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REMEDIATION SUMMARY & SOIL CLOSURE REQUEST

Property:

REGENCY FIELD SERVICES LLC.
A-14 6" Lateral
Historical Release Site
Lea County, New Mexico
Unit Letter "E", Section 2, Township 24 South, Range 34 East
Latitude 32.24915, Longitude -103.44687
1RP-1062

February 2015
Apex Project No. 7250715009

Prepared for:

Regency Field Services LLC
421 West 3rd Street, Suite 250
Fort Worth, TX 76102
Attn: **Ms. Crystal Callaway, BSN, RN, CHMM**

Prepared by:

Thomas Franklin
Project Manager

Liz Scaggs, P.G.
Senior Technical Review

TABLE OF CONTENTS

APPENDICES

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1.0 INTRODUCTION

1.1 Site Description & Background

Apex TITAN, Inc. (Apex) has prepared this Remediation Summary and Soil Closure Request for the Regency Field Services, LLC (Regency) A-14 6" Lateral leak (referred to hereinafter as the "Site" or "subject Site"). Remedial actions were reportedly conducted in accordance with New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (NMOCD) rules (*NMAC 19.15.29 Release Notification*) and the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

The A-14 6" Lateral Line leak is located east of Antelope Road, 18 miles northwest of Jal, New Mexico (GPS 32.24915, -103.44687). According to documentation provided by Southern Union Gas Services, (SUG), the Initial C-141 was submitted by SUG, the operator at the time, to the New Mexico Oil Conservation Division (NMOCD) in September of 2006. Regency Field Services, LLC. has subsequently acquired this site.

The previous remedial activities were reportedly conducted by Ocotillo Environmental, LLC. (Ocotillo) and NOVA Safety and Environmental (NOVA). This Closure Request is solely based upon the interpretation of the data provided by Ocotillo and NOVA.

1.2 Project Objective

The objective of the Remediation Summary and Soil Closure Request is to present documentation of the activities that were performed to date and to request closure of the site.

1.3 Standard of Care

Apex's services are performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, express or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in

the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

1.4 Reliance

This report has been prepared for the exclusive use of Regency, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Regency and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

The Site is subject to regulatory oversight by the NMOCD. To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically NMAC 19.15.29 *Release Notification*. These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

Ranking Criteria			**Ranking Score**
Depth to Groundwater	<50 feet	20	**0**
	50 to 99 feet	10	
	>100 feet	0	
Wellhead Protection Area, <1,000 feet from a water source, or; <200 feet from private domestic water source.	Yes	20	**0**
	No	0	
Distance to Surface Water Body	<200 feet	20	**0**
	200 to 1,000 feet	10	
	>1,000 feet	0	
Total Ranking Score			**0**

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 0. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is greater than 100 feet at the Site.
- The impacted area is greater than 200 feet from a private domestic water source.

- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 0, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for benzene, 50 mg/Kg for total benzene, toluene, ethlybenzene and xylene (BTEX), 5,000 mg/Kg for total petroleum hydrocarbons (TPH) and 1,000 mg/Kg for chloride.

3.0 INITIAL RESPONSE, EXCAVATION & TRENCHING ACTIVITIES

3.1 Initial Response

In 2006, SUG conducted an initial investigation at the Site. A ranking analysis was completed which ranked the site as a zero (0) and stated that ground water was an average of one hundred and forty five (145) feet deep in the area. During the investigation, samples were collected from the surface and field screened for hydrocarbons.

3.2 Excavation Activities

Excavation remediation activities were conducted by Ocotillo and began in April of 2007 and extended into 2008. The excavation activities included removing impacted material from the release, field screening for hydrocarbons and blending onsite. Material that exceeded regulatory levels was hauled to the Pitchfork Land farm for proper disposal. Based on the Bill of Ladings, included in Appendix E, approximately 264 cubic yards of impacted material was disposed. The final dimensions of the excavation were approximately five hundred (500) feet in length and fifty (50) feet to seventy five (75) feet in width as shown on Figure 3, Appendix A. The depth of the excavated areas was not documented by Ocotillo.

3.3 Excavation Confirmation Soil Sampling Program

According to the daily time tickets from Ocotillo, soil samples were field screened for hydrocarbons and then collected and sent to a laboratory for analysis. The daily time tickets do not specify a particular laboratory or show the field analysis from sampling. The laboratory analytical results are not available from Ocotillo for submittal.

3.4 Trenching Activities

NOVA personnel supervised trenching activities in the area that was not previously documented for vertical delineation. In May and June of 2013, NOVA personnel were present to observe on-Site activities and to collect soil samples. Eight (8) trenches (Trench-1 through Trench-8) and the Release Point (RP) were installed and sampled as shown in Figure 3.

