-135            1-Chlorooctane         89.0         99.9         89         70-135            0-Terphenyl         43.9         50.0         88         70-135            1-Chlorooctane         Sample: 450295-012 / SMP         Batch: 1         Matrix: Soil            Lab Batch #: 898604         Sample: 10/11/12 13:49         SURROGATE RECOVERY STUDY             Minits: mg/kg         Date Analyzed: 10/11/12 13:49         SURROGATE RECOVERY STUDY             I-Chlorooctane	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1-Chlorooctane       95.1       99.6       95       70-135         o-Terphenyl       43.8       49.8       88       70-135         Lab Batch #: 898604       Sample: 450295-006 / SMP       Batch: 1       Matrix: Soil         Units: mg/kg       Date Analyzed: 10/11/12 12:50       SURROGATE RECOVERY STUDY         TPH By SW8015 Mod       Amount [A]       True [B]       Recovery %R [D]       Control Limits %R       Flag         1-Chlorooctane       89.0       99.9       89       70-135       Flag         o-Terphenyl       43.9       50.0       88       70-135       Flag         1-Chlorooctane       89.0       99.9       89       70-135       Flag         o-Terphenyl       43.9       50.0       88       70-135       To 135         Lab Batch #: 898604       Sample: 450295-012 / SMP       Batch: 1       Matrix: Soil       Matrix: Soil         Units: mg/kg       Date Analyzed: 10/11/12 13:49       SURROGATE RECOVERY STUDY       Control Limits %R       Flag         1-Chlorooctane       Recovery       Control Limits %R       %R       Flag         0-Terphenyl       43.5       50.0       88       70-135		Analytes					
Instrume         43.8         49.6         80         70-133           Lab Batch #: 898604         Sample: 450295-006 / SMP         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/11/12 12:50         SURROGATE RECOVERY STUDY         Flag           TPH By SW8015 Mod         Amount Found [A]         True Amount [A]         Recovery %R [D]         %R [D]         Control Limits %R         Flag           1-Chlorooctane         89.0         99.9         89         70-135            0-Terphenyl         43.9         50.0         88         70-135            Lab Batch #: 898604         Sample: 450295-012 / SMP Units: mg/kg         Batch:         1         Matrix: Soil           Units: mg/kg         Date Analyzed: 10/11/12 13:49         SURROGATE RECOVERY STUDY            TPH By SW8015 Mod         Amount Found [A]         True Amount [A]         Matrix: Soil            1-Chlorooctane         88.1         100         88         70-135            1-Chlorooctane         88.1         100         88         70-135            1-Chlorooctane         88.1         100         88         70-135	1-Chlorooctane		95.1	99.6	95	70-135	
Lab Batch #: 89804Sample: 450295-006 / SMPBatch: 1Matrix: SolUnits: mg/kgDate Analyzed: 10/11/12 12:50SURROGATERECOVERY STUDYTPH By SW8015 ModAmount [A]True [B]Recovery %R [D]Control Limits %R1-Chlorooctane89.099.98970-135o-Terphenyl43.950.08870-135Lab Batch #: 898604Sample: 450295-012 / SMP Date Analyzed: 10/11/12 13:49Batch: 1Matrix: SoilUnits: mg/kgDate Analyzed: 10/11/12 13:49SURROGATERECOVERY STUDYTPH By SW8015 ModAmount [A]True [B]Recovery %R [D]Control Limits1-Chlorooctane88.11008870-1350-Terphenyl43.550.08770-135		a 150205.006/01/D	43.8	49.8	88	/0-135	
Units: mg/kgDate Analyzed: 10/11/12 12:50SOCKOOGATE RECOVERT STODTTPH By SW8015 ModAmount [A]True Amount [B]Recovery %RControl Limits %RFlag1-Chlorooctane89.099.98970-135o-Terphenyl43.950.08870-135Lab Batch #: 898604Sample: 450295-012 / SMP Units: mg/kgBatch: 1Matrix: SoilUnits: mg/kgDate Analyzed: 10/11/12 13:49SURROGATE RECOVERY STUDYTPH By SW8015 ModAmount Found [A]True Amount [B]Recovery %R (D]Control Limits %R1-Chlorooctane88.11008870-1351-Chlorooctane88.11008870-135	Lab Batch #: 898604	Sample: 450295-006 / SMP	Batel	h: 1 Matrix:	Soil	STUDV	
Analytes         [A]         [B]         %R [D]         %R [D]         %R [D]         %R [D]           1-Chlorooctane         89.0         99.9         89         70-135            o-Terphenyl         43.9         50.0         88         70-135            Lab Batch #: 898604         Sample: 450295-012 / SMP         Batch:         1         Matrix: Soil            Units: mg/kg         Date Analyzed:         10/11/12 13:49         SURROGATE         Recovery %R         Control Limits         Flag           TPH By SW8015 Mod         Amount [A]         True Analytes         Recovery %R         Control Limits         Flag           1-Chlorooctane         88.1         100         88         70-135           o-Terphenyl         43.5         50.0         87         70-135	Units: mg/kg	Date Analyzed:         10/11/12 12:50           By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
Analytes         Image: Constraint of the second secon		Analyta	[A]	[B]	%R [D]	%R	
1-Chlorooctanc       39.0       99.9       89       70-135         o-Terphenyl       43.9       50.0       88       70-135         Lab Batch #: 898604       Sample: 450295-012 / SMP       Batch:       1       Matrix: Soil         Units: mg/kg       Date Analyzed: 10/11/12 13:49       SURROGATE RECOVERY STUDY         TPH By SW8015 Mod       Amount [A]       True Amount [A]       Recovery %R [D]       Control Limits %R       Flag         1-Chlorooctane       88.1       100       88       70-135       Flag         o-Terphenyl       43.5       50.0       87       70-135       Flag	1-Chlorooctane	Anarytes	80.0	00.0	60	70.125	
Lab Batch #: 898604     Sample: 450295-012 / SMP     Batch:     1     Matrix: Soil       Units: mg/kg     Date Analyzed:     10/11/12     13:49     SURROGATE     RECOVERY     STUDY       TPH By SW8015 Mod     Amount Found [A]     True Amount [A]     Recovery (B]     Control Limits %R     Flag       1-Chlorooctane     88.1     100     88     70-135       0-Terphenyl     43.5     50.0     87     70-135	o-Terphenyl		43.9	50.0	88	70-135	
Units: mg/kgDate Analyzed: 10/11/12 13:49SURROGATE RECOVERY STUDYTPH By SW8015 ModAmount Found [A]True Amount [B]Control Units: %RI-Chlorooctane88.11008870-135o-Terphenyl43.550.08770-135	Lab Batch #: 898604	Sample: 450295-012 / SMP	Batc	h: 1 Matrix	Soil		
TPH By SW8015 ModAmount Found [A]True Amount [B]Recovery %R [D]Control Limits %RFlag1-Chlorooctane88.11008870-135o-Terphenyl43.550.08770.135	Units: mg/kg	Date Analyzed: 10/11/12 13:49	SU	RROGATE RI	ECOVERY	STUDY	
Analytes         100         88         70-135           o-Terphenyl         43.5         50.0         87         70-135	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
o-Terphenyl         43.5         50.0         87         70-135	1-Chlorooctape	Analytes	88.1	100	δδ [m]	70-135	
	o-Terphenyl		43.5	50.0	87	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" #4 (RP-1510)

