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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

100

OPERATOR

Initial Report ☒ Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Rose Slade
Address	801 S. Loop 464, Monahans, TX, 79756	Telephone No.	432-940-5147
Facility Name: S & W 4" Lateral (RP-1018) Lea Co. Field Dept.		Facility Type	Natural Gas Gathering

Surface Owner State of New Mexico	Mineral Owner: State of New Mexico	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	16	20S	37E					Lea

Latitude N32 34.160 Longitude W103 15.249

NATURE OF RELEASE

Type of Release Natural Gas, gas liquids and iron sulfide	Volume of Release 22.5 mcf nat. gas, 15 bbls nat. gas liquids	Volume Recovered 0 bbls
Source of Release Pipeline	Date and Hour of Occurrence 5/27/06 Hour unknown.	Date and Hour of Discovery 5/27/06 Hour unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom? Tony Savoie	Date and Hour: 7/21/07	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken:
The 4" steel gathering pipeline, operating at 20 psi developed a leak, the line was blocked in and allowed to blow down on 5/27/06. Repair crews replaced the affected area of pipe by replacing approximately 400 ft. of steel pipe with poly-pipe on 8/11/06. Normal operating pressure on the line is 20 psi to 30 psi, with a potential H_2S content of 4000 ppm.

Describe Area Affected and Cleanup Action Taken. An area measuring approximately 2175 ft^2 of pasture land was affected around the immediate leak area with a mist of iron sulfide and natural gas liquids. No immediate cleanup action was taken. The impacted soil will be remediated using the NMOCD recommended guidelines.

On or around August 14, 2006, remediation activities were conducted at the S & W 4" Lateral Release Site by an environmental contractor that is no longer affiliated with the site. During remediation activities at least 132 yd^3 of impacted material was excavated from the release site and hauled to SUGs Landfarm. On December 20, 2012, the site was revisited in an effort to determine if soil exhibiting sulfide, 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: Rose L Slade	OIL CONSERVATION DIVISION
Printed Name: Rose L. Slade	Approved by District Supervisor: Environmental Specialist
Title: EHS Compliance Specialist	Approval Date: 3/1/13 Expiration Date: —
E-mail Address: rose.slade@sug.com	Conditions of Approval: —
Date: Phone: 432-940-5147(cell)	IRP-1018

MAR 0 4 2013

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

Effective Solutions

REMEDIATION SUMMARY &

SITE CLOSURE REQUEST

SOUTHERN UNION GAS SERVICES
S & W 4" LATERAL (1RP-1018)
HISTORICAL RELEASE SITE
Lea County, New Mexico
Unit Letter "J" (NW/SE), Section 16, Township 20 South, Range 37 East
Latitude 32° 34.160' North, Longitude 103° 15.249' West
NMOCD Reference # 1RP-1018

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

February 2013

Joel W. Lowry
Project Manager

TABLE OF CONTENTS

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 S & W 4" Lateral Historical Release Site (1RP-1018). The legal description of the release site is Unit Letter "J" (NW/SE), Section 16, Township 20 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 34.160' North latitude and 103° 15.249' West longitude. The property affected by the release is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO). Please reference Figure 1 for a "Site Location Map".

On May 22, 2008, Southern Union discovered a release had occurred on the S & W 4" Lateral Pipeline. The "Release Notification and Corrective Action Form" (Form C-141) indicated failure of a section of four-inch (4") steel natural gas gathering pipeline resulted in the release of twenty-two and one half (22.5) Mcf of natural gas and fifteen barrels (15 bbls) of natural gas liquids, including iron sulfide. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on August 28, 2006. During initial response activites, the line was blocked in and allowed to blow down. The affected segmet of pipe was replaced on September 11, 2006. The Form C-141 indicated a mist of iron sulfide and natural gas liquids affected approximately two thousand, one hundred and seventy-five square feet (2,175 ft^2) of pasture land. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix C.

Between August 4 and September 18, 2006, remediation activities were conducted at the S & W 4" Lateral Historical Release Site by an environmental contractor that is no longer affiliated with the site. Work records indicate at least one hundred and thirty-two cubic yards (132 yd^3) of impacted material was transported to Southern Union's Landfarm (Discharge Permit # NM-02-0019) for treatment during this time.

On June 22, 2012, at the request of Southern Union, Basin assumed remediation responsibilities at the S & W 4" Lateral 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 16, Township 20 South, Range 37 East. An inferred depth to groundwater gradient map utilized by the NMOCD indicated groundwater should be encountered at approximately twenty-five feet (25') below ground surface (bgs). Based on the NMOCD ranking system, twenty (20) points will be assigned to the site as a result of this criterion.

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

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

NMOCD guidelines indicate the S & W 4" Lateral Historical Release Site has an initial ranking score of twenty (20) points. The soil remediation levels for a site with a ranking score of greater than nineteen (>19) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) – 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) – 100 mg/Kg (ppm)

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

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On or around August 14, 2006, excavation activities began at the S & W 4" Lateral Historical Release Site. Eight (8) initial soil samples (Release Point Surface, Release Point 4' BGS, Release Point 6' BGS, West Bell Hole 1' BGS, West Bell Hole 4' BGS, West Ponded Area 6" BGS, West Ponded Area 1' BGS and West Ponded Area Surface) were collected near the release point and submitted to the Environmental Lab of Texas, of Odessa, Texas, for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations ranged from 17.5 mg/Kg for soil sample West Ponded Area 1' BGS to 4,020 mg/Kg for soil sample Release Point Surface. Soil samples Release Point 6' BGS and West Ponded Area 1' BGS were also analyzed for concentrations of BTEX, which were determined to be less than the laboratory method detection limit (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.

On September 7, 2006, one (1) confirmation soil sample (SW-1) was collected from excavated area for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentration was less than the laboratory MDL.

On September 18, 2006, seven (7) confirmation soil samples (PR @ 9', B-Comp., S-Comp., NW-Copm., SW-Comp., P-Comp. and S-5) were collected from the floor and sidewalls of the excavated area for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL for each of the submitted soil samples, with the exception of soil sample S-5, which exhibited a concentration of 10.3 mg/Kg. Soil sample S-5 was also analyxed for concentrations of BTEX, which were determined to be less than the laboratory MDL. Confirmation soil samples were not analyzed for concentrations of sulfide or chloride

On December 20, 2012, Basin responded to the S & W 4" Lateral Historical Release Site. During the initial investigation, a series of test trenches (TT-1 through TT-7) were advanced in the disturbed areas in an effort to determine if soil containing sulfide, BTEX, TPH and chloride concentrations above NMOCD regulatory standards remained in-situ, and to collect confirmation soil samples. During the advancement of the test trenches, soil samples were collected from the surface, four feet (4') and six feet (6') bgs and submitted to Xenco Laboratories, of Odessa, Texas, for determination of TPH and chloride concentrations. Laboratory analytical results

indicated TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. with the exception of soil sample TT-3 @ 6', which had a concentration of 74.1 mg/Kg. Chloride concentrations were less than 10 mg/Kg for each of the submitted soil samples with the exception of soil sample TT-5 @ Surface which had a concentration of 10.7 mg/Kg. Soil samples TT-2 @ 6', TT-3 @ 6' and TT-4 @ 6' were also analyzed for concentrations of BTEX, which were determined to be less than the appropriate laboratory MDL for each of the soil samples. Soil samples TT-2 @ 6', TT-3 @ 6' and TT-4 @ 6' were also analyzed for concentrations of sulfide, which were determined to be less than the laboratory MDL for each of the soil samples with the exception of soil sample TT-4 @ 6', which had a concentration of 64.0 mg/Kg. Concentrations of BTEX, TPH, chloride and sulfide were below NMOCD regulatory standards for each of the submitted soil samples.

On January 24, 2012, upon receiving analytical results from the initial investigation, a hand-auger was utlizied to advance a soil bore in the area represented by test trench TT-3. During the advancement of the soil bore, two (2) soil samples (SB#1 @ 8' and SB#1 @ 10') were collected and submitted to the laboratory for analysis of TPH concentrations. Laboratory analytical results indicated TPH concentrations were less than the laboratory MDL for each of the submitted soil samples.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Xenco Laboratories, of Odessa, Texas, and/or Environmental Labs of Texas, of Odessa, Texas, for BTEX, TPH, chloride, and/or sulfide 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
- Sulfide concentrations in accordance with EPA Method SW-846 9030B

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 S & W 4" Lateral Historical Release Site were analyzed by an NMOCD-approved laboratory, which determined that benzene, BTEX, TPH, chloride and sulfide concentrations were less than NMOCD regulatory remediation action levels for each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends Southern Union provide the NMOCD Hobbs District Office and the NMSLO a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the S & W 4" Lateral 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

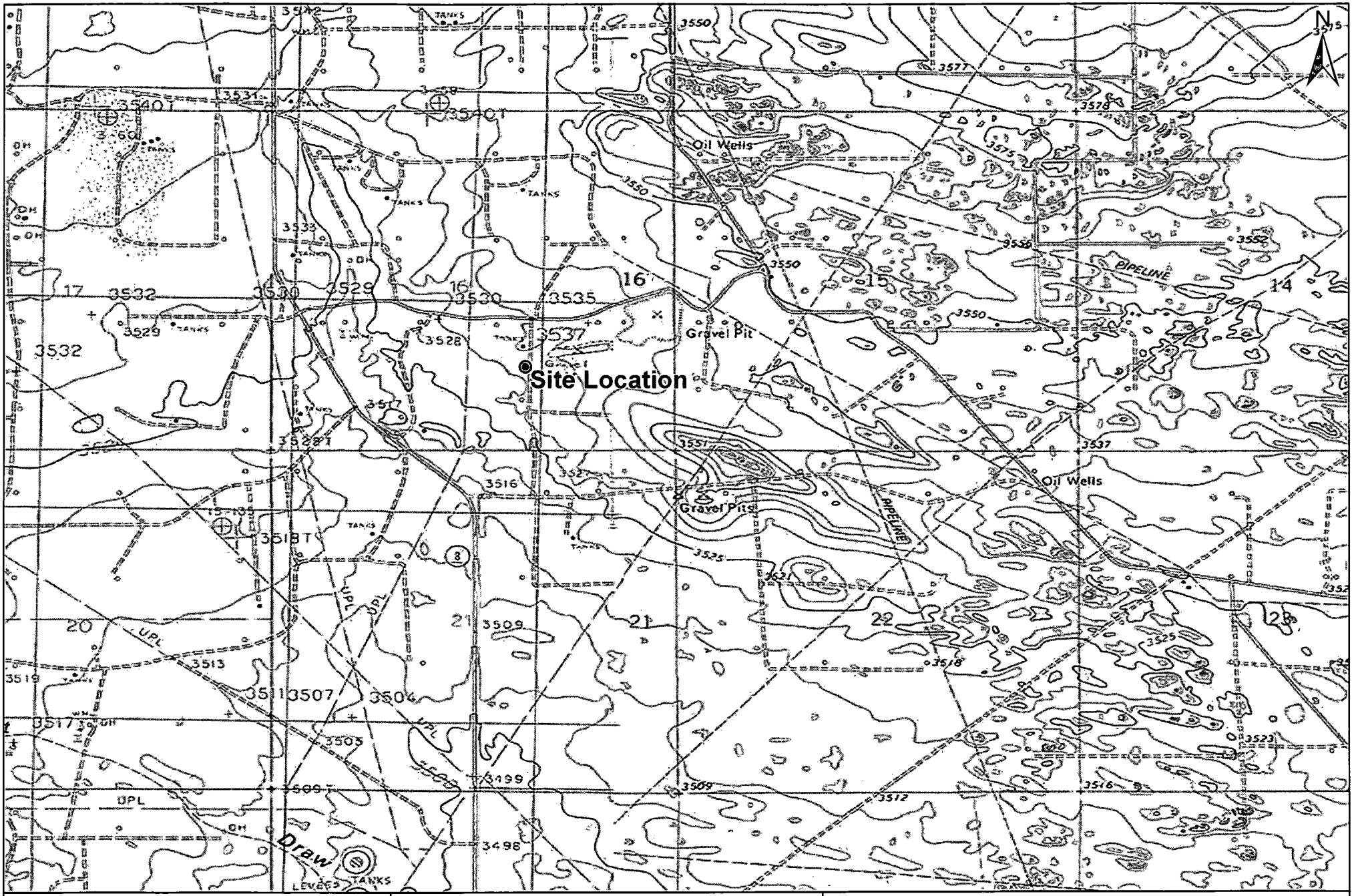
Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, NM 88240
GeoffreyR.Leking@state.nm.us

Copy 2: Bill Sonnamaker
New Mexico State Land Office
2702-D North Grimes
Hobbs, NM 88240

Copy 3: Rose Slade
Southern Union Gas Services
801 S. Loop 464
Monahans, Texas 79756
rose.slade@sug.com