3.5 Trenching Confirmation Soil Sampling Program

Soil samples were collected by NOVA personnel and analyzed for BTEX, TPH and chlorides as shown in Appendix B, Table 1. The analytical sample results were below the NMOCD regulatory levels for BTEX and TPH. Elevated chloride concentrations were found in Trench-4, Trench-5, Tench-6 and Trench-7. Trench-4 showed elevated chloride

concentrations of 450 mg/Kg at two (2) feet declining to 325 mg/Kg at seven (7) feet below grade surface (bgs). Trench-5 showed elevated chloride concentrations of 950 mg/Kg at one (1) foot declining to 42.8 mg/Kg at two (2) feet bgs. Trench-6 showed elevated chloride concentrations of 1,610 mg/Kg at two (2) feet declining to 242 mg/Kg at six (6) feet bgs. Trench-7 showed elevated chloride concentrations of 1,940 mg/Kg at four (4) feet declining to 248 mg/Kg at ten (10) feet bgs. Trench-5, Trench-6 and Trench-7 were vertically delineated with depth and exhibited concentrations below the NMOCD regulatory levels. Trench-4 was not vertically delineated, however, the chlorides were declining with depth and were not at a significant concentration.

4.0 LABORATORY ANALYTICAL METHODS

Soil samples collected were analyzed for TPH GRO/DRO utilizing EPA method SW-846 8015, BTEX using EPA method SW-846 8021B and chlorides utilizing EPA method SW-846 300.1. Copies of the laboratory analytical reports are provided in Appendix D.

Soil samples were collected and placed in laboratory prepared glassware, placed on ice in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to an approved laboratory for normal turn-around time.

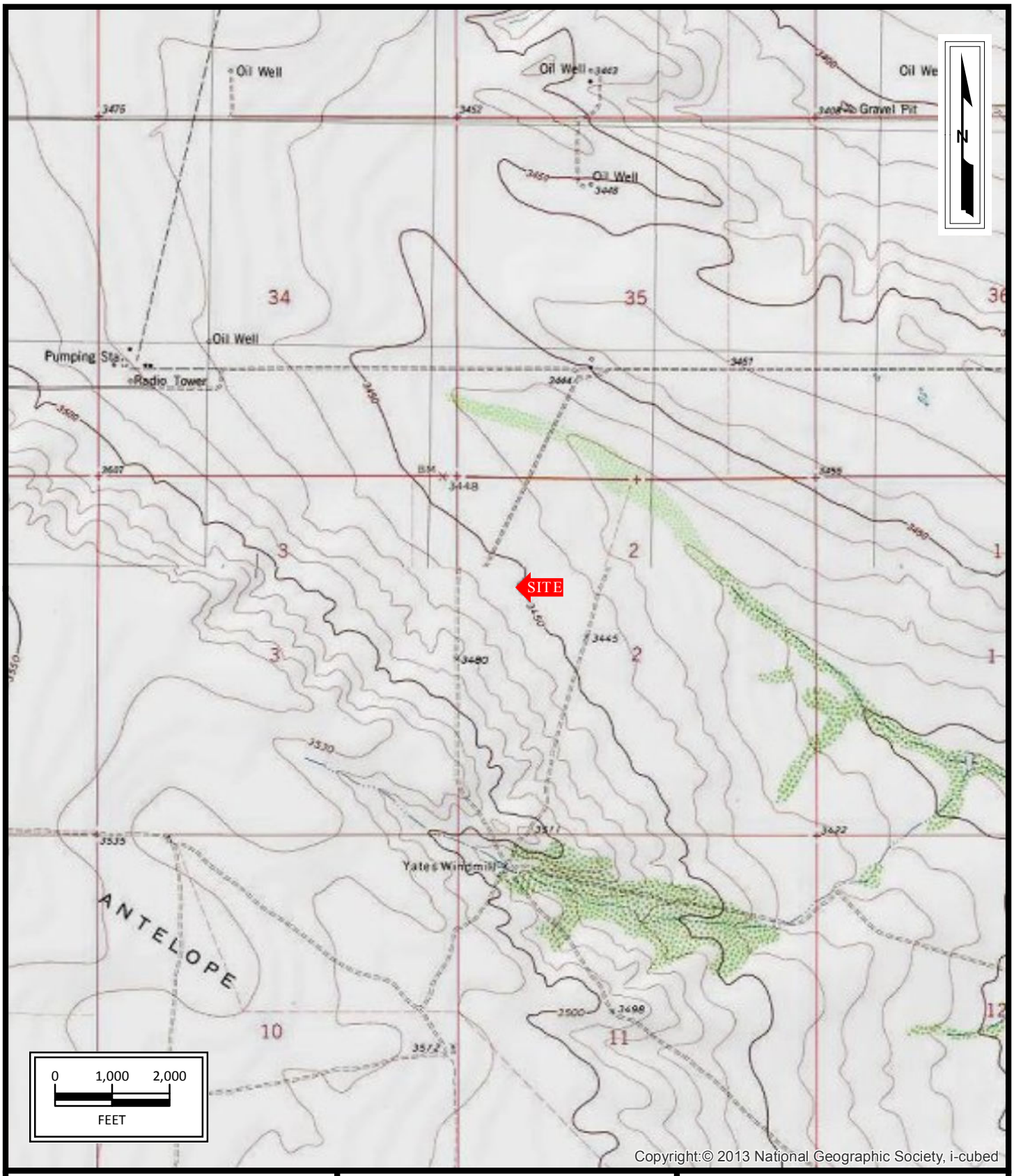
Figure 3 is a Site plan that indicates the approximate location of the confirmation soil samples and test trench locations in relation to pertinent land features and general Site boundaries.