Vork Orders : 450295 Lab Batch #: 898604	5, Sample: 450295-014 / SMF	Batch	Project II n: <sup>1</sup> Matrix:	<b>D:</b> SUG Histo Soil	orical Relea	ses
<b>Units:</b> mg/kg	Date Analyzed: 10/11/12 14:19	SU	RROGATE RI	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 Chlorooctana	Analytes	89.4	100	00	70.125	
o-Terphenyl		43.6	50.1	87	70-135	
Lab Datab # 808308	Sec. 628365 1 BLK / B		. 1 Motriv	Solid	10 100	
Lao Balen #: 070370	<b>Sample:</b> 028303-1-DEK / D	SLK Batch	RROGATE RE	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1,4-Difluorobenzene		0.0265	0.0300	88	80-120	
4-Bromofluorobenzene		0.0280	0.0300	93	80-120	
Lab Batch #: 898390	Sample: 628359-1-BLK / B	LK Batch	n: <sup>1</sup> Matrix:	Solid	~~~~~	
Units: mg/kg	Date Analyzed: 10/09/12 18:21	SU	RROGATE RI	ECOVERY	STUDY	
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		94.2	100	94	70-135	
o-Terphenyl		44.9	50.2	89	70-135	
Lab Batch #: 898513	Sample: 628376-1-BLK / B	SLK Batel	n: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 10/10/12 02:07	SU	RROGATE RH	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			լոյ		
1-Chlorooctane		92.6	99.8	93	70-135	
o-Terphenyl		45.3	49.9	91	70-135	
Lab Batch #: 898604	Sample: 628489-1-BLK / B	LK Batel	n: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 10/11/12 11:50	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		90.2	100	90	70-135	
o-Terphenyl		45.4	50.0	91	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" #4 (RP-1510)