Copy 4: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, New Mexico 88260

FIGURES



1,000500 0 1,000 2,000

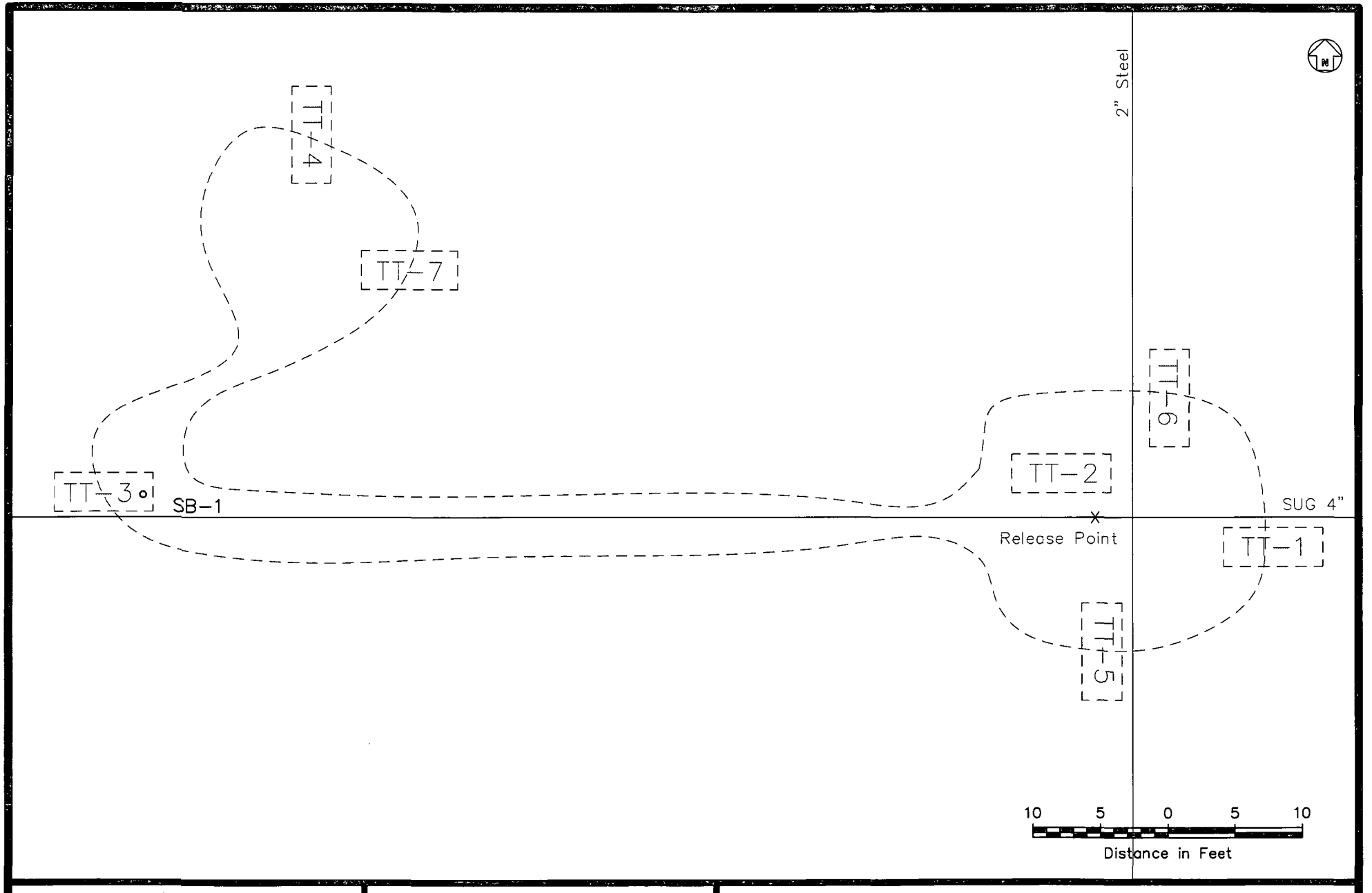
Distance in Feet

Figure 1
Site Location Map
Southern Union Gas Services
S&W 4" Lateral
Lea County, New Mexico
NMOCD Reference #: 1RP-1018

Basin Environmental Service Technologies
Effective Solutions

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

Drawn By: BJA	Checked By: JWL
December 27, 2012	Scale: 1" = 2000'



Legend

- - - Inferred Flow Path

[ ] Test Trench

o Soil Boring Location

Figure 2
Site & Sample Location Map
Southern Union Gas Services
S & W 4" Lateral
NMOCD Ref RP-1018
Lea County, New Mexico

Basin Environmental Services

Prep By: JWL	Checked By: BJA
December, 27, 2012	Scale 1"=10'

TABLES

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

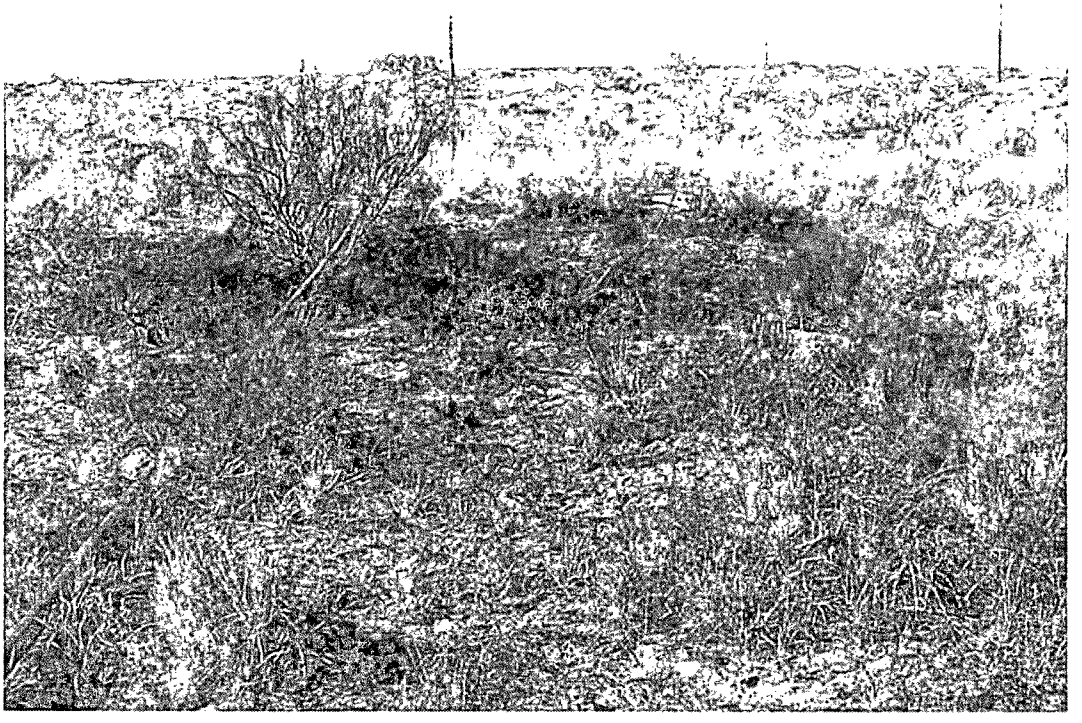
SOUTHERN UNION GAS SERVICES
S & W 4" LATERAL
HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REF# 1RP-1018

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	SULFIDE (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C_6-C_{12} (mg/Kg)	DRO C_{12}-C_{28} (mg/Kg)	ORO C_{28}-C_{35} (mg/Kg)	TOTAL TPH C_6-C_{28} (mg/Kg)	CHLORIDE (mg/Kg)
Release Point Surface	Surface	8/14/2006	Excavated	-	-	-	-	-	-	344.0	2,770.0	903.0	**4,020.0**	-
Release Point 4' BGS	4'	8/14/2006	Excavated	-	-	-	-	-	-	11.4	18.7	<10.0	30.1	-
Release Point 6' BGS	6'	8/14/2006	Excavated	-	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	-	-	-	-	-
West Bell Hole 1' BGS	1'	8/14/2006	Excavated	-	-	-	-	-	-	37.8	39.6	<10.0	77.4	-
West Bell Hole 4' BGS	4'	8/14/2006	Excavated	-	-	-	-	-	-	1,490.0	354.0	67.3	**1,910.0**	-
West Ponded Area 6" BGS	6"	8/14/2006	Excavated	-	-	-	-	-	-	639.0	638.0	162.0	**1,440.0**	-
West Ponded Area 1' BGS	1'	8/14/2006	Excavated	-	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	17.5	<10.0	17.5	-
West Ponded Area Surface	3'	8/14/2006	Excavated	-	-	-	-	-	-	129.0	2,100.0	429.0	**2,660.0**	-
SW-1	N/A	9/7/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
P.R. @ 9'	9'	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
B-Comp.	N/A	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
S-Comp.	N/A	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
NW-Comp.	N/A	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
SW-Comp.	N/A	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
P-Comp.	N/A	9/18/2006	N/A	-	-	-	-	-	-	<10.0	<10.0	<10.0	<10.0	-
S-5	N/A	9/18/2006	N/A	-	<0.025	<0.025	<0.025	<0.025	<0.025	10.3	<10.0	<10.0	10.3	-
TT-1 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<19.7	<19.7	<19.7	<19.7	4.26
TT-1 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<18.0	<18.0	<18.0	<18.0	2.36
TT-1 @ 6'	6'	12/20/2012	In-Situ	-	-	-	-	-	-	<19.0	<19.0	<19.0	<19.0	1.79
TT-2 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<15.4	<15.4	<15.4	<15.4	<1.03
TT-2 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<17.2	<17.2	<17.2	<17.2	1.28
TT-2 @ 6'	6'	12/20/2012	In-Situ	<50.0	<0.00103	<0.00206	<0.00103	<0.00206	<0.00206	<15.4	<15.4	<15.4	<15.4	<1.03
TT-3 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<18.7	<18.7	<18.7	<18.7	1.54
TT-3 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<18.5	<18.5	<18.5	<18.5	1.31
TT-3 @ 6'	6'	12/20/2012	In-Situ	<50.0	<0.00116	<0.00232	<0.00116	<0.00232	<0.00232	<17.5	74.1	<17.5	74.1	4.16
TT-4 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<19.5	<19.5	<19.5	<19.5	<1.31
TT-4 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<15.4	<15.4	<15.4	<15.4	<1.03
TT-4 @ 6'	6'	12/20/2012	In-Situ	64.0	<0.00122	<0.00244	<0.00122	<0.00244	<0.00244	<18.3	<18.3	<18.3	<18.3	<1.22
TT-5 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<21.2	<21.2	<21.2	<21.2	10.9
TT-5 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<19.8	<19.8	<19.8	<19.8	4.10
TT-5 @ 6'	6'	12/20/2012	In-Situ	-	-	-	-	-	-	<18.3	<18.3	<18.3	<18.3	3.60
TT-6 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<19.8	<19.8	<19.8	<19.8	<1.32
TT-6 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<17.1	<17.1	<17.1	<17.1	<1.14
TT-6 @ 6'	6'	12/20/2012	In-Situ	-	-	-	-	-	-	<18.0	<18.0	<18.0	<18.0	<1.20
TT-7 @ Surface	Surface	12/20/2012	In-Situ	-	-	-	-	-	-	<19.3	<19.3	<19.3	<19.3	<1.28
TT-7 @ 4'	4'	12/20/2012	In-Situ	-	-	-	-	-	-	<20.3	<20.3	<20.3	<20.3	2.16
TT-7 @ 6'	6'	12/20/2012	In-Situ	-	-	-	-	-	-	<15.3	<15.3	<15.3	<15.3	<1.02
SB#1 @ 8'	8'	1/24/2013	In-Situ	-	-	-	-	-	-	<16.0	<16.0	<16.0	<16.0	-
SB#1 @ 10'	10'	1/24/2013	In-Situ	-	-	-	-	-	-	<15.4	<15.4	<15.4	<15.4	-
NMOCD Standard					**10**				**50**				**100**	**250**

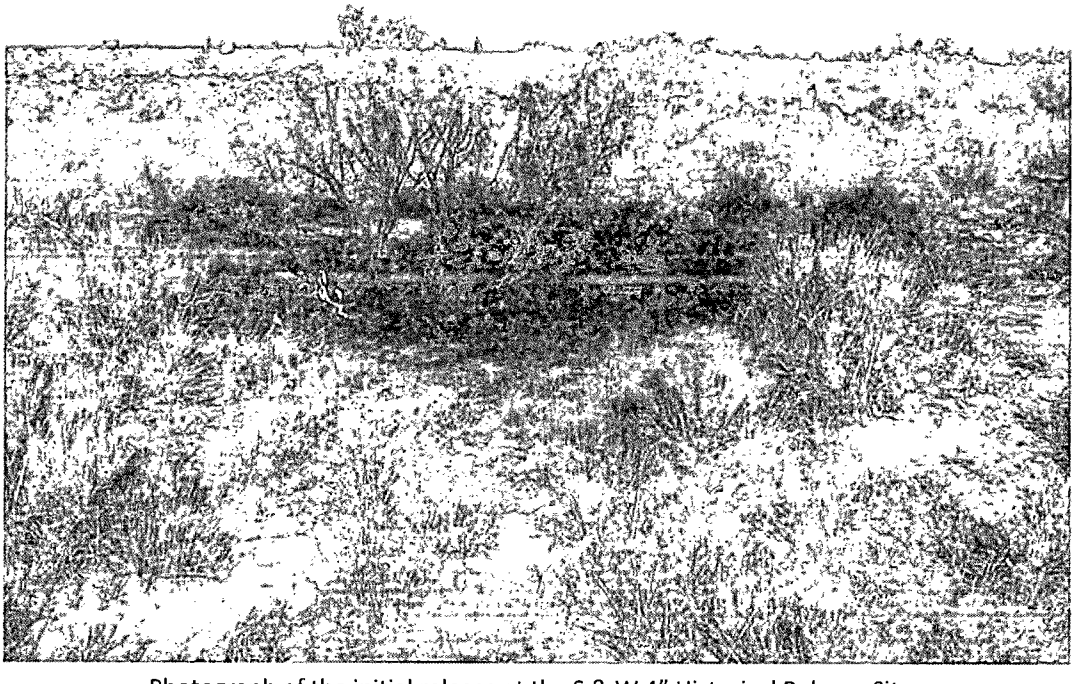
APPENDICES

Appendix A

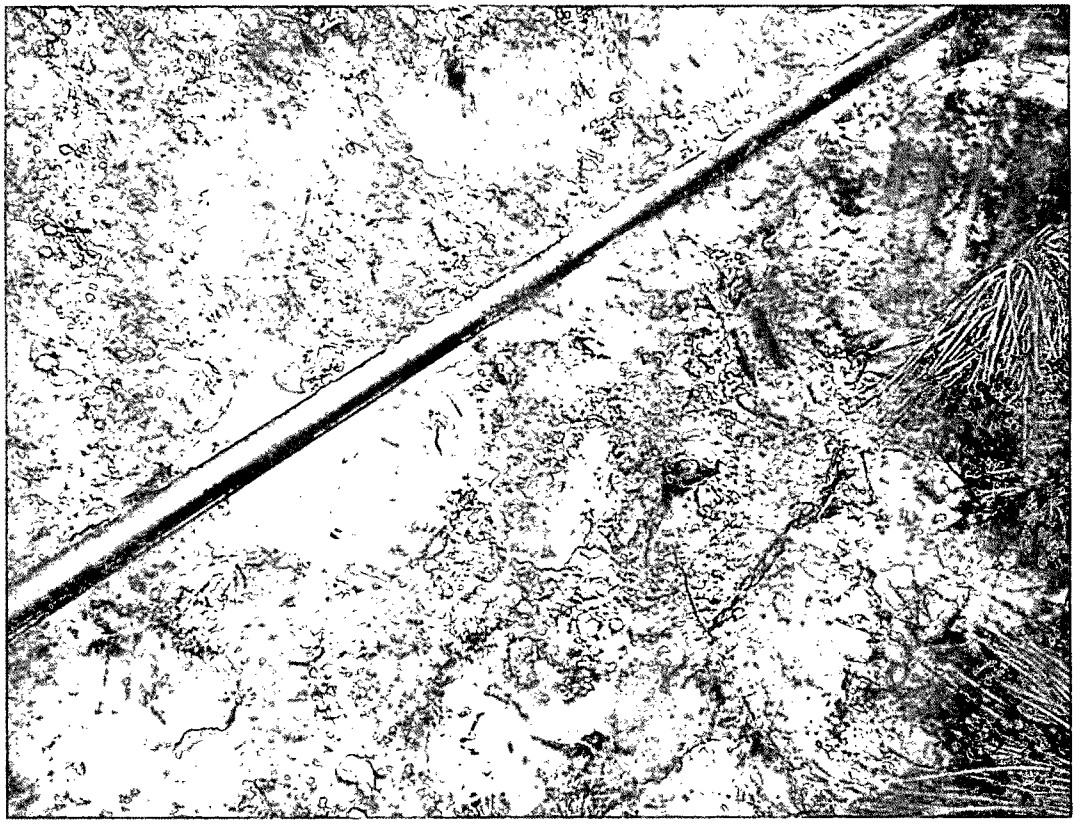
Photographs



Photograph of the initial release at the S & W 4" Historical Release Site.