5.0 CLOSURE

Based upon the data provided by Ocotillo and NOVA with the photos shown in Appendix C, the constituents of concern were horizontally and vertically delineated. The excavation was backfilled and brought to grade. Based upon the response actions and laboratory analytical results, no additional investigation and/or remediation appears warranted at this time. Regency respectfully requests closure of this Site. Copies of the Initial and Final C-141 are provided in Appendix F.

APPENDIX A

Figures



Regency - A-14 6 Inch Lateral
Lea County, New Mexico
32.24915N, 103.44687W

Project No. 7250715009

Apex TITAN, Inc.
505 N. Big Spring Street, Suite 301A
Midland, Texas 79701
Phone: (432) 695-6016
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1
Topographic Map
Woodley Flat, NM Quadrangle
1973

Regency - A-14 6 Inch Lateral
Lea County, New Mexico
32.24915N, 103.44687W

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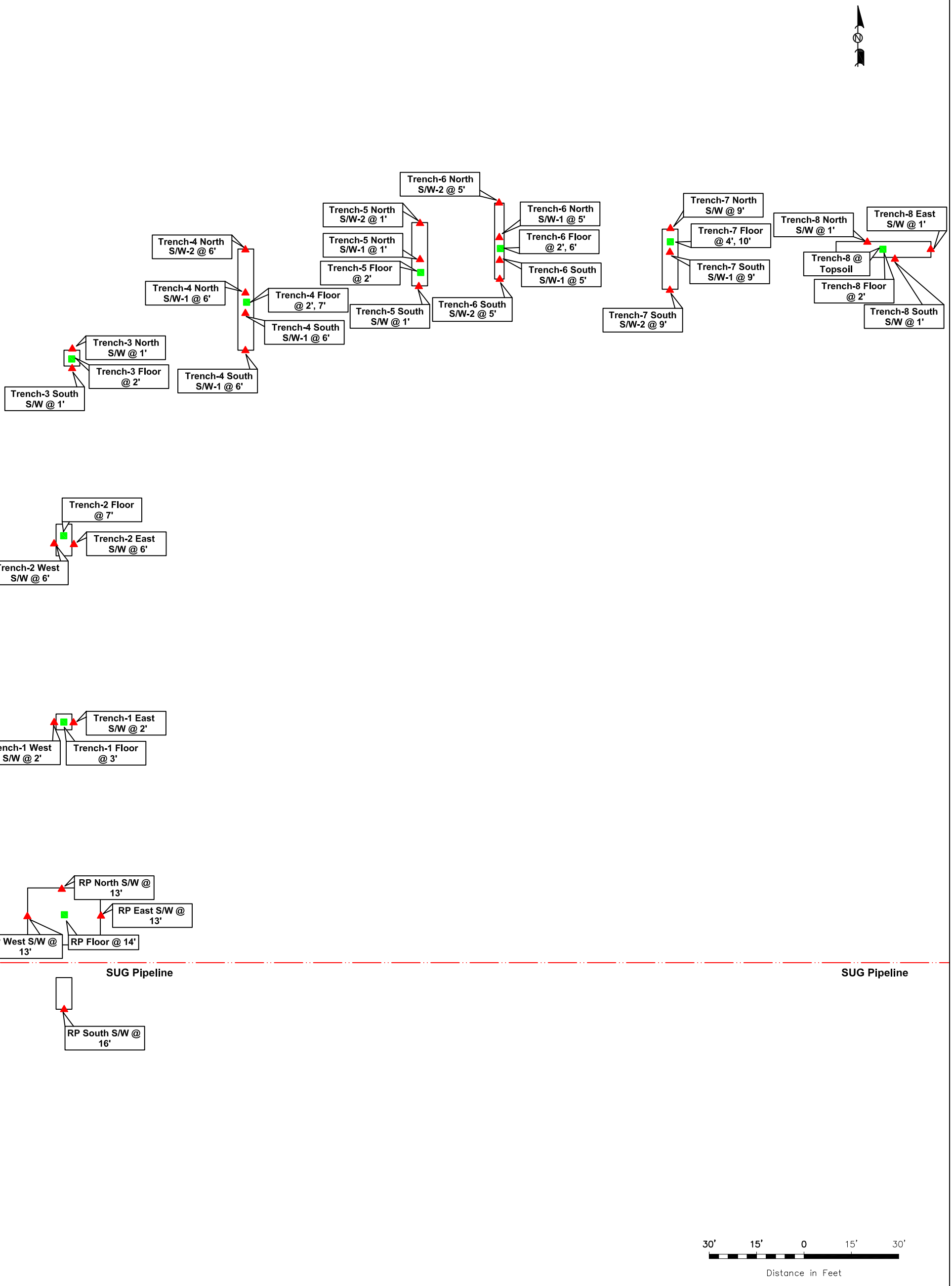
FIGURE 2
Site Vicinity Map