Vork Orders : 450295	, Somple: 628365-1-BKS/BF	S Botch	Project II	<b>):</b> SUG Histo Solid	orical Relea	ses
Units: mg/kg	Date Analyzed: 10/09/12 15:45	SUR	ROGATE RE	ECOVERY S	STUDY	
BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			נען		
1,4-Difluorobenzene		0.0336	0.0300	112	80-120	
4-Bromofluorobenzene		0.0323	0.0300	108	80-120	
Lab Batch #: 898390	Sample: 628359-1-BKS / BK	KS Batch:	1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 10/09/12 17:19	SUR	ROGATE RE	COVERY S	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Tinui y teo	99.7	100	100	70-135	
o-Terphenyl		50.8	50.0	102	70-135	
Lah Ratch #• 898513	Sample: 628376-1-BKS / BK	CS Batch:	1 Matrix	Solid	<u>                                      </u>	
Lab Datch #. 0,0010	Date Analyzed: 10/10/12.01:00	SUR	ROGATE RE	ECOVERY S	STUDY	
TPH ]	By SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags
	Analytes	[A]	լոյ	[D]	70K	
1-Chlorooctane		95.8	100	96	70-135	
o-Terphenyl		50.9	50.0	102	70-135	
Lab Batch #: 898604	Sample: 628489-1-BKS / BF	KS Batch:	1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 10/11/12 10:52	SUR	ROGATE RF	<b>ECOVERY</b> S	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			נען		
1-Chlorooctane		98.5	100	99	70-135	
o-1erpnenyi		52.7	50.1	105	70-135	
Lab Batch #: 898398						
	Sample: 628365-1-BSD / BS	SD Batch:	1 Matrix:	Solid		
Units: mg/kg	Sample: 628365-1-BSD / BS Date Analyzed: 10/09/12 16:00	SD Batch: SUR	1 Matrix: ROGATE RE	Solid	STUDY	
Units: mg/kg BTE2	Sample: 628365-1-BSD / BS Date Analyzed: 10/09/12 16:00 X by EPA 8021B Analytes	SD Batch: SUR Amount Found [A]	1 Matrix: ROGATE RF True Amount [B]	Solid COVERY S Recovery %R [D]	STUDY Control Limits %R	Flags
Units: mg/kg BTEX 1,4-Difluorobenzene	Sample: 628365-1-BSD / BS Date Analyzed: 10/09/12 16:00 X by EPA 8021B Analytes	SD Batch: SUR Amount [A] 0.0280	1 Matrix: ROGATE RE True Amount [B] 0.0300	Solid ECOVERY S Recovery %R [D] 93	STUDY Control Limits %R 80-120	Flags

\* Surrogate outside of Laboratory QC limits

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

\*\*\* Poor recoveries due to dilution



Project Name: Trunk "O" #4 (RP-1510)

Vork Orders: 450295	, ,		Project II	<b>D:</b> SUG Histo	orical Relea	ses
Lab Batch #: 898390	Sample: 028359-1-850/8	SD Batch	POCATE RE	Solid	STUDY	
Units: mg/kg	<b>By SW8015 Mod</b>	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		103	100	103	70-135	
o-Terphenyl		52.3	50.1	104	70-135	
Lab Batch #: 898513	Sample: 628376-1-BSD / B	SD Batch	: 1 Matrix:	Solid		
Units: mg/kg	Date Analyzed: 10/10/12 01:37	SUF	RROGATE RE	ECOVERY	STUDY	
TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Anaryus	96.4	99.6	97	70-135	
o-Terphenyl		50.8	49.8	102	70-135	
Lab Datab #, 898604	Somelor 628489-1-BSD / B		1 Motriv	Solid		
	Data Analyzed, 10/11/12 11:21	SUF SUF	ROGATE RE	ECOVERY S	STUDY	
Units: mg/kg	Date Analyzed: 10/11/12 11.21					
TPH I	By SW8015 Mod Analvtes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		97.6	99.8	98	70-135	
o-Terphenyl		52.7	49.9	106	70-135	
Lab Batch #: 898390	Sample: 450295-016 S / MS	S Batch	: 1 Matrix	Soil		
Units: mg/kg	Date Analyzed: 10/09/12 19:24	SUF	RROGATE RI	ECOVERY	STUDY	
ТРН І	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1 Chlorosotona	Analytes	05.0	100	0/C	70.125	
a-Ternhenvl		95.9 47.0	50.0	90	/0-155 70_135	
<b>1 D 4</b> 1 4, 909209	S 450205 002 S / M		1 Madatha	20	/0-155	
Lab Batch #: 070370	Sample: 430293-002 57 141		POCATE RE	COVERY	STUDY	
Units: mg/kg	Date Analyzed: 10/09/12 19:28					
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0316	0.0300	105	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" #4 (RP-1510)