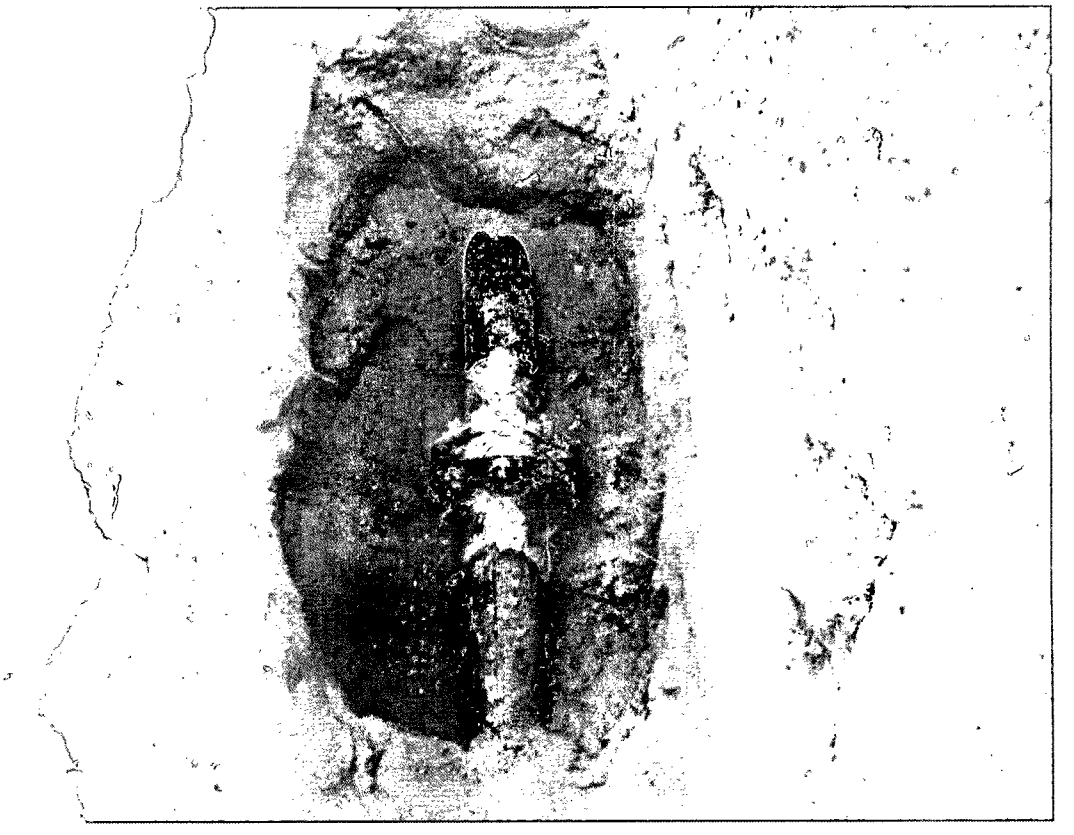


Photograph of the initial release at the S & W 4" Historical Release Site.

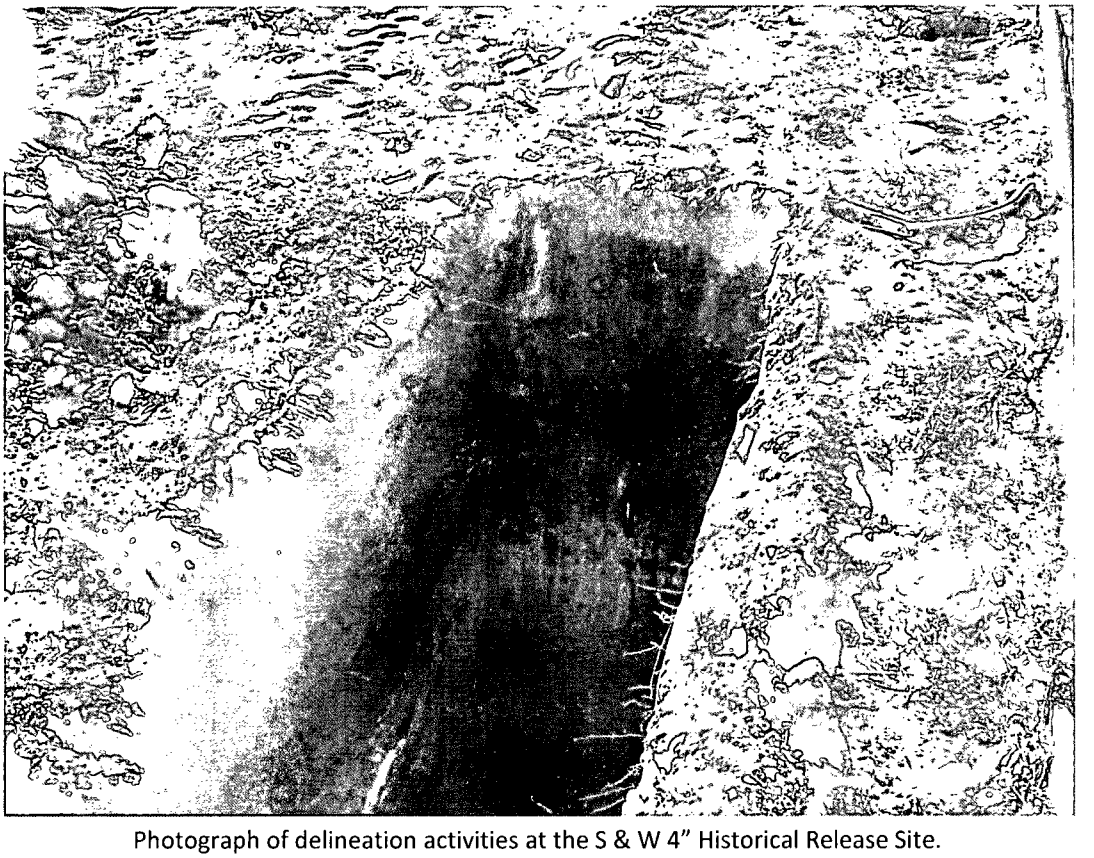


Photograph of the pipeline replacement and excavation activities at the S & W 4" Historical Release Site.

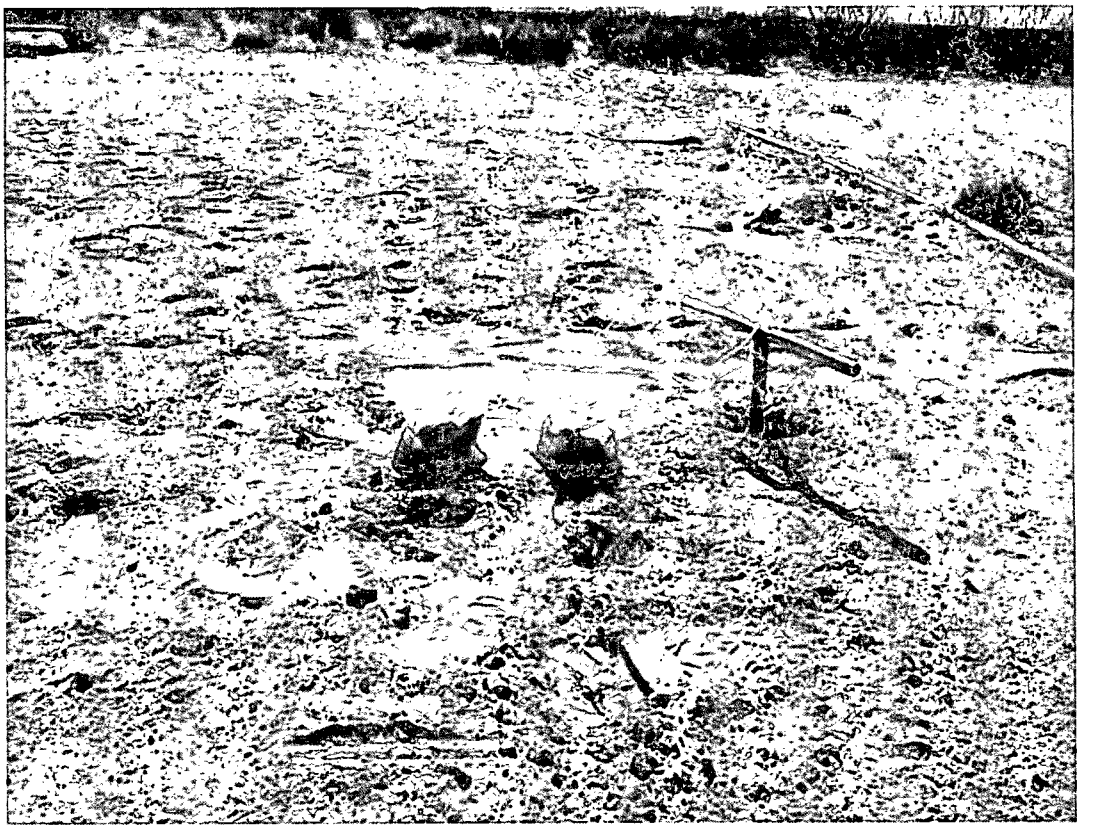
Photograph of the pipeline replacement and excavation activities at the S & W 4" Historical Release Site.



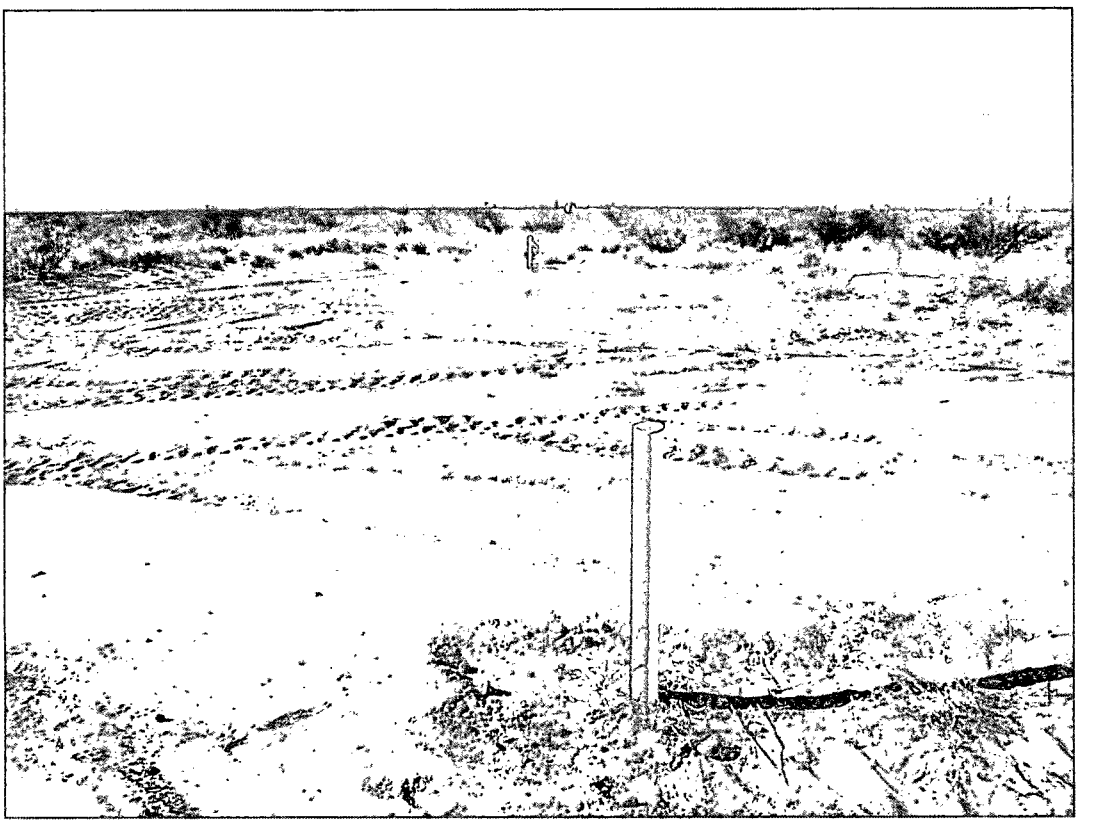
Photograph of delineation activities at the S & W 4" Historical Release Site.



Photograph of delineation activities at the S & W 4" Historical Release Site.



Photograph of the advancement of Soil Boring SB-1 at the S & W 4" Historical Release Site.



Photograph of the S & W 4" Historical Release Site after delineation activities.