Legend:

- Sidewall Soil Sample Location
- Floor Soil Sample Location
- SUG Pipeline

Figure 3
Site Details & Soil Samples
Location Map
Southern Union Gas Service
A-14 6 Inch Lateral
Lea County, NM
1RP-1062

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

August 5, 2013 | Scale: 1" - 30' | CAD By: CAS | Checked By:

Lat. _____ Long. W _____

Z:\Houston South\Drafting\Midland 07\2015\7250715009\Figure 3.dwg 02/17/15

APPENDIX B

Soil Analytical Results

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
A-14 6 INCH LATERAL HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE # 1RP-1062

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
NMOCD Regulatory Limit		**10**	**-**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**5,000**	**1,000**
RP Floor @ 14'	05/30/13	<0.00102	<0.00204	<0.00102	<0.00204	<0.00102	<0.00204	<15.0	<15.0	<15.0	<15.0	5.45
RP West S/W @ 13'	05/30/13	<0.00108	<0.00217	<0.00108	<0.00217	<0.00108	<0.00217	<14.9	<14.9	<14.9	<14.9	4.65
RP East S/W @ 13'	05/30/13	<0.00109	<0.00218	<0.00109	<0.00218	<0.00109	<0.00218	<15.0	<15.0	<15.0	<15.0	6.57
SP-1	05/30/13	<0.00104	<0.00208	<0.00104	<0.00208	<0.00104	<0.00208	<14.9	323	82.3	405	69.3
RP South S/W @ 16'	05/31/13	<0.00104	<0.00208	<0.00104	<0.00208	<0.00104	<0.00208	<15.0	<15.0	<15.0	<15.0	2.59
Trench-1 Floor @ 3'	05/31/13	<0.00106	<0.00212	<0.00106	<0.00212	<0.00106	<0.00212	<15.0	<15.0	<15.0	<15.0	100
Trench-1 East S/W @ 2'	05/31/13	<0.00107	<0.00214	<0.00107	<0.00214	<0.00107	<0.00214	<15.0	<15.0	<15.0	<15.0	49.6
Trench-1 West S/W @ 2'	05/31/13	<0.00104	<0.00208	<0.00104	<0.00208	<0.00104	<0.00208	<14.9	<14.9	<14.9	<14.9	28.1
RP North S/W @ 13'	06/03/13	<0.00101	<0.00202	<0.00101	<0.00202	<0.00101	<0.00202	<15.0	211	43.7	255	106
Trench-2 Floor @ 7'	06/03/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<14.9	<14.9	<14.9	<14.9	30.5
Trench-2 East S/W @ 6'	06/03/13	<0.00101	<0.00202	<0.00101	<0.00202	<0.00101	<0.00202	<14.9	<14.9	<14.9	<14.9	51.1
Trench-2 West S/W @ 6'	06/03/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<14.9	<14.9	<14.9	<14.9	<2.00
Trench-3 Floor @ 2'	06/03/13	<0.00100	<0.00201	<0.00100	<0.00201	<0.00100	<0.00201	<15.0	<15.0	<15.0	<15.0	156
Trench-3 North S/W @ 1'	06/03/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<15.0	<15.0	<15.0	<15.0	64.8
Trench-3 South S/W @ 1'	06/03/13	<0.00101	<0.00201	<0.00101	<0.00201	<0.00101	<0.00201	<14.9	<14.9	<14.9	<14.9	89.2
Trench-4 Floor @ 2'	06/04/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<15.0	<15.0	<15.0	<15.0	450
Trench-4 Floor @ 7'	06/04/13	<0.000990	<0.00198	<0.000990	<0.00198	<0.000990	<0.00198	<14.9	<14.9	<14.9	<14.9	325
Trench-4 North S/W-1 @ 6'	06/04/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<15.0	<15.0	<15.0	<15.0	297
Trench-4 North S/W-2 @ 6'	06/04/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<15.0	<15.0	<15.0	<15.0	158
Trench-4 South S/W-1 @ 6'	06/04/13	<0.000994	<0.00199	<0.000994	<0.00199	<0.000994	<0.00199	<14.9	<14.9	<14.9	<14.9	458
Tench-4 South S/W-2 @ 6'	06/04/13	<0.000994	<0.00199	<0.000994	<0.00199	<0.000994	<0.00199	<15.0	<15.0	<15.0	<15.0	85.8
Trench-5 Floor @ 2'	06/04/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.0	<15.0	<15.0	<15.0	42.8
Trench-5 South S/W @ 1'	06/04/13	<0.000994	<0.00199	<0.000994	<0.00199	<0.000994	<0.00199	<15.0	<15.0	<15.0	<15.0	2.96
Trench-5 North S/W-1 @ 1'	06/04/13	<0.000990	<0.00198	<0.000990	<0.00198	<0.000990	<0.00198	<15.7	<15.7	<15.7	<15.7	950
Trench-5 North S/W-2 @ 1'	06/04/13	<0.000996	<0.00199	<0.000996	<0.00199	<0.000996	<0.00199	<15.8	<15.8	<15.8	<15.8	39.9