Vork Orders : 450295 Lab Batch #: 898513	5, Sample: 450295-002 S / M	S Batcl	Project II h: <sup>1</sup> Matrix:	<b>D: SUG Histo</b> Soil	orical Relea	ises
Units: mg/kg	Date Analyzed: 10/10/12 14:30	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytes	101	100	101	70.135	
o-Terphenyl		50.6	50.2	101	70-135	
Lah Datah # 202604	Samelar 450295 006 S / M	S Detai	h. 1 Motriv	Soil	10 100	
Units: mg/kg	Date Analyzed: 10/11/12 21:15	S Batch	RROGATE RI	ECOVERY S	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	Analytes	101	100	101	70.125	
o-Terphenyl		54.2	50.0	101	70-135	
L - L D - 4 - L # 908208	S 450205 002 SD / 1			Soil	10 100	
Lab Batch #: 090390	Sample: 430293-002 SD / 1	SU Batch	RROGATE RE	COVERV 9	STUDY	
Units: mg/kg	Date Analyzed: 10/09/12 19:43	50			51001	
BTE:	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0286	0.0300	95	80-120	
4-Bromofluorobenzene		0.0301	0.0300	100	80-120	
Lab Batch #: 898390	Sample: 450295-016 SD / I	MSD Batcl	h: 1 Matrix:	Soil		1
<b>Units:</b> mg/kg	<b>Date Analyzed:</b> 10/09/12 19:52	SU	RROGATE RI	ECOVERY	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
	Analytes			[D]		
1-Chlorooctane		101	99.8	101	70-135	
o-Terphenyl		51.7	49.9	104	70-135	
Lab Batch #: 898513	Sample: 450295-002 SD / I	MSD Batcl	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 10/10/12 14:58	SU	RROGATE RI	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	-	101	100	101	70-135	
o-Terphenyl		50.7	50.0	101	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" #4 (RP-1510)

Work Orders : 450295,			Project II	D: SUG Histo	orical Relea	.ses
Lab Batch #: 898604	Sample: 450295-006 SD / M	MSD Bate	h: <sup>1</sup> Matrix:	Soil		
Units: mg/kg	Date Analyzed: 10/11/12 21:46	SU	RROGATE RE	ECOVERY S	STUDY	
TPH B	y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
1	Analytes			נשן		
1-Chlorooctane		94.6	100	95	70-135	
o-Terphenyl		50.6	50.1	101	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" #4 (RP-1510)

Work Order #: 450295							Proj	ject ID: S	SUG Histor	ical Releas	ses
Analyst: KEB	Da	ate Prepar	ed: 10/09/201	2			Date A	nalyzed: 1	0/09/2012		
Lab Batch ID: 898398 Sample: 628365-1-E	BKS	Batcl	h#: 1					Matrix: S	olid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	SPIKE DUPI	JCATE 1	RECOVE	ERY STUD	Y	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000994	0.0994	0.104	105	0.100	0.0814	81	24	70-130	35	
Toluene	< 0.00199	0.0994	0.106	107	0.100	0.0808	81	27	70-130	35	
Ethylbenzene	<0.000994	0.0994	0.105	106	0.100	0.0802	80	27	71-129	35	
m,p-Xylenes	<0.00199	0.199	0.223	112	0.201	0.171	85	26	70-135	35	
o-Xylene	< 0.000994	0.0994	0.108	109	0.100	0.0844	84	25	71-133	35	
Analyst: TTE	Da	ate Prepar	ed: 10/08/201	2			Date A	nalyzed: 1	0/08/2012		
Lab Batch ID: 898337 Sample: 628330-1-E	BKS	Batcl	<b>h #:</b> 1					Matrix: S	olid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / B	BLANK S	SPIKE DUPI	JCATE 1	RECOVE	RY 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	<0.996	99.6	94.5	95	102	98.4	96	4	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" #4 (RP-1510)

Work Order #: 450295							Proj	ject ID: S	SUG Histori	ical Releas	ses
Analyst: KEB	Da	ate Prepar	red: 10/09/201	12			Date A	nalyzed: 1	0/09/2012		
Lab Batch ID: 898390 Sample: 628359-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / H	BLANK S	PIKE DUPI	LICATE I	RECOVE	ERY STUD	Y	
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	1010	101	1000	1030	103	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	969	97	1000	985	99	2	70-135	35	
Analyst: KEB	Da	ate Prepar	red: 10/09/201	12			Date A	nalyzed: 1	0/10/2012		
Lab Batch ID: 898513 Sample: 628376-1-	BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / H	BLANK S	PIKE DUPI	LICATE I	RECOVE	ERY STUD	Y	
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
J							1 1				
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	946	95	996	928	93	2	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





## Project Name: Trunk "O" #4 (RP-1510)

<b>Work Order #:</b> 450295								Pro	ject ID: S	SUG Histori	cal Releas	ses
Analyst: KEB		Da	ate Prepar	red: 10/11/201	2			Date A	nalyzed: 1	0/11/2012		
Lab Batch ID: 898604	Sample: 628489-1-B	KS	Bate	h #: 1					Matrix: S	Solid		
Units: mg/kg			BLAN	K /BLANK S	SPIKE / H	BLANK S	PIKE DUPL	ICATE	RECOVE	ERY STUD	Y	
TPH By SW80	15 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
C6-C12 Gasoline Range Hydroca	arbons	<15.0	1000	956	96	998	986	99	3	70-135	35	
C12-C28 Diesel Range Hydrocar	bons	<15.0	1000	990	99	998	1000	100	1	70-135	35	