Appendix B

Laboratory Analytical Reports

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Tony Savoie

Southern Union Gas Services- Jal

P.O. Box 1226

Jal, NM 88252

Project: S & W 4" Lateral

Project Number: 2006-036

Location: North of Oil Center

Lab Order Number: 6H15006

Report Date: 08/18/06

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release Point Surface	6H15006-01	Soil	08/14/06 08:50	08-15-2006 09:35
Release Point 4' BGS	6H15006-02	Soil	08/14/06 08:53	08-15-2006 09:35
Release Point 6' BGS	6H15006-03	Soil	08/14/06 08:57	08-15-2006 09:35
West Bellhole 1' BGS	6H15006-04	Soil	08/14/06 09:00	08-15-2006 09:35
West Bellhole 4' BGS	6H15006-05	Soil	08/14/06 09:05	08-15-2006 09:35
West Ponded area 6" BGS	6H15006-06	Soil	08/14/06 09:10	08-15-2006 09:35
West Ponded area 1' BGS	6H15006-07	Soil	08/14/06 09:12	08-15-2006 09:35
West Ponded area Surface	6H15006-08	Soil	08/14/06 09:08	08-15-2006 09:35

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Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point Surface (6H15006-01) Soil									
Carbon Ranges C6-C12	**344**	100	mg/kg dry	10	EH61508	08/15/06	08/15/06	EPA 8015M	
Carbon Ranges C12-C28	**2770**	100	"	"	"	"	"	"	
Carbon Ranges C28-C35	**903**	100	"	"	"	"	"	"	
Total Hydrocarbons	**4020**	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*9.40 %*	*70-130*		"	"	"	"	*S-06*
Surrogate: 1-Chlorooctadecane		*11.4 %*	*70-130*		"	"	"	"	*S-06*
Release Point 4' BGS (6H15006-02) Soil									
Carbon Ranges C6-C12	**11.4**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	**18.7**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**30.1**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*92.6 %*	*70-130*		"	"	"	"	
Release Point 6' BGS (6H15006-03) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH61514	08/15/06	08/16/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.8 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.5 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.6 %*	*70-130*		"	"	"	"	

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
West Bellhole 1' BGS (6H15006-04) Soil									
Carbon Ranges C6-C12	**37.8**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	**39.6**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**77.4**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*95.0 %*	*70-130*		"	"	"	"	
West Bellhole 4' BGS (6H15006-05) Soil									
Carbon Ranges C6-C12	**1490**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	**354**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**67.3**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**1910**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*133 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	
West Ponded area 6" BGS (6H15006-06) Soil									
Carbon Ranges C6-C12	**639**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	**638**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**162**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**1440**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*117 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*97.4 %*	*70-130*		"	"	"	"	
West Ponded area 1' BGS (6H15006-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH61514	08/15/06	08/16/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*103 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.2 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	**J [9.82]**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	J
Carbon Ranges C12-C28	**17.5**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**17.5**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*93.2 %*	*70-130*		"	"	"	"	

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
West Ponded area Surface (6H15006-08) Soil									
Carbon Ranges C6-C12	**129**	10.0	mg/kg dry	1	EH61508	08/15/06	08/16/06	EPA 8015M	
Carbon Ranges C12-C28	**2100**	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**429**	10.0	"	"	"	"	"	"	
Total Hydrocarbons	**2660**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.0 %*	*70-130*		"	"	"	"	

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Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point Surface (6H15006-01) Soil									
% Moisture	**7.3**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
Release Point 4' BGS (6H15006-02) Soil									
% Moisture	**19.2**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
Release Point 6' BGS (6H15006-03) Soil									
Chloride	**J [1.90]**	5.00	mg/kg	10	EH61511	08/15/06	08/15/06	EPA 300.0	J
% Moisture	**17.1**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
West Bellhole 1' BGS (6H15006-04) Soil									
% Moisture	**14.1**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
West Bellhole 4' BGS (6H15006-05) Soil									
% Moisture	**17.0**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
West Ponded area 6" BGS (6H15006-06) Soil									
% Moisture	**17.5**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
West Ponded area 1' BGS (6H15006-07) Soil									
Chloride	**J [2.16]**	5.00	mg/kg	10	EH61511	08/15/06	08/15/06	EPA 300.0	J
% Moisture	**17.2**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	
West Ponded area Surface (6H15006-08) Soil									
% Moisture	**24.8**	0.1	%	1	EH61601	08/15/06	08/16/06	% calculation	

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61508 - EPA 5030C (GC)										
Blank (EH61508-BLK1)				Prepared & Analyzed: 08/15/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	*50.5*		*mg/kg*	*50.0*		*101*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.3*		"	*50.0*		*96.6*	*70-130*			
LCS (EH61508-BS1)				Prepared & Analyzed: 08/15/06						
Carbon Ranges C6-C12	470	10.0	mg/kg wet	500		94.0	75-125			
Carbon Ranges C12-C28	481	10.0	"	500		96.2	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	951	10.0	"	1000		95.1	75-125			
Surrogate: 1-Chlorooctane	*54.0*		*mg/kg*	*50.0*		*108*	*70-130*			
Surrogate: 1-Chlorooctadecane	*46.8*		"	*50.0*		*93.6*	*70-130*			
Calibration Check (EH61508-CCV1)				Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C12	236		mg/kg	250		94.4	80-120			
Carbon Ranges C12-C28	273		"	250		109	80-120			
Total Hydrocarbons	509		"	500		102	80-120			
Surrogate: 1-Chlorooctane	*63.4*		"	*50.0*		*127*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.9*		"	*50.0*		*114*	*70-130*			
Matrix Spike (EH61508-MS1)	**Source: 6H15006-03**			Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C12	559	10.0	mg/kg dry	603	ND	92.7	75-125			
Carbon Ranges C12-C28	572	10.0	"	603	ND	94.9	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1130	10.0	"	1210	ND	93.4	75-125			
Surrogate: 1-Chlorooctane	*56.0*		*mg/kg*	*50.0*		*112*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.3*		"	*50.0*		*96.6*	*70-130*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61508 - EPA 5030C (GC)										
Matrix Spike Dup (EH61508-MSD1)	**Source: 6H15006-03**			Prepared: 08/15/06 Analyzed: 08/16/06						
Carbon Ranges C6-C12	578	10.0	mg/kg dry	603	ND	95.9	75-125	3.34	20	
Carbon Ranges C12-C28	589	10.0	"	603	ND	97.7	75-125	2.93	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1170	10.0	"	1210	ND	96.7	75-125	3.48	20	
Surrogate: 1-Chlorooctane	*58.1*		*mg/kg*	*50.0*		*116*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.2*		*"*	*50.0*		*98.4*	*70-130*			
Batch EH61514 - EPA 5030C (GC)										
Blank (EH61514-BLK1)				Prepared: 08/15/06 Analyzed: 08/16/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*38.1*		*ug/kg*	*40.0*		*95.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*41.0*		*"*	*40.0*		*102*	*80-120*			
LCS (EH61514-BS1)				Prepared & Analyzed: 08/15/06						
Benzene	1.21	0.0250	mg/kg wet	1.25		96.8	80-120			
Toluene	1.38	0.0250	"	1.25		110	80-120			
Ethylbenzene	1.22	0.0250	"	1.25		97.6	80-120			
Xylene (p/m)	2.97	0.0250	"	2.50		119	80-120			
Xylene (o)	1.38	0.0250	"	1.25		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.6*		*ug/kg*	*40.0*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.8*		*"*	*40.0*		*120*	*80-120*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61514 - EPA 5030C (GC)										
Calibration Check (EH61514-CCV1)				Prepared: 08/15/06 Analyzed: 08/17/06						
Benzene	47.2		ug/kg	50.0		94.4	80-120			
Toluene	51.8		"	50.0		104	80-120			
Ethylbenzene	55.0		"	50.0		110	80-120			
Xylene (p/m)	112		"	100		112	80-120			
Xylene (o)	55.2		"	50.0		110	80-120			
Surrogate: a,a,a-Trifluorotoluene	*45.7*		"	*40.0*		*114*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.5*		"	*40.0*		*111*	*80-120*			
Matrix Spike (EH61514-MS1)		**Source: 6H15008-01**		Prepared: 08/15/06 Analyzed: 08/17/06						
Benzene	1.33	0.0250	mg/kg dry	1.35	ND	98.5	80-120			
Toluene	1.54	0.0250	"	1.35	ND	114	80-120			
Ethylbenzene	1.30	0.0250	"	1.35	ND	96.3	80-120			
Xylene (p/m)	3.19	0.0250	"	2.71	ND	118	80-120			
Xylene (o)	1.45	0.0250	"	1.35	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	*84.1*		*ug/kg*	*80.0*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*84.0*		"	*80.0*		*105*	*80-120*			
Matrix Spike Dup (EH61514-MSD1)		**Source: 6H15008-01**		Prepared: 08/15/06 Analyzed: 08/17/06						
Benzene	1.28	0.0250	mg/kg dry	1.35	ND	94.8	80-120	3.83	20	
Toluene	1.56	0.0250	"	1.35	ND	116	80-120	1.74	20	
Ethylbenzene	1.53	0.0250	"	1.35	ND	113	80-120	16.0	20	
Xylene (p/m)	3.24	0.0250	"	2.71	ND	120	80-120	1.68	20	
Xylene (o)	1.58	0.0250	"	1.35	ND	117	80-120	8.93	20	
Surrogate: a,a,a-Trifluorotoluene	*44.4*		*ug/kg*	*40.0*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.6*		"	*40.0*		*119*	*80-120*			

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
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Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61511 - Water Extraction										
Blank (EH61511-BLK1)				Prepared & Analyzed: 08/15/06						
Chloride	ND	0.500	mg/kg							
LCS (EH61511-BS1)				Prepared & Analyzed: 08/15/06						
Chloride	9.79	0.500	mg/kg	10.0		97.9	80-120			
Calibration Check (EH61511-CCV1)				Prepared & Analyzed: 08/15/06						
Chloride	9.49		mg/L	10.0		94.9	80-120			
Duplicate (EH61511-DUP1)		**Source: 6H15002-02**		Prepared & Analyzed: 08/15/06						
Chloride	42.2	5.00	mg/kg		43.4			2.80	20	
Duplicate (EH61511-DUP2)		**Source: 6H15010-01**		Prepared & Analyzed: 08/15/06						
Chloride	647	10.0	mg/kg		642			0.776	20	
Matrix Spike (EH61511-MS1)		**Source: 6H15002-02**		Prepared & Analyzed: 08/15/06						
Chloride	149	5.00	mg/kg	100	43.4	106	80-120			
Matrix Spike (EH61511-MS2)		**Source: 6H15010-01**		Prepared & Analyzed: 08/15/06						
Chloride	900	10.0	mg/kg	200	642	129	80-120			S-07
Batch EH61601 - General Preparation (Prep)										
Blank (EH61601-BLK1)				Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	100		%							
Duplicate (EH61601-DUP1)		**Source: 6H15002-01**		Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	90.3		%		89.0			1.45	20	

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH61601 - General Preparation (Prep)										
Duplicate (EH61601-DUP2)	**Source: 6H15007-04**			Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	97.3		%		96.9			0.412	20	
Duplicate (EH61601-DUP3)	**Source: 6H15013-01**			Prepared: 08/15/06 Analyzed: 08/16/06						
% Solids	90.1		%		90.1			0.00	20	

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P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

Notes and Definitions

S-07	Recovery outside Laboratory historical or method prescribed limits.
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 8/18/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Tony Savoie
Company Name: Southern Union Gas Services
Company Address: 610 Commerce Jal,
City/State/Zip: JAL, N.M.
Telephone No: 505-631-9376 Fax No:
Sampler Signature: Tony Savoie

Project Name: Stw 4" lateral
Project #: 2006-036
Project Loc: North of Oil Center
PO #:
Report Format: ☑ Standard ☐ TRRP ☐ NPDES
e-mail: tony.savoie@sug.com

(lab use only)
ORDER #: 1CH5006

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	No. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M	1005	1006 Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Release Point Surface	0	0½	8/14/06	0850	1	✓								S			✓								✓				✓
02	Release Point 4' B.G.S.	4'	4'	"	0853	1	✓								S			✓												✓
03	Release Point 6' B.G.S.	6'	6'	"	0857	1	✓								S			✓			✓					✓				✓
04	West Bellhole 1' B.G.S.	1'	1'	"	0900	1	✓								S			✓												✓
05	West Bellhole 4' B.G.S.	4'	4'	"	0905	1	✓								S			✓												✓
06	West Ponded area 6" B.G.S.	6"	6"	"	0910	1	✓								S			✓												✓
07	West Ponded area 1' B.G.S.	1'	1'	"	0912	1	✓								S			✓			✓					✓				✓
08	West Ponded area Surface	0'	1"	"	0908	1	✓								S			✓												

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Tony Savoie	8/15/06	0935			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cerina Kelly	8/15/06	9:35

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Custody seals on container(s) (Y) N
Custody seals on cooler(s) (Y) N
Sample Hand Delivered by Sampler/Client Rep. ? (Y) N
by Courier? UPS DHL FedEx Lone Star
4oz glass
Temperature Upon Receipt: 1.5 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: SUGS

te/ Time: 8/15/06 9:35

o ID # : 6H15006

ials: CK

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	1.5 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
Sample matrix/ properties agree with Chain of Custody?	Yes	No		
Containers supplied by ELOT?	Yes	No		
Samples in proper container/ bottle?	Yes	No	See Below	
Samples properly preserved?	Yes	No	See Below	
Sample bottles intact?	Yes	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	Yes	No		
Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
All samples received within sufficient hold time?	Yes	No	See Below	
VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken: _____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Tony Savoie

Southern Union Gas Services- Jal

P.O. Box 1226

Jal, NM 88252

Project: S & W 4" Lateral

Project Number: 2006-036

Location: SE of Monument

Lab Order Number: 6I08004

Report Date: 09/11/06

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-1	6I08004-01	Soil	09/07/06 15:20	09-08-2006 09:55