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
A-14 6 INCH LATERAL HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
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SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
NMOCD Regulatory Limit		**10**	**-**	**-**	**-**	**-**	**50**	**-**	**-**	**-**	**5,000**	**1,000**
Trench-6 Floor @ 2'	06/05/13	<0.000992	<0.00198	<0.000992	<0.00198	<0.000992	<0.00198	<15.8	<15.8	<15.8	<15.8	**1,610**
Trench-6 Floor @ 6'	06/05/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<15.1	<15.1	<15.1	<15.1	242
Floor-6 North S/W-1 @ 5'	06/05/13	<0.000994	<0.00199	<0.000994	<0.00199	<0.000994	<0.00199	<15.6	<15.6	<15.6	<15.6	738
Trench-6 South S/W-1 @ 5'	06/05/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.7	<15.7	<15.7	<15.7	190
Trench-6 North S/W-2 @ 5'	06/05/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<15.3	<15.3	<15.3	<15.3	87.8
Trench-6 South S/W-2 @ 5'	06/05/13	<0.00101	<0.00201	<0.00101	<0.00201	<0.00101	<0.00201	<15.5	<15.5	<15.5	<15.5	128
Trench-7 Floor @ 4'	06/06/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<16.2	<16.2	<16.2	<16.2	**1,940**
Trench-7 Floor @ 10'	06/06/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.5	<15.5	<15.5	<15.5	248
Trench-7 North S/W @ 9'	06/06/13	<0.000994	<0.00199	<0.000994	<0.00199	<0.000994	<0.00199	<15.8	<15.8	<15.8	<15.8	59.9
Trench-7 South S/W-1 @ 9'	06/06/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.7	<15.7	<15.7	<15.7	714
Trench-7 South S/W-2 @ 9'	06/06/13	<0.00106	<0.00211	<0.00106	<0.00211	<0.00106	<0.00211	<15.7	<15.7	<15.7	<15.7	333
Trench-8 Topsoil	06/07/13	<0.00102	<0.00205	<0.00102	<0.00205	<0.00102	<0.00205	<15.3	31.4	<15.3	31.4	26.2
Trench-8 Floor @ 2'	06/07/13	<0.00114	<0.00229	<0.00114	<0.00229	<0.00114	<0.00229	<17.0	<17.0	<17.0	<17.0	19.3
Trench-8 North S/W @ 1'	06/07/13	<0.00108	<0.00217	<0.00108	<0.00217	<0.00108	<0.00217	<16.3	<16.3	<16.3	<16.3	21.0
Trench-8 East S/W @ 1'	06/07/13	<0.00110	<0.00221	<0.00110	<0.00221	<0.00110	<0.00221	<16.6	<16.6	<16.6	<16.6	5.84
Trench-8 South S/W @ 1'	06/07/13	<0.00107	<0.00215	<0.00107	<0.00215	<0.00107	<0.00215	<16.3	<16.3	<16.3	<16.3	6.39

APPENDIX C

Photos

View North – Approximate area of release

View North – Spill path with new growth

APPENDIX D

Laboratory Data Reports & Chain-of-Custody Documents

Analytical Report 464286

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUGS Historical A-14 6 Inch Lateral 1RP-1062

04-JUN-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)

04-JUN-13

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

Reference: XENCO Report No(s): **464286**
SUGS Historical A-14 6 Inch Lateral 1RP-1062
Project Address: Lea County, New Mexico