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



Chloride

## Form 3 - MS Recoveries





Work Order #: 450295							
Lab Batch #: 898337				Pro	oject ID:	SUG Histor	ical Releas
Date Analyzed: 10/08/2012	Date P	repared: 10/0	8/2012	A	nalyst: T	ГЕ	
QC- Sample ID: 450295-001 S		Batch #: 1		I	Matrix: So	oil	
Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECOV	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		<1.00	100	96.5	97	80-120	
Lab Batch #: 898337							
Date Analyzed: 10/08/2012	Date P	repared: 10/0	8/2012	A	nalyst: T	ГЕ	
QC- Sample ID: 450296-002 S		Batch #: 1		I	Matrix: So	oil	
Reporting Units: mg/kg		MATE	RIX / MA	TRIX SPIKE	RECOV	VERY STU	DY
Inorganic Anions by EPA 300		Parent Sample Result	Spike Added	Spiked Sample Result	%R [D]	Control Limits %R	Flag
Analytes		[A]	[B]	101	(~)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

3.41

101

103

99

80-120

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

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries

## Project Name: Trunk "O" #4 (RP-1510)



<b>Work Order # :</b> 450295						Project I	D: SUG H	listorical l	Releases		
Lab Batch ID: 898398	QC- Sample ID:	450295	-002 S	Ba	tch #:	1 Matri	<b>x:</b> Soil				
Date Analyzed: 10/09/2012	Date Prepared:	10/09/2	012	An	alyst:	KEB					
Reporting Units: mg/kg		Μ	ATRIX 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	<0.00109	0.109	0.0836	77	0.109	0.0899	82	7	70-130	35	
Toluene	< 0.00218	0.109	0.0893	82	0.109	0.0930	85	4	70-130	35	
Ethylbenzene	< 0.00109	0.109	0.0782	72	0.109	0.0863	79	10	71-129	35	
m,p-Xylenes	< 0.00218	0.218	0.159	73	0.218	0.179	82	12	70-135	35	
o-Xylene	< 0.00109	0.109	0.0772	71	0.109	0.0883	81	13	71-133	35	Ì
Lab Batch ID: 898390 Date Analyzed: 10/09/2012	QC- Sample ID: Date Prepared:	450295- 10/09/2	-016 S 012	Ba An	tch #: alyst:	1 <b>Matri</b> KEB	<b>x:</b> Soil				
Reporting Units: mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample Posult [F]	Spiked Dup. % P	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	[B]	[0]	[D]	[E]	Kesutt [F]	[G]	/0	701		
C6-C12 Gasoline Range Hydrocarbons	<15.9	1060	1010	95	1060	1070	101	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.9	1060	973	92	1060	1040	98	7	70-135	35	
Lab Batch ID: 898513 Date Analyzed: 10/10/2012	QC- Sample ID: Date Prepared:	450295- 10/09/2	-002 S 012	Ba An	tch #: alyst:	1 <b>Matri</b> KEB	<b>x:</b> Soil				
Reporting Units: mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	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	<16.3	1090	1090	100	1080	1050	97	4	70-135	35	

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



## Form 3 - MS / MSD Recoveries

### Project Name: Trunk "O" #4 (RP-1510)



Work Order #: 450295						Project I	D: SUG H	istorical R	Releases		
Lab Batch ID: 898604 Q	C- Sample ID:	450295-	006 S	Ba	tch #:	1 Matri	x: Soil				
Date Analyzed: 10/11/2012	Date Prepared:	10/11/20	012	An	alyst:	KEB					
Reporting Units: mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY S	STUDY		
TPH By SW8015 Mod	Parent Sample	Enilto	Spiked Sample	Spiked	Cuilto	Duplicate	Spiked	DDD	Control	Control	Flag
Analytas	Result	Added	[C]	%R	Added	Result [F]	%R	%	%R	%RPD	riag
Analytes		[B]		נשן	[E]		[G]				
C6-C12 Gasoline Range Hydrocarbons	<15.6	1040	1030	99	1040	992	95	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.6	1040	1070	103	1040	1000	96	7	70-135	35	

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

Page 22 of 26



## Sample Duplicate Recovery



## Project Name: Trunk "O" #4 (RP-1510)

Work Order #: 450295

Lab Batch #: 898413 Date Analyzed: 10/09/2012 13:50 QC- Sample ID: 450295-001 D	Date Prepar Batch	ed: 10/09/2012	2 Anal Mat	<b>Project I</b> l <b>yst:</b> WRU <b>rix:</b> Soil	D: SUG His	torical Rele	ases
<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>B</b> ]				
Percent Moisture		5.39	5.51	2	15		