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW-1 (6108004-01) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI60813	09/08/06	09/08/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*74.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*77.4 %*	*70-130*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW-1 (6I08004-01) Soil									
% Moisture	**15.6**	0.1	%	1	EI61103	09/08/06	09/11/06	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI60813 - Solvent Extraction (GC)										
Blank (EI60813-BLK1)				Prepared & Analyzed: 09/08/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	*39.3*		*mg/kg*	*50.0*		*78.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*37.7*		*"*	*50.0*		*75.4*	*70-130*			
LCS (EI60813-BS1)				Prepared & Analyzed: 09/08/06						
Carbon Ranges C6-C12	464	10.0	mg/kg wet	500		92.8	75-125			
Carbon Ranges C12-C28	403	10.0	"	500		80.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	867	10.0	"	1000		86.7	75-125			
Surrogate: 1-Chlorooctane	*51.4*		*mg/kg*	*50.0*		*103*	*70-130*			
Surrogate: 1-Chlorooctadecane	*40.2*		*"*	*50.0*		*80.4*	*70-130*			
Calibration Check (EI60813-CCV1)				Prepared & Analyzed: 09/08/06						
Carbon Ranges C6-C12	208		mg/kg	250		83.2	80-120			
Carbon Ranges C12-C28	271		"	250		108	80-120			
Total Hydrocarbons	479		"	500		95.8	80-120			
Surrogate: 1-Chlorooctane	*51.0*		*"*	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*46.3*		*"*	*50.0*		*92.6*	*70-130*			
Matrix Spike (EI60813-MS1)	**Source: 6108009-02**			Prepared & Analyzed: 09/08/06						
Carbon Ranges C6-C12	556	10.0	mg/kg dry	577	ND	96.4	75-125			
Carbon Ranges C12-C28	478	10.0	"	577	ND	82.8	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1030	10.0	"	1150	ND	89.6	75-125			
Surrogate: 1-Chlorooctane	*53.0*		*mg/kg*	*50.0*		*106*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.8*		*"*	*50.0*		*87.6*	*70-130*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI60813 - Solvent Extraction (GC)										
Matrix Spike Dup (EI60813-MSD1)	**Source: 6I08009-02**			Prepared & Analyzed: 09/08/06						
Carbon Ranges C6-C12	567	10.0	mg/kg dry	577	ND	98.3	75-125	1.96	20	
Carbon Ranges C12-C28	498	10.0	"	577	ND	86.3	75-125	4.10	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1060	10.0	"	1150	ND	92.2	75-125	2.87	20	
Surrogate: 1-Chlorooctane	*54.5*		*mg/kg*	*50.0*		*109*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.1*		*"*	*50.0*		*90.2*	*70-130*			

Southern Union Gas Services- Jal	Project: S & W 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61103 - General Preparation (Prep)										
Blank (EI61103-BLK1)				Prepared: 09/08/06 Analyzed: 09/11/06						
% Solids	99.9		%							
Duplicate (EI61103-DUP1)		**Source: 6108001-01**		Prepared: 09/08/06 Analyzed: 09/11/06						
% Solids	100		%		100			0.00	20	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 9/11/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: TONY SAVOIE
Company Name: S.W.G.S.
Company Address: 610 COMMERCE
City/State/Zip: JAL, N.M. 88252
Telephone No: 505-395-2116 Fax No:
Sampler Signature: Don Green
Email:

Project Name: S&W 4" LATERAL
Project #: 2006-036
Project Loc: SE OF MONUMENT
PO #:

ELO804

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 / 8015M / 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/8260 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule)	Standard TAT
-01	SW-1	9-7-06	3:20	1	✓									✓		✓												✓

TCLP:
TOTAL:

Special Instructions:

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 3.0

Laboratory Comments:
4oz glass

Relinquished by:	Date	Time	Received by:	Date	Time
Don Green	9-8-06	7:20		9-8-06	7:20
	9806	9:55	Received by ELOT:	9/8/06	9:55

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

ent: SWCA

ıte/ Time: 9/8/10 9:55

b ID # : 10D0009

tials: CK

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	3.0 °C	
Shipping container in good condition?	~~Yes~~	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	~~Not Present~~	
Custody Seals intact on sample bottles/ container?	~~Yes~~	No	Not Present	
Chain of Custody present?	~~Yes~~	No		
Sample instructions complete of Chain of Custody?	~~Yes~~	No		
Chain of Custody signed when relinquished/ received?	~~Yes~~	No		
Chain of Custody agrees with sample label(s)?	~~Yes~~	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	~~Yes~~	No	Not Applicable	
0 Sample matrix/ properties agree with Chain of Custody?	~~Yes~~	No		
1 Containers supplied by ELOT?	~~Yes~~	No		
2 Samples in proper container/ bottle?	~~Yes~~	No	See Below	
3 Samples properly preserved?	~~Yes~~	No	See Below	
4 Sample bottles intact?	~~Yes~~	No		
5 Preservations documented on Chain of Custody?	~~Yes~~	No		
6 Containers documented on Chain of Custody?	~~Yes~~	No		
7 Sufficient sample amount for indicated test(s)?	~~Yes~~	No	See Below	
8 All samples received within sufficient hold time?	~~Yes~~	No	See Below	
9 VOC samples have zero headspace?	~~Yes~~	No	Not Applicable	

Variance Documentation

ıntact: _____ Contacted by: _____ Date/ Time: _____

ɡarding: _____

_____

rrective Action Taken:

_____

_____

_____

ıeck all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Tony Savoie

Southern Union Gas Services- Jal

P.O. Box 1226

Jal, NM 88252

Project: SW 4" Lateral

Project Number: 2006-036

Location: None Given

Lab Order Number: 6I18008

Report Date: 09/20/06

Southern Union Gas Services- Jal	Project: SW 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P.R.@ 9'	6118008-01	Soil	09/18/06 12:00	09-18-2006 14:45
B- Comp.	6118008-02	Soil	09/18/06 12:00	09-18-2006 14:45
S- Comp.	6118008-03	Soil	09/18/06 12:00	09-18-2006 14:45
NW- Comp.	6118008-04	Soil	09/18/06 12:00	09-18-2006 14:45
SW- Comp.	6118008-05	Soil	09/18/06 12:00	09-18-2006 14:45
P- Comp.	6118008-06	Soil	09/18/06 12:00	09-18-2006 14:45
S-5	6118008-07	Soil	09/18/06 12:00	09-18-2006 14:45

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal
P.O. Box 1226
Jal NM, 88252

Project: SW 4" Lateral
Project Number: 2006-036
Project Manager: Tony Savoie

Fax: 505-395-2326

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P.R.@ 9' (6118008-01) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*93.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*123 %*	*70-130*		"	"	"	"	
B- Comp. (6118008-02) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*80.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	
S- Comp. (6118008-03) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*79.0 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*100 %*	*70-130*		"	"	"	"	
NW- Comp. (6118008-04) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*78.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	

Southern Union Gas Services- Jal	Project: SW 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SW- Comp. (6118008-05) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*79.4 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*100 %*	*70-130*		"	"	"	"	
P- Comp. (6118008-06) Soil									
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*76.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*98.0 %*	*70-130*		"	"	"	"	
S-5 (6118008-07) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EI61904	09/19/06	09/19/06	EPA 8021B	
Toluene	**J [0.0136]**	0.0250	"	"	"	"	"	"	J
Ethylbenzene	**J [0.0162]**	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	**0.0316**	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*123 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		"	"	"	"	
Carbon Ranges C6-C12	**10.3**	10.0	mg/kg dry	1	EI61820	09/18/06	09/19/06	EPA 8015M	
Carbon Ranges C12-C28	**J [8.93]**	10.0	"	"	"	"	"	"	J
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*81.2 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*102 %*	*70-130*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Southern Union Gas Services- Jal	Project: SW 4" Lateral	Fax: 505-395-2326
P.O. Box 1226	Project Number: 2006-036	
Jal NM, 88252	Project Manager: Tony Savoie	

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P.R.@ 9' (6I18008-01) Soil									
% Moisture	**1.5**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
B- Comp. (6I18008-02) Soil									
% Moisture	**1.9**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
S- Comp. (6I18008-03) Soil									
% Moisture	**8.8**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
NW- Comp. (6I18008-04) Soil									
% Moisture	**1.9**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
SW- Comp. (6I18008-05) Soil									
% Moisture	**4.5**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
P- Comp. (6I18008-06) Soil									
% Moisture	**5.4**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	
S-5 (6I18008-07) Soil									
% Moisture	**18.1**	0.1	%	1	EI61901	09/18/06	09/19/06	% calculation	

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Southern Union Gas Services- Jal
P.O. Box 1226
Jal NM, 88252

Project: SW 4" Lateral
Project Number: 2006-036
Project Manager: Tony Savoie

Fax: 505-395-2326

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61820 - Solvent Extraction (GC)										
Blank (EI61820-BLK1)				Prepared & Analyzed: 09/18/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	*38.9*		*mg/kg*	*50.0*		*77.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.7*		*"*	*50.0*		*97.4*	*70-130*			
LCS (EI61820-BS1)				Prepared & Analyzed: 09/18/06						
Carbon Ranges C6-C12	485	10.0	mg/kg wet	500		97.0	75-125			
Carbon Ranges C12-C28	401	10.0	"	500		80.2	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	886	10.0	"	1000		88.6	75-125			
Surrogate: 1-Chlorooctane	*52.7*		*mg/kg*	*50.0*		*105*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.8*		*"*	*50.0*		*106*	*70-130*			
Calibration Check (EI61820-CCV1)				Prepared: 09/18/06 Analyzed: 09/19/06						
Carbon Ranges C6-C12	229		mg/kg	250		91.6	80-120			
Carbon Ranges C12-C28	298		"	250		119	80-120			
Total Hydrocarbons	527		"	500		105	80-120			
Surrogate: 1-Chlorooctane	*51.2*		*"*	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*58.7*		*"*	*50.0*		*117*	*70-130*			
Matrix Spike (EI61820-MS1)	**Source: 6118006-01**			Prepared & Analyzed: 09/18/06						
Carbon Ranges C6-C12	563	10.0	mg/kg dry	571	ND	98.6	75-125			
Carbon Ranges C12-C28	489	10.0	"	571	ND	85.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1050	10.0	"	1140	ND	92.1	75-125			
Surrogate: 1-Chlorooctane	*52.5*		*mg/kg*	*50.0*		*105*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.4*		*"*	*50.0*		*107*	*70-130*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61820 - Solvent Extraction (GC)										
Matrix Spike Dup (EI61820-MSD1)	**Source: 6I18006-01**			Prepared & Analyzed: 09/18/06						
Carbon Ranges C6-C12	547	10.0	mg/kg dry	571	ND	95.8	75-125	2.88	20	
Carbon Ranges C12-C28	467	10.0	"	571	ND	81.8	75-125	4.60	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1010	10.0	"	1140	ND	88.6	75-125	3.88	20	
Surrogate: 1-Chlorooctane	*52.0*		*mg/kg*	*50.0*		*104*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.5*		*"*	*50.0*		*103*	*70-130*			
Batch EI61904 - EPA 5030C (GC)										
Blank (EI61904-BLK1)				Prepared & Analyzed: 09/19/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*38.7*		*ug/kg*	*40.0*		*96.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*32.4*		*"*	*40.0*		*81.0*	*80-120*			
LCS (EI61904-BS1)				Prepared & Analyzed: 09/19/06						
Benzene	1.42	0.0250	mg/kg wet	1.25		114	80-120			
Toluene	1.29	0.0250	"	1.25		103	80-120			
Ethylbenzene	1.19	0.0250	"	1.25		95.2	80-120			
Xylene (p/m)	2.65	0.0250	"	2.50		106	80-120			
Xylene (o)	1.22	0.0250	"	1.25		97.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*42.4*		*ug/kg*	*40.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*38.7*		*"*	*40.0*		*96.8*	*80-120*			

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61904 - EPA 5030C (GC)										
Calibration Check (EI61904-CCV1)				Prepared & Analyzed: 09/19/06						
Benzene	0.0512		mg/kg wet	0.0500		102	80-120			
Toluene	0.0454		"	0.0500		90.8	80-120			
Ethylbenzene	0.0450		"	0.0500		90.0	80-120			
Xylene (p/m)	0.0887		"	0.100		88.7	80-120			
Xylene (o)	0.0440		"	0.0500		88.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.4*		*ug/kg*	*40.0*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*32.8*		*"*	*40.0*		*82.0*	*80-120*			
Matrix Spike (EI61904-MS1)	**Source: 6I15017-30**			Prepared & Analyzed: 09/19/06						
Benzene	1.47	0.0250	mg/kg dry	1.31	ND	112	80-120			
Toluene	1.33	0.0250	"	1.31	ND	102	80-120			
Ethylbenzene	1.21	0.0250	"	1.31	ND	92.4	80-120			
Xylene (p/m)	2.81	0.0250	"	2.62	ND	107	80-120			
Xylene (o)	1.32	0.0250	"	1.31	ND	101	80-120			
Surrogate: a,a,a-Trifluorotoluene	*40.2*		*ug/kg*	*40.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*39.3*		*"*	*40.0*		*98.2*	*80-120*			
Matrix Spike Dup (EI61904-MSD1)	**Source: 6I15017-30**			Prepared & Analyzed: 09/19/06						
Benzene	1.55	0.0250	mg/kg dry	1.31	ND	118	80-120	5.22	20	
Toluene	1.32	0.0250	"	1.31	ND	101	80-120	0.985	20	
Ethylbenzene	1.32	0.0250	"	1.31	ND	101	80-120	8.89	20	
Xylene (p/m)	2.75	0.0250	"	2.62	ND	105	80-120	1.89	20	
Xylene (o)	1.36	0.0250	"	1.31	ND	104	80-120	2.93	20	
Surrogate: a,a,a-Trifluorotoluene	*39.9*		*ug/kg*	*40.0*		*99.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.5*		*"*	*40.0*		*111*	*80-120*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI61901 - General Preparation (Prep)										
Blank (EI61901-BLK1)				Prepared: 09/18/06 Analyzed: 09/19/06						
% Solids	100		%							
Duplicate (EI61901-DUP1)	**Source: 6I18006-01**			Prepared: 09/18/06 Analyzed: 09/19/06						
% Solids	87.3		%		87.6			0.343	20	

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 9/20/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Tony Savoie
Company Name: S.W.G.S
Company Address: 610 Commerce
City/State/Zip: Jal N.M. 88252
Telephone No: (505) 395-2116
Fax No:
Sampler Signature:
Email:

Project Name: SWGS 5W4" Lateral
Project #: 2006-036
Project Loc:
PO #:

9/18/06

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule)	Standard TAT
01	PQ @ 9'	91806	12:00	1	✓									✓		✓											✓
02	6 Comp	91806	12:00	1	✓									✓		✓											✓
03	5 Comp	91806	12:00	1	✓									✓		✓											✓
04	NW Comp	91806	12:00	1	✓									✓		✓											✓
05	SW Comp	91806	12:00	1	✓									✓		✓											✓
06	P Comp	91806	12:00	1	✓									✓		✓											✓
07	5'-5'	91806	12:00	1	✓									✓		✓							✓				✓

Special Instructions:

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 3.5

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
	91806	1345			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
				9/18/06	1345