Camille Bryant:

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) 464286. 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. 464286 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 464286

Southern Union Gas Services- Monahans, Monahans, TX

SUGS Historical A-14 6 Inch Lateral 1RP-1062

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
RP Floor @ 14'	S	05-30-13 14:00		464286-001
RP West S/W @ 13'	S	05-30-13 14:30		464286-002
RP East S/W @ 13'	S	05-30-13 15:00		464286-003
SP-1	S	05-30-13 14:05		464286-004
RP SOuth S/W @ 16'	S	05-31-13 10:00		464286-005
Trench-1 Floor @ 3'	S	05-31-13 11:10		464286-006
Trench-1 East S/W @ 2'	S	05-31-13 13:00		464286-007
Trench- 1 West S/W @ 2'	S	05-31-13 13:15		464286-008

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project ID:
Work Order Number(s): *464286*

Report Date: *04-JUN-13*
Date Received: *06/03/2013*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 464286

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Jun-03-13 11:25 am
Report Date: 04-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	464286-001		464286-002		464286-003		464286-004		464286-005		464286-006	
	Field Id:	RP Floor @ 14'		RP West S/W @ 13'		RP East S/W @ 13'		SP-1		RP SOuth S/W @ 16'		Trench-1 Floor @ 3'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-30-13 14:00		May-30-13 14:30		May-30-13 15:00		May-30-13 14:05		May-31-13 10:00		May-31-13 11:10	
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	Jun-03-13 16:04		Jun-04-13 08:57		Jun-03-13 16:37		Jun-03-13 16:53		Jun-03-13 17:09		Jun-03-13 17:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00102	ND	0.00108	ND	0.00109	ND	0.00104	ND	0.00104	ND	0.00106
Toluene		ND	0.00204	ND	0.00217	ND	0.00218	ND	0.00208	ND	0.00208	ND	0.00212
Ethylbenzene		ND	0.00102	ND	0.00108	ND	0.00109	ND	0.00104	ND	0.00104	ND	0.00106
m,p-Xylenes		ND	0.00204	ND	0.00217	ND	0.00218	ND	0.00208	ND	0.00208	ND	0.00212
o-Xylene		ND	0.00102	ND	0.00108	ND	0.00109	ND	0.00104	ND	0.00104	ND	0.00106
Total Xylenes		ND	0.00102	ND	0.00108	ND	0.00109	ND	0.00104	ND	0.00104	ND	0.00106
Total BTEX		ND	0.00102	ND	0.00108	ND	0.00109	ND	0.00104	ND	0.00104	ND	0.00106
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-03-13 12:00		Jun-03-13 12:00		Jun-03-13 12:00		Jun-03-13 12:00		Jun-03-13 12:00		Jun-03-13 12:00	
	Analyzed:	Jun-03-13 21:57		Jun-03-13 22:40		Jun-03-13 23:02		Jun-03-13 23:23		Jun-03-13 23:45		Jun-04-13 00:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		5.45	2.00	4.65	2.00	6.57	2.00	69.3	4.00	2.59	2.00	100	4.00
Percent Moisture	***Extracted:***												
	Analyzed:	Jun-03-13 12:55		Jun-03-13 12:55		Jun-03-13 12:55		Jun-03-13 13:00		Jun-03-13 13:00		Jun-03-13 13:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.86	1.00	7.74	1.00	9.12	1.00	4.75	1.00	4.11	1.00	5.83	1.00
TPH By SW8015 Mod	***Extracted:***	Jun-03-13 15:30		Jun-03-13 15:30		Jun-03-13 15:30		Jun-03-13 15:30		Jun-03-13 15:30		Jun-03-13 15:30	
	Analyzed:	Jun-03-13 17:01		Jun-03-13 17:28		Jun-03-13 17:55		Jun-03-13 18:22		Jun-03-13 18:48		Jun-03-13 19:15	
	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	15.0	ND	14.9	ND	15.0	ND	14.9	ND	15.0	ND	15.0
C12-C28 Diesel Range Hydrocarbons		ND	15.0	ND	14.9	ND	15.0	323	14.9	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	14.9	ND	15.0	82.3	14.9	ND	15.0	ND	15.0
Total TPH		ND	15.0	ND	14.9	ND	15.0	405	14.9	ND	15.0	ND	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464286