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

## 450295

Page

<u>1</u> of <u>2</u>

Company Name:	Basin Environmental Service 1	echno	logies	F	hon	e #:		1		5	75-3	896-	2378	3 · · ·					<u> </u>		AN		.YS	IS	RE	QU	ES]	Г Сміт		、			
ddress:	P.O. 301 Lovington, NM, 882	60		F	ax #	•				575	5-39	6-14	429				:	. <b>\</b> . [			9 0 	гз 	pe 	сп 	y 1			) 	NO.	₽	[ ]		
contact Person:	Rose Slade (SUG) Joel Low	ry (Bas	sin)	E	E-mai	il:			pn ros	n@b e.sl	asi ade	nen @s	v.co ug.c	om om					10B / 20										141	ر چ		P	2
voice to:		Southe	ern Un	ion (	Gas	Serv	ices												09 10	이 문									Alkalin	Aihain		standa	
roject #:	SUG Historical Relea	ses		F	Proje	ct Nar	ne:				Tru (F	unk RP-	"O" : 1510	#4 ))		324	524	¥	b Se F	Pb Se									q	, <sup>1</sup>		t from	
roject Location: nclude state)	Lea County, New Me	(ico		<b>0</b> , 0,	Samp Signa	iler iture:	В	s ki	ly;	Ľ	S	la	ku	nd	2.	8260B / (	8260B / 6	/ DRO /	a Cd Cr F	a Cd Cr					024 2700/625		80					differen	
		IERS	nount		MA				PR	ESE ME	RV/		/E	SA		8/602/	/ 602 /	TX1005	Ag As B	Ag As E	s	olatiles	les	1 0000		808	81A/6		Tent N-O	K, TDS		Time i	
LAB # ( LAB USE ONLY )	FIELD CODE	¢ CONTAIN	/olume/Am	NATER		AIR SLUDGE		ц Ц	-INO3	H₂SO₄	VaOH	Ш	NONE	DATE	IME	ATBE 8021E	3TEX 8021B	PH 418.1/	otal Metals /	CLP Metals	CLP Volatile	CLP Semi V	CLP Pesticio	CI CI	C/MS Sami	CB's 8082 /	esticides 80	30D, TSS, pł	Agisture Cor	la, Ca, Mg,		Tirm Around	
	TT-1 @ Surface	1			x			Ē				x		10/:	3 83	0										1			Ň	$\frac{1}{2}$		┦╴	
	TT-1 @ 3.5'	1			x							х		10/	3 84	0	x	x									Τ		X		$\Box$		
	TT-2 @ Surface	1			x			L				X		10/:	3 90	0								<i></i>					×	<			
	TT-2 @ 3.5'	1_1			x			L				x		10/	3 91	0	X	x											×				
	TT-3 @ Surface	1			x							x		10/	3 93	0									$\bot$				×	<u>(</u>	Ш		
	TT-3 @ 3.5'	1			x		<u> </u>		<u> </u>			X		10/	3 94	0	X	x									<u> </u> _		×			⊥_	1
	TT-4 @ Surface	1			<u>x</u>			╞		-		X	·	10/	3 100	<u> </u>			_							_		Щ	_ <u> </u>	<u>(</u>	$\square$	⊥_	<u>_</u>
	TT-4 @ 3.5'	1			×		<u> </u>	╞				<u>x</u>	-	10/	3 101	0	X	<u>×</u>	+-					$\perp$			<u> </u> _		×	4			_
	TT-5 @ Surface	1	<u> </u>	<u> </u>	x			╞				X		10/	3 103	0			_						_		<u> </u>	$\square$	_ <u>+</u> ×	4	$\left  \right $	4_	
	TT-5 @ 3.5'	1		╞	X				+			X		10/	3 104	0	X	<u>x</u>				:	4				+-	$\square$	×	4	$\square$	+	
	TT-6 @ Surface	1 Recei	vod bu		X				)ata			X		10/	3 110	0													X	<u>(</u>	Ļ		
Bully C	Company: Date: Time:	TR	ved by.	lah	<u>~</u>	ompa	ny.	//	) <i>ate</i> ) <i>/ 0</i> 3	-	07 Tin	ne:		NSI DBS OR		ړې د مې	. L <b>/</b>	AB L ONL	ISE .Y				Dry	Weial	nt Bas	sis Re	equire	d		1.	5		
TROG Ha	hn 1905/12/130		y.						2-4-	-			0	BS		°C Inta °C Hea	act adsp	Y ace <u>Y</u>	/ N / N /	<u>'NA</u>			TRR	P Re	port F	Requi	red						
lelinquishéd by:	Company: Date: Time:	Recei	ved by:		nn nn	ompa L	ny:	· E	Date	ะ Հมา	l in	ne: ביו	יי ס מיני	BS _		°d							Che	ck if S	Specia	al Rep	porting	g Limit	s Are I	Neede	d ·		