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

t: SWG

Time: 9/18/08 1:45

D #: 608-18008

s: Clk

Sample Receipt Checklist

				Client Initials
Temperature of container/ cooler?	Yes	No	3.5 °C	
Shipping container in good condition?	Yes	No		
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
Chain of Custody present?	Yes	No		
Sample instructions complete of Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished/ received?	Yes	No		
Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
Container label(s) legible and intact?	Yes	No	Not Applicable	
Sample matrix/ properties agree with Chain of Custody?	Yes	No		
Containers supplied by ELOT?	Yes	No		
Samples in proper container/ bottle?	Yes	No	See Below	
Samples properly preserved?	Yes	No	See Below	
Sample bottles intact?	Yes	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	Yes	No		
Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
All samples received within sufficient hold time?	Yes	No	See Below	
VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

act: _____ Contacted by: _____ Date/ Time: _____

arding: _____

_____

ective Action Taken:

_____

_____

_____

ck all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

Analytical Report 454753

for

Southern Union Gas Services- Monahans

Project Manager: Joel Lowry

SW 4-Inch Lateral

1RP-1018

07-JAN-13

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)

07-JAN-13

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

Reference: XENCO Report No(s): **454753**
SW 4-Inch Lateral
Project Address: Lovington, 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(s) 454753. 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. 454753 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

Sample Cross Reference 454753

Southern Union Gas Services- Monahans, Monahans, TX

SW 4-Inch Lateral

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-1 @ Surface	S	12-20-12 09:00		454753-001
TT-1 @ 4'	S	12-20-12 09:05		454753-002
TT-1 @ 6'	S	12-20-12 09:10		454753-003
TT-2 @ Surface	S	12-20-12 09:20		454753-004
TT-2 @ 4'	S	12-20-12 09:25		454753-005
TT-2 @ 6'	S	12-20-12 09:30		454753-006
TT-3 @ Surface	S	12-20-12 09:40		454753-007
TT-3 @ 4'	S	12-20-12 09:45		454753-008
TT3- @ 6'	S	12-20-12 09:50		454753-009
TT4- @ Surface	S	12-20-12 10:00		454753-010
TT4- @ 4'	S	12-20-12 10:05		454753-011
TT4- @ 6'	S	12-20-12 10:10		454753-012
TT-5 @ Surface	S	12-20-12 10:20		454753-013
TT-5 @ 4'	S	12-20-12 10:25		454753-014
TT-5 @ 6'	S	12-20-12 10:30		454753-015
TT-6 @ Surface	S	12-20-12 10:40		454753-016
TT-6 @ 4'	S	12-20-12 10:45		454753-017
TT-6 @ 6'	S	12-20-12 10:50		454753-018
TT-7 @ Surface	S	12-20-12 11:00		454753-019
TT-7 @ 4'	S	12-20-12 11:05		454753-020
TT-7 @ 6'	S	12-20-12 11:10		454753-021

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: SW 4-Inch Lateral

Project ID:	*1RP-1018*	*Report Date:*	*07-JAN-13*
Work Order Number(s):	*454753*	*Date Received:*	*12/24/2012*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	454753-001		454753-002		454753-003		454753-004		454753-005		454753-006	
	Field Id:	TT-1 @ Surface		TT-1 @ 4'		TT-1 @ 6'		TT-2 @ Surface		TT-2 @ 4'		TT-2 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-12 09:00		Dec-20-12 09:05		Dec-20-12 09:10		Dec-20-12 09:20		Dec-20-12 09:25		Dec-20-12 09:30	
BTEX by EPA 8021B	*Extracted:*											Jan-03-13 08:30	
	Analyzed:											Jan-03-13 13:36	
	Units/RL:											mg/kg	RL
Benzene												ND	0.00103
Toluene												ND	0.00206
Ethylbenzene												ND	0.00103
m,p-Xylenes												ND	0.00206
o-Xylene												ND	0.00103
Total Xylenes												ND	0.00103
Total BTEX												ND	0.00103
Inorganic Anions by EPA 300/300.1 SUB: E871002	*Extracted:*	Dec-28-12 17:06		Dec-28-12 17:41		Dec-28-12 18:15		Dec-28-12 18:33		Dec-28-12 18:50		Dec-28-12 19:42	
	Analyzed:	Dec-28-12 17:06		Dec-28-12 17:41		Dec-28-12 18:15		Dec-28-12 18:33		Dec-28-12 18:50		Dec-28-12 19:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4.26	1.31	2.36	1.20	1.79	1.27	ND	1.03	1.28	1.14	ND	1.03
Percent Moisture SUB: E871002	*Extracted:*												
	Analyzed:	Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		23.9	1.00	16.6	1.00	21.0	1.00	2.94	1.00	12.6	1.00	2.78	1.00
Sulfides by SW-846 9030B SUB: E871002	*Extracted:*												
	Analyzed:											Jan-03-13 16:36	
	Units/RL:											mg/kg	RL
Sulfide, total												ND	50.0

Nicholas Straccione
Project Manager

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	454753-001		454753-002		454753-003		454753-004		454753-005		454753-006	
	Field Id:	TT-1 @ Surface		TT-1 @ 4'		TT-1 @ 6'		TT-2 @ Surface		TT-2 @ 4'		TT-2 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-12 09:00		Dec-20-12 09:05		Dec-20-12 09:10		Dec-20-12 09:20		Dec-20-12 09:25		Dec-20-12 09:30	
TPH By SW8015 Mod	***Extracted:***	Dec-27-12 12:00		Dec-27-12 12:00		Dec-27-12 12:00		Dec-27-12 12:00		Dec-27-12 12:00		Dec-27-12 12:00	
	Analyzed:	Dec-28-12 00:10		Dec-28-12 00:36		Dec-28-12 01:02		Dec-28-12 01:28		Dec-28-12 01:54		Dec-28-12 02:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	19.7	ND	18.0	ND	19.0	ND	15.4	ND	17.2	ND	15.4
C12-C28 Diesel Range Hydrocarbons		ND	19.7	ND	18.0	ND	19.0	ND	15.4	ND	17.2	ND	15.4
C28-C35 Oil Range Hydrocarbons		ND	19.7	ND	18.0	ND	19.0	ND	15.4	ND	17.2	ND	15.4
Total TPH		ND	19.7	ND	18.0	ND	19.0	ND	15.4	ND	17.2	ND	15.4

Nicholas Straccione
Project Manager

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	454753-007		454753-008		454753-009		454753-010		454753-011		454753-012	
	Field Id:	TT-3 @ Surface		TT-3 @ 4'		TT3- @ 6'		TT4- @ Surface		TT4- @ 4'		TT4- @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-12 09:40		Dec-20-12 09:45		Dec-20-12 09:50		Dec-20-12 10:00		Dec-20-12 10:05		Dec-20-12 10:10	
BTEX by EPA 8021B	***Extracted:***					Jan-03-13 08:30						Jan-03-13 08:30	
	Analyzed:					Jan-03-13 13:53						Jan-03-13 15:31	
	Units/RL:					mg/kg	RL					mg/kg	RL
Benzene						ND	0.00116					ND	0.00122
Toluene						ND	0.00232					ND	0.00244
Ethylbenzene						ND	0.00116					ND	0.00122
m,p-Xylenes						ND	0.00232					ND	0.00244
o-Xylene						ND	0.00116					ND	0.00122
Total Xylenes						ND	0.00116					ND	0.00122
Total BTEX						ND	0.00116					ND	0.00122
Inorganic Anions by EPA 300/300.1 SUB: E871002	***Extracted:***	Dec-28-12 20:00		Dec-28-12 20:17		Dec-28-12 20:35		Dec-28-12 20:52		Dec-28-12 21:09		Dec-28-12 21:44	
	Analyzed:	Dec-28-12 20:00		Dec-28-12 20:17		Dec-28-12 20:35		Dec-28-12 20:52		Dec-28-12 21:09		Dec-28-12 21:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1.54	1.25	1.31	1.24	4.16	1.16	ND	1.31	ND	1.03	ND	1.22
Percent Moisture SUB: E871002	***Extracted:***												
	Analyzed:	Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		19.8	1.00	19.2	1.00	14.1	1.00	23.4	1.00	2.59	1.00	17.9	1.00
Sulfides by SW-846 9030B SUB: E871002	***Extracted:***												
	Analyzed:					Jan-03-13 16:38						Jan-03-13 16:40	
	Units/RL:					mg/kg	RL					mg/kg	RL
Sulfide, total						ND	50.0					64.0	50.0

Nicholas Straccione
Project Manager

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested	*Lab Id:*	454753-007		454753-008		454753-009		454753-010		454753-011		454753-012	
	Field Id:	TT-3 @ Surface		TT-3 @ 4'		TT3- @ 6'		TT4- @ Surface		TT4- @ 4'		TT4- @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-12 09:40		Dec-20-12 09:45		Dec-20-12 09:50		Dec-20-12 10:00		Dec-20-12 10:05		Dec-20-12 10:10	
TPH By SW8015 Mod	*Extracted:*	Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00	
	Analyzed:	Dec-28-12 19:55		Dec-28-12 20:21		Dec-28-12 20:46		Dec-28-12 21:12		Dec-28-12 21:37		Dec-28-12 22:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	18.7	ND	18.5	ND	17.5	ND	19.5	ND	15.4	ND	18.3
C12-C28 Diesel Range Hydrocarbons		ND	18.7	ND	18.5	74.1	17.5	ND	19.5	ND	15.4	ND	18.3
C28-C35 Oil Range Hydrocarbons		ND	18.7	ND	18.5	ND	17.5	ND	19.5	ND	15.4	ND	18.3
Total TPH		ND	18.7	ND	18.5	74.1	17.5	ND	19.5	ND	15.4	ND	18.3

Nicholas Straccione
Project Manager

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested													
	Lab Id:	454753-013		454753-014		454753-015		454753-016		454753-017		454753-018	
	Field Id:	TT-5 @ Surface		TT-5 @ 4'		TT-5 @ 6'		TT-6 @ Surface		TT-6 @ 4'		TT-6 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-12 10:20		Dec-20-12 10:25		Dec-20-12 10:30		Dec-20-12 10:40		Dec-20-12 10:45		Dec-20-12 10:50	
Inorganic Anions by EPA 300/300.1 SUB: E871002	***Extracted:***	Dec-28-12 22:02		Dec-28-12 22:19		Dec-28-12 23:11		Dec-28-12 23:29		Dec-28-12 23:46		Dec-29-12 00:04	
	Analyzed:	Dec-28-12 22:02		Dec-28-12 22:19		Dec-28-12 23:11		Dec-28-12 23:29		Dec-28-12 23:46		Dec-29-12 00:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.9	1.42	4.10	1.32	3.60	1.23	ND	1.32	ND	1.14	ND	1.20
Percent Moisture SUB: E871002	***Extracted:***												
	Analyzed:	Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		29.6	1.00	24.3	1.00	18.5	1.00	24.4	1.00	12.0	1.00	16.5	1.00
TPH By SW8015 Mod	***Extracted:***	Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00	
	Analyzed:	Dec-28-12 22:28		Dec-28-12 22:53		Dec-28-12 23:17		Dec-28-12 23:42		Dec-29-12 00:31		Dec-29-12 00:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	21.2	ND	19.8	ND	18.3	ND	19.8	ND	17.1	ND	18.0
C12-C28 Diesel Range Hydrocarbons		ND	21.2	ND	19.8	ND	18.3	ND	19.8	ND	17.1	ND	18.0
C28-C35 Oil Range Hydrocarbons		ND	21.2	ND	19.8	ND	18.3	ND	19.8	ND	17.1	ND	18.0
Total TPH		ND	21.2	ND	19.8	ND	18.3	ND	19.8	ND	17.1	ND	18.0

Nicholas Straccione
Project Manager

Certificate of Analysis Summary 454753

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SW 4-Inch Lateral

Project Id: 1RP-1018
Contact: Joel Lowry
Project Location: Lovington, NM

Date Received in Lab: Mon Dec-24-12 03:00 pm
Report Date: 07-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested											
	Lab Id:	454753-019		454753-020		454753-021					
	Field Id:	TT-7 @ Surface		TT-7 @ 4'		TT-7 @ 6'					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Dec-20-12 11:00		Dec-20-12 11:05		Dec-20-12 11:10					
Inorganic Anions by EPA 300/300.1 SUB: E871002	*Extracted:*	Dec-29-12 00:21		Dec-29-12 00:38		Dec-29-12 01:48					
	Analyzed:	Dec-29-12 00:21		Dec-29-12 00:38		Dec-29-12 01:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		ND	1.28	2.16	1.36	ND	1.02				
Percent Moisture SUB: E871002	*Extracted:*										
	Analyzed:	Dec-28-12 11:06		Dec-28-12 11:06		Dec-28-12 11:06					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		22.2	1.00	26.3	1.00	1.91	1.00				
TPH By SW8015 Mod	*Extracted:*	Dec-28-12 15:00		Dec-28-12 15:00		Dec-28-12 15:00					
	Analyzed:	Dec-29-12 01:20		Dec-29-12 01:45		Dec-29-12 02:09					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	19.3	ND	20.3	ND	15.3				
C12-C28 Diesel Range Hydrocarbons		ND	19.3	ND	20.3	ND	15.3				
C28-C35 Oil Range Hydrocarbons		ND	19.3	ND	20.3	ND	15.3				
Total TPH		ND	19.3	ND	20.3	ND	15.3				

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903786 **Sample:** 454753-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 00:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 903786 **Sample:** 454753-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 00:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	49.6	50.0	99	70-135	

Lab Batch #: 903786 **Sample:** 454753-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 01:02

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.6	50.0	101	70-135	

Lab Batch #: 903786 **Sample:** 454753-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 01:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.8	93	70-135	
o-Terphenyl	45.0	49.9	90	70-135	

Lab Batch #: 903786 **Sample:** 454753-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 01:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.6	100	96	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903786 **Sample:** 454753-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 02:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	99.8	94	70-135	
o-Terphenyl	46.0	49.9	92	70-135	

Lab Batch #: 903894 **Sample:** 454753-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 19:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	99.9	93	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 903894 **Sample:** 454753-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 20:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.5	99.6	93	70-135	
o-Terphenyl	46.8	49.8	94	70-135	

Lab Batch #: 903894 **Sample:** 454753-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 20:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.2	100	94	70-135	
o-Terphenyl	48.3	50.1	96	70-135	