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Jun-03-13 11:25 am
Report Date: 04-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	464286-007		464286-008					
	Field Id:	Trench-1 East S/W @ 2'		Trench- 1 West S/W @ 2'					
	Depth:								
	Matrix:	SOIL		SOIL					
	Sampled:	May-31-13 13:00		May-31-13 13:15					
BTEX by EPA 8021B	***Extracted:***	** ** ** **		** ** ** **					
	Analyzed:	Jun-03-13 17:42		Jun-03-13 18:17					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00107	ND	0.00104				
Toluene		ND	0.00214	ND	0.00208				
Ethylbenzene		ND	0.00107	ND	0.00104				
m,p-Xylenes		ND	0.00214	ND	0.00208				
o-Xylene		ND	0.00107	ND	0.00104				
Total Xylenes		ND	0.00107	ND	0.00104				
Total BTEX		ND	0.00107	ND	0.00104				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-03-13 12:00		Jun-03-13 12:00					
	Analyzed:	Jun-04-13 00:29		Jun-04-13 00:50					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		49.6	4.00	28.1	2.00				
Percent Moisture	***Extracted:***								
	Analyzed:	Jun-03-13 13:00		Jun-03-13 13:00					
	Units/RL:	%	RL	%	RL				
Percent Moisture		7.18	1.00	4.32	1.00				
TPH By SW8015 Mod	***Extracted:***	Jun-03-13 15:30		Jun-03-13 15:30					
	Analyzed:	Jun-03-13 19:41		Jun-03-13 20:07					
	Units/RL:	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.0	ND	14.9				
C12-C28 Diesel Range Hydrocarbons		ND	15.0	ND	14.9				
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	14.9				
Total TPH		ND	15.0	ND	14.9				

Kelsey Brooks
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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915314 **Sample:** 464286-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 16:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 915314 **Sample:** 464286-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 16:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 915314 **Sample:** 464286-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 16:53

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 915286 **Sample:** 464286-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.9	105	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 915314 **Sample:** 464286-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915314 **Sample:** 464286-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0264	0.0300	88	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 915286 **Sample:** 464286-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.5	106	70-135	
o-Terphenyl	58.0	49.8	116	70-135	

Lab Batch #: 915314 **Sample:** 464286-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0249	0.0300	83	80-120	

Lab Batch #: 915286 **Sample:** 464286-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 17:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	57.3	49.9	115	70-135	

Lab Batch #: 915314 **Sample:** 464286-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 18:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915286 **Sample:** 464286-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 18:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	61.9	49.8	124	70-135	

Lab Batch #: 915286 **Sample:** 464286-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 18:48

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.8	106	70-135	
o-Terphenyl	58.8	49.9	118	70-135	

Lab Batch #: 915286 **Sample:** 464286-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 19:15

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	100	97	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

Lab Batch #: 915286 **Sample:** 464286-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 19:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.1	99.7	95	70-135	
o-Terphenyl	52.2	49.9	105	70-135	

Lab Batch #: 915286 **Sample:** 464286-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 20:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.6	99.5	95	70-135	
o-Terphenyl	51.1	49.8	103	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915314 **Sample:** 464286-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 08:57

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0355	0.0300	118	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 915314 **Sample:** 639110-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 14:59

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 915286 **Sample:** 639101-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 16:34

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.9	107	70-135	
o-Terphenyl	59.7	50.0	119	70-135	

Lab Batch #: 915314 **Sample:** 639110-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 14:10

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 915286 **Sample:** 639101-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 15:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.8	107	70-135	
o-Terphenyl	62.5	49.9	125	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915314 **Sample:** 639110-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 14:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 915286 **Sample:** 639101-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 16:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	63.1	50.2	126	70-135	

Lab Batch #: 915314 **Sample:** 464286-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 21:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0347	0.0300	116	80-120	

Lab Batch #: 915286 **Sample:** 464286-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 02:00

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	99.5	107	70-135	
o-Terphenyl	64.0	49.8	129	70-135	

Lab Batch #: 915314 **Sample:** 464286-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/03/13 21:19

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0340	0.0300	113	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464286,

Project ID:

Lab Batch #: 915286 **Sample:** 464286-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 02:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	64.1	50.0	128	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464286 **Project ID:**

Analyst: DYV **Date Prepared:** 06/03/2013 **Date Analyzed:** 06/03/2013

Lab Batch ID: 915314 **Sample:** 639110-1-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	<0.000990	0.0990	0.100	101	0.0996	0.0825	83	19	70-130	35	
Toluene	<0.00198	0.0990	0.101	102	0.0996	0.0882	89	14	70-130	35	
Ethylbenzene	<0.000990	0.0990	0.103	104	0.0996	0.0874	88	16	71-129	35	
m,p-Xylenes	<0.00198	0.198	0.197	99	0.199	0.165	83	18	70-135	35	
o-Xylene	<0.000990	0.0990	0.0986	100	0.0996	0.0823	83	18	71-133	35	

Analyst: AMB **Date Prepared:** 06/03/2013 **Date Analyzed:** 06/04/2013

Lab Batch ID: 915357 **Sample:** 639154-1-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	<2.00	50.0	47.8	96	50.0	47.7	95	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464286 **Project ID:**