Final 1.000

I A	۱B	Order	ID	#

# 450295

Page

#### **2** of 2

																						:												
					Phor	ne #:						-					Ì					AN	AL	YS	IS F	REC	QUE	ST					:	
Company Name:	Basin Environmental Service Te	chno	ogies								575	-39	6-23	78					(	Cir	cle	0	r S	ре	cify	y N	let	ho	d N	lo.)	,			
Address:	P.O. 301 Lovington, NM, 8826	0			Fax	#:				5	75-3	396-	-142	9		:				0.7			: [											
Contact Person:	Rose Slade (SUG) Joel Lowr	y (Bas	in)		E-ma	ail:			rc rc	om@ ose.s	)bas slad	sine le@	env. )sug	00 .CC	m om					10B/20										nity			.: "	ard
Invoice to:	S	outhe	rn Un	io <u>n</u>	Gas	s Se	rvic	es				•	:		0.					99 P	모				· ·					Alkali				stand
Project #:	SUG Historical Releas	es			Proj	ect N	ame				Т	Гrur (Ri	אר "C P-15	)" # 10]	<del>1</del> 4 )		624	324	2 H	ob Se I	Pb Se									04-P.	,			it from
Project Location: (include state)	Lea County, New Mexi	со			Sam Sign	pler ature	. 7	въ	lih	, 1 K	2	<u>L</u>	aik	w	ool j	1.	8260B /	8260B / 6 / DRO / <sup>-</sup>	/ DRO /	a Cd Cr I	a Cd Cr F				624	270C/62		308		NO <sub>2</sub> -N, I	ю, EC			if differer
		ERS	ount		M	ATR	IX		:	PRE:	SER IETI	VA1 HOE	TIVE )	:	SAM	PLING	/ 602 /	/ 602 /	TX1005	a As B	Ag As I	5	olatiles	es	260B/	Vol. 8	608	81A/6		03-N,	, TD			Time
LAB #	FIELD CODE	NTAIN	me/Amo	ER			Ы			en contraction of the second s	4	_	Ш		ш		E 8021B	(8021B	418.1 / T	Metals A	Metals /	Volatiles	Semi Vo	Pesticid	IS Vol 8	IS Semi.	s 8082/	cides 80	TSS, pt	, SO4, N	Ca, Mg, I			Around
(LAB USE ONLY		00 #	Volui	WAT	SOIL	AIR	SLUI		Ч				<u>y</u> Z		DATI	TIME	MTB	BTEY	H	Total	TCLF	TCLF	1 U U				PCB	Pesti	BOD		Na, (		$\bot$	Hold
	TT-6 @ 3.5'	1			Х							X			10/3	1100		x	x								ļ	$\square$	$\downarrow$	X			4	$\square$
	TT-7 @ Surface	1			х					1		X			10/3	1120											ŀ	$\square$	$\downarrow$	X		$\square$	:	
	TT-7 @ 3.5'	1			Х	_				:		X	(		10/3	1130		х	x		1							Ц		<u>x</u>	1	$\square$	$\downarrow$	·
	TT-8 @ Surface	1			x							X			10/3	1150														X			$\downarrow$	
	TT-8 @ 3.5'	1			x							X			10/3	1200	)	x	x										<u> </u>	X				
								_																										
				-				-																										
				1																														
							_																										ľ	
		~																$\square$															::	
Relinquished by	Company: Date: Time: Slackword (0.5 7:15	Recei	ved by	: _ (1	al	Com	pan	y:	Da /0/	ate:	Ċ	Time クテノ	e: //5	IN O C	IST BS OR	0 0	d	Ľ		JSE _Y		RE	MA	RKS	): )//oish	t Por	in Po	guirod						
Relinquished by	: Company: Date: Time: h 19/05/12/130	Recei	ved\by	<i>"</i> .`	(	Com	pan	y:	Da	ate:		Time	e:		BS OR	0 0	d Inta d He	act adsp	Y ace	<u>′/N</u> <u>′/N</u>	/ <u>NA</u>			TRF	Rep	n Das port F	Requir	ed						
Relinquished by	r: Company: Date: Time:	Recei	ived by	r: A	sole and	Com	pan	y:	Di 101	ate: Glo	2	//::	e: 30	ייי 0 ( 0 (	BS OR	o	d ℃Loį	g-in f	Revie	w				Che	ck If S	pecia	al Rep	orting	Limits	s Are N	leede	d		
Submittal of samp	les constitutes agreement to Terms and Condition	ons				_			'	,							Ca	rrier	#															

**ORIGINAL COPY** 

Final 1.000



## **XENCO** Laboratories



## Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- MonahanAcceptable Temperature Range: 0 - 6 degCDate/ Time Received: 10/05/2012 11:30:00 AMAir and Metal samples Acceptable Range: AmbientWork Order #: 450295Temperature Measuring device used :

Sample Receipt Checklis	st Comments
#1 *Temperature of cooler(s)?	7.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	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?	Νο
#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: \_\_\_\_\_