Lab Batch #: 903894 **Sample:** 454753-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 21:12

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.7	92	70-135	
o-Terphenyl	46.7	49.9	94	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903894 **Sample:** 454753-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 21:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	100	93	70-135	
o-Terphenyl	45.8	50.0	92	70-135	

Lab Batch #: 903894 **Sample:** 454753-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 22:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	100	95	70-135	
o-Terphenyl	48.3	50.0	97	70-135	

Lab Batch #: 903894 **Sample:** 454753-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 22:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.7	106	70-135	
o-Terphenyl	53.3	49.9	107	70-135	

Lab Batch #: 903894 **Sample:** 454753-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 22:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	100	94	70-135	
o-Terphenyl	47.3	50.0	95	70-135	

Lab Batch #: 903894 **Sample:** 454753-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 23:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.7	98	70-135	
o-Terphenyl	47.9	49.9	96	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903894 **Sample:** 454753-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/28/12 23:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.7	99.7	96	70-135	
o-Terphenyl	46.7	49.9	94	70-135	

Lab Batch #: 903894 **Sample:** 454753-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 00:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	48.1	50.1	96	70-135	

Lab Batch #: 903894 **Sample:** 454753-018 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 00:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.5	100	98	70-135	
o-Terphenyl	47.6	50.1	95	70-135	

Lab Batch #: 903894 **Sample:** 454753-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 01:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	100	98	70-135	
o-Terphenyl	49.5	50.0	99	70-135	

Lab Batch #: 903894 **Sample:** 454753-020 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 01:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	99.8	96	70-135	
o-Terphenyl	48.2	49.9	97	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903894 **Sample:** 454753-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 02:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.0	100	93	70-135	
o-Terphenyl	44.1	50.1	88	70-135	

Lab Batch #: 904067 **Sample:** 454753-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/03/13 13:36

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 904067 **Sample:** 454753-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/03/13 13:53

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	80-120	

Lab Batch #: 904067 **Sample:** 454753-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/03/13 15:31

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 903786 **Sample:** 631807-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/27/12 15:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.4	100	94	70-135	
o-Terphenyl	44.7	50.1	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903894 **Sample:** 631869-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/28/12 19:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	99.7	94	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 904067 **Sample:** 631984-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/03/13 09:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0252	0.0300	84	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 903786 **Sample:** 631807-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/27/12 14:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.1	100	91	70-135	
o-Terphenyl	52.9	50.1	106	70-135	

Lab Batch #: 903894 **Sample:** 631869-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/28/12 18:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.7	100	70-135	
o-Terphenyl	59.4	49.9	119	70-135	

Lab Batch #: 904067 **Sample:** 631984-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/03/13 09:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 903786 **Sample:** 631807-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/27/12 15:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.7	100	94	70-135	
o-Terphenyl	47.8	50.1	95	70-135	

Lab Batch #: 903894 **Sample:** 631869-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/28/12 19:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.8	95	70-135	
o-Terphenyl	54.0	49.9	108	70-135	

Lab Batch #: 904067 **Sample:** 631984-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/03/13 09:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0333	0.0300	111	80-120	

Lab Batch #: 903786 **Sample:** 454643-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/27/12 16:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.9	100	85	70-135	
o-Terphenyl	49.3	50.1	98	70-135	

Lab Batch #: 903894 **Sample:** 454753-009 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 03:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.9	98	70-135	
o-Terphenyl	54.1	50.0	108	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SW 4-Inch Lateral

Work Orders : 454753, 454753 **Project ID:** 1RP-1018

Lab Batch #: 904067 **Sample:** 454753-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/03/13 15:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 903786 **Sample:** 454643-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/27/12 17:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.0	99.9	92	70-135	
o-Terphenyl	48.6	50.0	97	70-135	

Lab Batch #: 903894 **Sample:** 454753-009 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/29/12 03:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.2	99.9	97	70-135	
o-Terphenyl	54.4	50.0	109	70-135	

Lab Batch #: 904067 **Sample:** 454753-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/03/13 16:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0315	0.0300	105	80-120	
4-Bromofluorobenzene	0.0349	0.0300	116	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: SW 4-Inch Lateral

Work Order #: 454753, 454753 **Project ID:** 1RP-1018

Analyst: KEB **Date Prepared:** 01/03/2013 **Date Analyzed:** 01/03/2013

Lab Batch ID: 904067 **Sample:** 631984-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000992	0.0992	0.0829	84	0.0998	0.0821	82	1	70-130	35	
Toluene	<0.00198	0.0992	0.0795	80	0.0998	0.0817	82	3	70-130	35	
Ethylbenzene	<0.000992	0.0992	0.0780	79	0.0998	0.0817	82	5	71-129	35	
m,p-Xylenes	<0.00198	0.198	0.153	77	0.200	0.160	80	4	70-135	35	
o-Xylene	<0.000992	0.0992	0.0775	78	0.0998	0.0829	83	7	71-133	35	

Analyst: JOL **Date Prepared:** 12/28/2012 **Date Analyzed:** 12/28/2012

Lab Batch ID: 903868 **Sample:** 631862-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	105	105	0	80-120	20	

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

BS / BSD Recoveries

Project Name: SW 4-Inch Lateral

Work Order #: 454753, 454753 **Project ID:** 1RP-1018

Analyst: JOL **Date Prepared:** 12/29/2012 **Date Analyzed:** 12/29/2012

Lab Batch ID: 903869 **Sample:** 631863-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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	107	107	100	108	108	1	80-120	20	

Analyst: PRB **Date Prepared:** 01/03/2013 **Date Analyzed:** 01/03/2013

Lab Batch ID: 904060 **Sample:** 904060-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Sulfides by SW-846 9030B 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
Sulfide, total	<50.0	10000	10800	108	10000	10800	108	0	60-120	20	

Analyst: KEB **Date Prepared:** 12/27/2012 **Date Analyzed:** 12/27/2012

Lab Batch ID: 903786 **Sample:** 631807-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	1040	104	1000	1000	100	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	998	100	1000	966	97	3	70-135	35	

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

BS / BSD Recoveries

Project Name: SW 4-Inch Lateral

Work Order #: 454753, 454753 **Project ID:** 1RP-1018

Analyst: KEB **Date Prepared:** 12/28/2012 **Date Analyzed:** 12/28/2012

Lab Batch ID: 903894 **Sample:** 631869-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	997	1090	109	998	1040	104	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	997	1080	108	998	1020	102	6	70-135	35	

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

Form 3 - MS Recoveries

Project Name: SW 4-Inch Lateral

Work Order #: 454753

Lab Batch #: 903868 **Project ID:** 1RP-1018

Date Analyzed: 12/28/2012 **Date Prepared:** 12/28/2012 **Analyst:** JOL

QC- Sample ID: 454753-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	4.26	131	144	107	80-120	

Lab Batch #: 903868

Date Analyzed: 12/28/2012 **Date Prepared:** 12/28/2012 **Analyst:** JOL

QC- Sample ID: 454753-011 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	<1.03	103	110	107	80-120	

Lab Batch #: 903869

Date Analyzed: 12/29/2012 **Date Prepared:** 12/29/2012 **Analyst:** JOL

QC- Sample ID: 454797-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	8.73	115	130	105	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: SW 4-Inch Lateral

Work Order # : 454753 **Project ID:** 1RP-1018

Lab Batch ID: 904067 **QC- Sample ID:** 454753-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/03/2013 **Date Prepared:** 01/03/2013 **Analyst:** KEB

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00103	0.103	0.0907	88	0.102	0.101	99	11	70-130	35	
Toluene	<0.00206	0.103	0.0910	88	0.102	0.0988	97	8	70-130	35	
Ethylbenzene	<0.00103	0.103	0.0880	85	0.102	0.0953	93	8	71-129	35	
m,p-Xylenes	<0.00206	0.206	0.170	83	0.205	0.177	86	4	70-135	35	
o-Xylene	<0.00103	0.103	0.0869	84	0.102	0.0959	94	10	71-133	35	

Lab Batch ID: 903786 **QC- Sample ID:** 454643-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/27/2012 **Date Prepared:** 12/27/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<16.3	1090	1020	94	1090	1070	98	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.3	1090	1010	93	1090	1020	94	1	70-135	35	

Lab Batch ID: 903894 **QC- Sample ID:** 454753-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/29/2012 **Date Prepared:** 12/28/2012 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<17.4	1160	1220	105	1160	1210	104	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	74.1	1160	1310	107	1160	1300	106	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Project Name: SW 4-Inch Lateral

Work Order #: 454753

Lab Batch #: 903801 **Project ID:** 1RP-1018
Date Analyzed: 12/28/2012 11:06 **Date Prepared:** 12/28/2012 **Analyst:** RKO
QC- Sample ID: 454753-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	23.9	23.8	0	20	

Lab Batch #: 903801
Date Analyzed: 12/28/2012 11:06 **Date Prepared:** 12/28/2012 **Analyst:** RKO
QC- Sample ID: 454753-011 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.59	2.56	1	20	

Lab Batch #: 903801
Date Analyzed: 12/28/2012 11:06 **Date Prepared:** 12/28/2012 **Analyst:** RKO
QC- Sample ID: 454753-021 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	1.91	1.87	2	20	

Lab Batch #: 904060
Date Analyzed: 01/03/2013 16:42 **Date Prepared:** 01/03/2013 **Analyst:** PRB
QC- Sample ID: 454753-012 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Sulfides by SW-846 9030B Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	64.0	72.0	12	20	

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

CHAIN OF CUSTODY RECORD

XENCO Laboratories — Environmental Advertising Radiochemistry

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

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LAB W.O#: 454753

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Joel Lowry; Rose Slade	Email:	pm@basinenv.com rose.slade@sug.com
Project ID:	S&W 4-Inch Lateral (1RP-1018)	PO#:	SUG0009
Invoice To:	Southern Union Gas Services - Monahans	Quote #:	

Sampler Signature: Joel Lowry

Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

TAT Work Days = D Need results by:_____ Time:_____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other_____

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code			Container Quantity & Type Code	TPH	BTEX	Chloride						Preservative Type Code
							Lab Only:									REMARKS
1	TT-1 @ Surface	12/20/12	9:00	S			1	X		X						Hold for BTEX & Iron Sulfide
2	TT-1 @ 4'	12/20/12	9:05	S			1	X		X						"
3	TT-1 @ 6'	12/20/12	9:10	S			1	X		X						"
4	TT-2 @ Surface	12/20/12	9:20	S			1	X		X						"
5	TT-2 @ 4'	12/20/12	9:25	S			1	X		X						"
6	TT-2 @ 6'	12/20/12	9:30	S			1	X		X						"
7	TT-3 @ Surface	12/20/12	9:40	S			1	X		X						"
8	TT-3 @ 4'	12/20/12	9:45	S			1	X		X						"
9	TT-3 @ 6'	12/20/12	9:50	S			1	X		X						"
0	TT-4 @ Surface	12/20/12	10:00	S			1	X		X						"

Container Type Codes

VA Vial Amber, VC Vial Clear, VP Vial Pre-preserved, GA Glass Amber, GC Glass Clear, PA Plastic Amber, PC Plastic Clear, ES Encore Sampler, TS TerraCore Sampler, AC Air Canister, TB Tedlar Bag, ZB Zip Lock Bag, PC Plastic Clear, Other _____

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal, 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____

Preservative Type Codes

A: None, E. HCL, I. Ice, B. HNO_3, F. MeOH, J. MCAA 2-5 C., H_2SO_4, G. $Na_2S_2O_3$, K. ZnAc&NaOH, D. NaOH, H. $NaHSO_4$, L Asbc Acid&NaOH, O. _____

Matrix Type Codes

GW Ground Water, WW Waste Water, DW Drinking Water, SW Surface Water, OW Ocean/Sea Water, PL Product-Liquid, PS Product-Solid, SL Sludge, Other, S Soil/Sediment/Solid, W Wipe, A Air, O Oil, T Tissue, U Urine, B Blood

Reg. Program / Clean-up Std.: CTLs TRRP DW NPDES LPST DryCln Other:

State for Comp. Regs: FL TX GA NC SC NJ PA OK LA AL NM Other:

QA/QC Level & Certification: 1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:

EDDs: ADaPT SEDD ERPIMS XLS Other:

COC Seals/Labels: Match Incomplete Absent Unclear

Coolers Temp °C: 1 2 3

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1	Joel Lowry	Basin Env.	12-21-12	8:00	Jody Walker	Basin	12-21-12	8:00
2	Jody Walker	Basin	12-21-12	9:00	Steve Butler	Shipper	12-21-12	09:00
3						Xenco	12-21-12	15:00
4								

Lab Use Only

	YES	NO	N/A
Non-Conformances found?	X		
Samples intact upon arrival?	X		
Received on Wet Ice?	X		
Labeled with proper preservatives?	X		
Received within holding time?	X		
Custody seals intact?	X		
VOCs rec'd w/o headspace?			X
Proper containers used?	X		
pH verified-acceptable, excl VOCs?	X		
Received on time to meet HTs?	X		

C.O.C. Serial #

 Revision Date: Nov 12, 2009

CHAIN OF CUSTODY RECORD

XENCO Laboratories
Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Page 2 of 2

LAB W.O#: 454753

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Joel Lowry; Rose Slade	Email:	pm@basinenv.com rose.slade@sug.com
Project ID:	S&W 4-Inch Lateral (1RP-1018)	PO#:	SUG0009
Invoice To:	Southern Union Gas Services - Monahans	Quote #:	

TAT Work Days = D Need results by: _____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other

Sampler Signature:

Circle One Event: Daily Weekly Monthly Quartely Semi-Annual Annual N/A

Lab #	Sample ID	Collected Date	Collected Time	Matrix	# Containers	Filtered	Preserved	Total # of Containers	TPH	BTEX	Chloride							
									6C	6C	6G							
									1	1	1							
									TPH	BTEX	Chloride							
								Lab Only:										REMARKS
1	TT-4 @ 4'	12/20/12	10:05	S			1		X		X							Hold for BTEX & Iron Sulfide
2	TT-4 @ 6'	12/20/12	10:10	S			1		X		X							"
3	TT-5 @ Surface	12/20/12	10:20	S			1		X		X							"
4	TT-5 @ 4'	12/20/12	10:25	S			1		X		X							"
5	TT-5 @ 6'	12/20/12	10:30	S			1		X		X							"
6	TT-6 @ Surface	12/20/12	10:40	S			1		X		X							"
7	TT-6 @ 4'	12/20/12	10:45	S			1		X		X							"
8	TT-6 @ 6'	12/20/12	10:50	S			1		X		X							"
9	TT-7 @ Surface	12/20/12	11:00	S			1		X		X							"
0	TT-7 @ 4'	12/20/12	11:05	S			1		X		X							"