District 1 1625 N. French Dr., Hobbs, NM 88240 District 11	State of New Mexico Energy Minerals and Natural Resources A Revised Octobe								
District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	Oil Conser 1220 South Santa Fe	vation Division St. Francis Dr. NM 87505	AUG 2007	Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form					
Trunk "0" # H F	Release Notification	and Corrective A	dian A	V/					
		OPERATOR 2.		al Report Final Report					
Name of Company Southern U	Union Gas Services, Ltd.	Contact	61 81 LL 9	Tony Savoie					
Address P.O. Bo	ox 1226 Jal, N.M. 88252	Telephone No.		505-395-2116					
Facility Name	Lea County Field Dept.	Facility Type		Natural Gas Gathering					
Surface Owner: Wanda Jones	Mineral Owner: I	Fee	Lease N	lo.					
	LOCATION	N OF RELEASE							
Unit LetterSectionTownshipRarF3422S36	nge Feet from the North/ 6E	South Line Feet from the	East/West Line	County Lea					
	Latitude N32 20.921 NATURE	Longitude W103 15.29 OF RELEASE	6						
Type of Release : Crude Oil, Produced wate	er, and Natural Gas	Volume of Release: 15 Bbl: Fluid and 45 MCF Nat. Gas	s Volume F and produ	Recovered 0 Bbls crude Oil					
Source of Release : 30" Natural Gas Pipelir	ne	Date and Hour of Occurrence	e Date and	Hour of Discovery 7/21/07					
Was Immediate Notice Given?		If YES. To Whom?	Time: 7:0	0 p.m.					
X Yes	s 🗌 No 🗌 Not Required	NMOCD on call representat	ive						
By Whom? Tony Savoie		Date and Hour: 7/21/07 7:15 p.m.							
Was a Watercourse Reached?	es 🖾 No	If YES, Volume Impacting the Watercourse.							
If a Watercourse was Impacted, Describe F	`ul <b>l</b> v.*								
Describe Cause of Problem and Remed A 30" Natural Gas gathering line devel and natural gas. Crews began shutting t arrived on site.	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. All of the fluid lost had soaked into the ground before the vacuum trucks								
Describe Area Affected and Cleanup Action was impacted by the release. No cleanup ac The final composition will follow the NMO	n Taken. Approximately 600 Sections were taken at the time of	quare feet of pasture land and the release.	approximately 44 s	quare feet of caliche lease road					
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									
		OIL CONSERVATION DIVISION							
Signature: Tony Savoie		Filin	DO ENCO						
Printed Name: i one Drune	John A. Savoie	Approved by District Supervis		50-					
Title:	Remediation Supervisor	Approval Date: Q - 7. D	7 Expiration	Date: 17 - 7,87					
				Dait. (0 - C - C - C - C - C - C - C - C - C -					
E-mail Address: tony.	savoie@sug.com	Conditions of Approval:	121 1	Attached					
* Attach Additional Sheets If Necessarv	016: 303-393-2116	HURSMIT CINAL C"	111 01						
		SUPPORTING DOC	UNENTATION	RP# 1510					

Form C-141 Revised October 10, 2003

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**

			<b>OPERATOR</b>	Initial Report	🛛 Final Report	
Name of Company	Southern Union Ga	s Services, Ltd.	Contact	Cry	vstal Callaway	
Address 801 S. Loop 464, Monahans, TX, 79756			Telephone No.	(817) 302-9407		
Facility Name: Trunk	: "O" #4 (RP-1510) Lea Co	ounty Field Dept.	Facility Type	Natur	al Gas Gathering	
		1				
Surface Owner Wanda Jones Mineral Owner:			Fee	Lease No.		

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	34	22S	36E					Lea

Latitude N32 20.921

Longitude W103 15.296

## NATURE OF RELEASE

Type of Release Crude Oil, Produced water and Natural Gas	Volume of Release 15 Bbls Volume Recovered 0 Bbls crud					
	Fluid and 45 MCF Nat. Gas	produced water				
Source of Release 30" Natural Gas Pipeline	Date and Hour of Occurrence	Date and Hour of Discovery 7/21/07				
•	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 Wat	ercourse.				
🗌 Yes 🖾 No						
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. All of the fluid lost had soaked into the ground before the vacuum trucks arrived on site.

Describe Area Affected and Cleanup Action Taken. Approximately 600 Square feet of pasture land and approximately 44 square feet of caliche lease road was impacted by the release. No cleanup actions were taken at the time of the release. The final remediation will follow the NMOCD guidelines for the remediation of leaks and spills.

Prior to June 22, 2012, remediation activities were conducted at the Trunk "O" #4 Release Site by an environmental contractor that is no longer affiliated with the site. On October 3, 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.

Signature: And Coloure	<u>OIL CONSER</u>	VATION DIVISION
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: 10/27/2014 Phone: (817) 302-9407		