Container Type Codes

VA Vial Amber, VC Vial Clear, VP Vial Pre-preserved, GA Glass Amber, GC Glass Clear, PA Plastic Amber, PC Plastic Clear, ES Encore Sampler, TS TerraCore Sampler, AC Air Canister, TB Tedlar Bag, ZB Zip Lock Bag, PC Plastic Clear, Other _____

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal, 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____

Preservative Type Codes

A. None, E. HCL, I. Ice, B. HNO_3, F. MeOH, J. MCAA, 2-5 C., H_2SO_4, G. $Na_2S_2O_3$, K. ZnAc&NaOH, D. NaOH, H. $NaHSO_4$, L Asbc Acid&NaOH, O. _____

Matrix Type Codes

GW Ground Water, WW Waste Water, DW Drinking Water, SW Surface Water, OW Ocean/Sea Water, PL Product-Liquid, PS Product-Solid, SL Sludge, Other, S Soil/Sediment/Solid, W Wipe, A Air, O Oil, T Tissue, U Urine, B Blood

Reg. Program / Lead in Soil: CTLs TRRP DW NPDES LPST DryCln Other:

STATE for EDD Reqs: FL TX GA NC SC NJ PA OK LA AL NM Other:

QA/QC Level & Certification: 1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:

EDDs: ADaPT SEDD ERPIMS XLS Other:

TOC Seals: Match Incomplete Absent Unclear

Coolers Temp: 1 2 3

Lab Use Only: Y or N

	Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
1		Basin Env.	12-21-12	8:00		Basin	12-21-12	8:00
2		Basin	12-21-12	9:00		Shipper	12-21-12	0900
3								
4								

	Y or N	
Non-Conformances found?		Y
Samples Intact upon arrival?	Y	
Received on Wet Ice?	Y	
Labeled with proper preservatives?	Y	
Received within holding time?	Y	
Custody seals intact?	Y	
VOCs rec'd w/o headspace?		Y
Proper containers used?	Y	
pH verified-acceptable, excl VOCs?	Y	
Received on time to meet HTs?	Y	

C.O.C. Serial #

 Revision Date: Nov 12, 2009

CHAIN OF CUSTODY RECORD

Houston: 4143 Greenbriar Dr. Stafford, TX 77477 (281)240-4200 Odessa: 12600 West I-20 East Odessa, TX 79765 (432)563-1800
Hobbs: 4008 N Grimes Hobbs, NM 88240 (575)392-7550

Page 3 of 3

LAB W.O#: 454753

Field billable Hrs :

Company:	Basin Environmental Service Technologies, LLC	Phone:	(575)396-2378
Address:	3100 Plains Hwy.	Fax:	(575)396-1429
City:	Lovington	State: NM	Zip: 88260
PM/Attn:	Joel Lowry; Rose Slade	Email:	pm@basinenv.com rose.slade@sug.com
Project ID:	S&W 4-Inch Lateral (1RP-1018)	PO#:	SUG0009
Invoice To:	Southern Union Gas Services - Monahans	Quote #:	

Sampler Signature: Joel Lowry

Circle One Event: Daily Weekly Monthly Quarterly Semi-Annual Annual N/A

TAT Work Days = D Need results by: _____ Time: _____

Std (5-7D) 5Hrs 1D 2D 3D 4D **5D 7D** 10D 14D Other

Lab #	Sample ID	Collect. Date	Collect. Time	Matrix Code	Filtered (Y/N)	# of Containers	Preservative Code	TPH	BTEX	Chloride						Total # of Containers
								BC	GC	BC						
								I		I						
1	TT-7 @ 6'	12/20/12	11:10	S		1		X		X						
2																
3																
4																
5																
6																
7																
8																
9																
10																

Lab Only:

ANALYSES REQUESTED

Container Type Codes

VA Vial Amber ES Encore Sampler
VC Vial Clear TS TerraCore Sampler
VP Vial Pre-preserved AC Air Canister
GA Glass Amber TB Tedlar Bag
GC Glass Clear ZB Zip Lock Bag
PA Plastic Amber PC Plastic Clear
PC Plastic Clear
Other _____

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal 40ml, 125 ml, 250 ml, 500 ml, 1L, Other _____

Preservative Type Codes

A: None E. HCL I. Ice
B. HNO_3 F. MeOH J. MCAA 2.5 C.
H_2SO_4 G. $Na_2S_2O_3$ K. ZnAc&NaOH
D. NaOH H. $NaHSO_4$ L Asbc Acid&NaOH
O. _____

Matrix Type Codes

GW Ground Water S Soil/Sediment/Solid
WW Waste Water W Wipe
DW Drinking Water A Air
SW Surface Water O Oil
OW Ocean/Sea Water T Tissue
PL Product-Liquid U Urine
PS Product-Solid B Blood
SL Sludge
Other

REMARKS

Hold for BTEX & Iron Sulfide

Reg. Program: CTLs TRRP DW NPDES LPST DryCln Other:

State Forms & Fees: FL TX GA NC SC NJ PA OK LA AL NM Other:

QA/QC Level / Certification: 1 2 3 4 CLP AFCEE QAPP NELAC DoD-ELAP Other:

EDDs: ADaPT SEDD ERPIMS XLS Other:

COC Seals: Match Incomplete Absent Unclear

Coolers Temp °C: 1 2 3

	Relinquished by:	Affiliation	Date	Time	Received by:	Affiliation	Date	Time
1	Joel Lowry	Basin Env.	12-21-12	8:00	Judy Walker	Basin	12-21-12	8:00
2	Judy Walker	Basin	12-21-12	9:00	Steve Butler	Shipper	12-21-12	0900
3					Dylan Hu	Xenco	12-21-12	1500
4								

	YES	NO	N/A
Non-Conformances found?	X		
Samples intact upon arrival?	X		
Received on Wet Ice?	X		
Labeled with proper preservatives?	X		
Received within holding time?	X		
Custody seals intact?	X		
VOCs recd w/o headspace?			X
Proper containers used?	X		
pH verified-acceptable, excl VOCs?	X		
Received on time to meet HTs?	X		

C.O.C. Serial #

 Revision Date: Nov 12, 2009

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 12/24/2012 03:00:00 PM

Work Order #: 454753

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.5
#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?	**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: 12/26/2012

Checklist reviewed by: Date: 12/26/2012

Analytical Report 456428

for

Southern Union Gas Services- Monahans

Project Manager: Ben Arguijo

S&W 4-Inch

RP-1018

29-JAN-13

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)

29-JAN-13

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

Reference: XENCO Report No(s): **456428**
S&W 4-Inch
Project Address: Lea County, NM

Ben Arguijo:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 456428. 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. 456428 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

Sample Cross Reference 456428

Southern Union Gas Services- Monahans, Monahans, TX

S&W 4-Inch

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP#1 @ 8'	S	01-24-13 12:00	8 ft	456428-001
SP#1 @ 10'	S	01-24-13 12:15	10 ft	456428-002

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: S&W 4-Inch

Project ID:	*RP-1018*	Report Date:	*29-JAN-13*
Work Order Number(s):	*456428*	Date Received:	*01/25/2013*

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 456428

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: S&W 4-Inch

Project Id: RP-1018
Contact: Ben Arguijo
Project Location: Lea County, NM

Date Received in Lab: Fri Jan-25-13 03:25 pm
Report Date: 29-JAN-13
Project Manager: Nicholas Straccione

Analysis Requested									
	Lab Id:	456428-001		456428-002					
	Field Id:	SP#1 @ 8'		SP#1 @ 10'					
	Depth:	8- ft		10- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-24-13 12:00		Jan-24-13 12:15					
Percent Moisture	*Extracted:*								
	Analyzed:	Jan-28-13 17:30		Jan-28-13 17:30					
	Units/RL:	%	RL	%	RL				
Percent Moisture		6.29	1.00	2.75	1.00				
TPH By SW8015 Mod	*Extracted:*	Jan-28-13 08:35		Jan-28-13 08:35					
	Analyzed:	Jan-28-13 19:31		Jan-28-13 19:57					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.0	ND	15.4				
C12-C28 Diesel Range Hydrocarbons		ND	16.0	ND	15.4				
C28-C35 Oil Range Hydrocarbons		ND	16.0	ND	15.4				
Total TPH		ND	16.0	ND	15.4				

Nicholas Straccione
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

\+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: S&W 4-Inch

Work Orders : 456428,

Project ID: RP-1018

Lab Batch #: 905671 **Sample:** 456428-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/13 19:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	99.8	104	70-135	
o-Terphenyl	56.5	49.9	113	70-135	

Lab Batch #: 905671 **Sample:** 456428-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/13 19:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 905671 **Sample:** 632981-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/13 11:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	55.4	50.1	111	70-135	

Lab Batch #: 905671 **Sample:** 632981-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/13 10:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.8	100	97	70-135	
o-Terphenyl	56.7	50.1	113	70-135	

Lab Batch #: 905671 **Sample:** 632981-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/13 10:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	100	94	70-135	
o-Terphenyl	56.8	50.1	113	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: S&W 4-Inch

Work Orders : 456428,

Project ID: RP-1018

Lab Batch #: 905671 **Sample:** 456251-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/13 21:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	61.1	50.1	122	70-135	

Lab Batch #: 905671 **Sample:** 456251-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/13 21:42

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	58.1	49.8	117	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

BS / BSD Recoveries

Project Name: S&W 4-Inch

Work Order #: 456428 **Project ID:** RP-1018

Analyst: KEB **Date Prepared:** 01/28/2013 **Date Analyzed:** 01/28/2013

Lab Batch ID: 905671 **Sample:** 632981-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	956	96	1000	945	95	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1030	103	1000	1020	102	1	70-135	35	

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

Form 3 - MS / MSD Recoveries

Project Name: S&W 4-Inch

Work Order # : 456428 **Project ID:** RP-1018

Lab Batch ID: 905671 **QC- Sample ID:** 456251-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/28/2013 **Date Prepared:** 01/28/2013 **Analyst:** KEB

Reporting Units: mg/kg

TPH By SW8015 Mod Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.8	1060	1110	105	1050	1090	104	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.8	1060	1200	113	1050	1180	112	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

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

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: S&W 4-Inch

Work Order #: 456428

Lab Batch #: 905649 **Project ID:** RP-1018

Date Analyzed: 01/28/2013 17:30 **Date Prepared:** 01/28/2013 **Analyst:** WRU

QC- Sample ID: 456340-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	5.83	5.95	2	20	

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

Xenco Laboratories

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Ben J. Arguijo; Joel Lowry

Project Name: S & W 4-Inch

Company Name: Basin Environmental Service Technologies, LLC

Project #: RP-1018

Company Address: P.O. Box 301

Project Loc: Lea County, NM

City/State/Zip: Lovington, NM 88260

PO #: Bill Southern Union

Telephone No: (575)396-2378

Fax No: (575) 396-1429

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

Sampler Signature: Joel Lowry

e-mail: pm@basinenv.com, rose.slade@SUG.com, cyndi.inskeep@SUGS.com

(lab use only)
ORDER #: 456428

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW = Drinking Water SL = Sludge	GW = Groundwater S = Soil/Sol	NP = Non-Potable Specify Othe	Analyze For: TCLP: TPH: 8015B	TPH: 8015M 418.1	TPH: TX 1005	TPH: TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260 (X)	RCI	N.O.R.M.	CHLORIDES	Total Dissolved Solids	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT 4 DAY
	SB#1@8'	8'		1/24/13	12:00		1	X											X										X						X
	SB#1@10'	10'		1/24/13	12:15		1	X											X										X						X

Special Instructions:

Laboratory Comments:

Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 17.0 °C

Relinquished by:	Date	Time	Received by:	Date	Time
Joel Lowry	1/24/13	12:35	Steve Battle	1-24-13	1237
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Maurel Smith	1/25/13	15:25

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 01/25/2013 03:25:13 PM

Work Order #: 456428

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

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	9
#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: _____

Appendix C

Release Notification and Corrective Action
(Form C-141)

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Tony Savoie
Address	P.O. Box 1226 Jal, N.M. 88252	Telephone No.	505-395-2116
Facility Name	Lea County Field Dept.	Facility Type	Natural Gas Gathering

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	16	20S	37E					Lea

Latitude N32 34.160 Longitude W103 15.249

NATURE OF RELEASE

Type of Release Natural Gas, gas liquids and iron sulfide.	Volume of Release 22.5 mcf nat. gas, 15 bbls nat.gas liquids	Volume Recovered 0 bbls
Source of Release Pipeline	Date and Hour of Occurrence 5/27/06. Hour unknown.	Date and Hour of Discovery 5/27/06 Hour unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The 4" steel gathering pipeline, operating at 20 psi developed a leak, the line was blocked in an allowed to blow down on 5/27/06. Repair crews replaced the affected area of pipe by replacing approximately 400 ft. of steel pipe with poly-pipe on 8/11/06. Normal operating pressure on the line is 20 psi to 30 psi, with a potential H2S content of 4000 ppm.

Received
Hobbs
OCD

Describe Area Affected and Cleanup Action Taken.* An area measuring approximately 2175 sq. ft of pasture land was affected around the immediate leak area with a mist of iron sulfide and natural gas liquids. No immediate cleanup action was taken. The impacted soil will be remediated using the NMOCD recommended guidelines. A Site sketch and remediation plan is attached.

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:	*Tony Savoie*	Approved by District ~~Supervisor~~: ENVIRO ENGR	
Printed Name:	John A. Savoie		
Title:	EH&S Comp. Coord.	Approval Date: 8-28-06	Expiration Date:
E-mail Address:	jasavoie@sidrichgas.com	Conditions of Approval: SUBMIT SITE PLOTS, SAMPLE RESULTS FOR TPH, SULFIDE, & CHLORIDES W/ CLOSURE REPORT BY NOV. 1, 2006.	Attached ☐
Date: 8/11/06	Phone: 505-395-2116		

* Attach Additional Sheets If Necessary

incident - nPAC0624038327
application - pPAC0624038548

RP#1018