Analyst: DYV **Date Prepared:** 06/03/2013 **Date Analyzed:** 06/03/2013

Lab Batch ID: 915286 **Sample:** 639101-1-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	998	995	100	1000	1010	101	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	998	1070	107	1000	1050	105	2	70-135	35	

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

Form 3 - MS Recoveries

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464286
Lab Batch #: 915357
Project ID:
Date Analyzed: 06/03/2013
Date Prepared: 06/03/2013
Analyst: AMB
QC- Sample ID: 464286-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5.45	50.0	53.0	95	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464286 **Project ID:**

Lab Batch ID: 915314 **QC- Sample ID:** 464286-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/03/2013 **Date Prepared:** 06/03/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00104	0.104	0.0969	93	0.104	0.102	98	5	70-130	35	
Toluene	<0.00209	0.104	0.117	113	0.104	0.102	98	14	70-130	35	
Ethylbenzene	<0.00104	0.104	0.112	108	0.104	0.110	106	2	71-129	35	
m,p-Xylenes	<0.00209	0.209	0.207	99	0.208	0.207	100	0	70-135	35	
o-Xylene	<0.00104	0.104	0.108	104	0.104	0.0988	95	9	71-133	35	

Lab Batch ID: 915286 **QC- Sample ID:** 464286-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/04/2013 **Date Prepared:** 06/03/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<14.9	995	1090	110	1000	1070	107	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<14.9	995	1150	116	1000	1140	114	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464286

Lab Batch #: 915292 **Project ID:**

Date Analyzed: 06/03/2013 11:55 **Date Prepared:** 06/03/2013 **Analyst:** WRU

QC- Sample ID: 464278-001 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	2.70	2.86	6	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

The 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: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project #:

Project Loc: Lea County, New Mexico

PO #:

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

(lab use only) ORDER #: 464286

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/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride E 300.0			RUSH TAT (Pre-Schedule) (24, 48, 72 hrs)	Standard TAT
01	RP Floor @ 14'			5/30/2013	2:00		1	X								Soil	X								X			X			X	
02	RP West S/W @ 13'			5/30/2013	2:30		1	X								Soil	X								X			X			X	
03	RP East S/W @ 13'			5/30/2013	3:00		1	X								Soil	X								X			X			X	
04	SP-1			5/30/2013	14:05		1	X								Soil	X								X			X			X	
05	RP South S/W @ 16'			5/31/2013	10:00		1	X								Soil	X								X			X			X	
06	Trench-1 Floor @ 3'			5/31/2013	11:10		1	X								Soil	X								X			X			X	
07	Trench-1 East S/W @ 2'			5/31/2013	1:00		1	X								Soil	X								X			X			X	
08	Trench-1 West S/W @ 2'			5/31/2013	1:15		1	X								Soil	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 Y N
by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 3.0 °C

Relinquished by: Camille Bryant	Date 6/3/13	Time 10:30	Received by: Jonathan Repp	Date 6/3/13	Time 1030
Relinquished by: Jonathan Repp	Date 6/3/13	Time 11:25	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Shawnee Smith	Date 6-3-13	Time 11:25

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 06/03/2013 11:25:00 AM

Work Order #: 464286

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)?	3
#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: Kelsey Brooks Date: 06/04/2013

Checklist reviewed by: Kelsey Brooks Date: 06/04/2013

Analytical Report 464484

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUGS Historical A-14 6 Inch Lateral 1RP-1062

06-JUN-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)

06-JUN-13

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

Reference: XENCO Report No(s): **464484**
SUGS Historical A-14 6 Inch Lateral 1RP-1062
Project Address: Lea County, New Mexico

Camille Bryant:

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) 464484. 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. 464484 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 464484

Southern Union Gas Services- Monahans, Monahans, TX

SUGS Historical A-14 6 Inch Lateral 1RP-1062

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
RP North S/W @ 13'	S	06-03-13 10:30		464484-001
Trench-2 Floor @ 7'	S	06-03-13 11:20		464484-002
Trench-2 East S/W @ 6'	S	06-03-13 11:40		464484-003
Trench-2 West S/W @ 6'	S	06-03-13 11:45		464484-004
Trench-3 Floor @ 2'	S	06-03-13 13:40		464484-005
Trench-3 North S/W @ 1'	S	06-03-13 14:05		464484-006
Trench-3 South S/W @ 1'	S	06-03-13 14:10		464484-007
Trench-4 Floor @ 2'	S	06-04-13 08:45		464484-008
Trench-4 Floor @ 7'	S	06-04-13 08:50		464484-009
Trench-4 North S/W-1 @ 6'	S	06-04-13 10:00		464484-010
Trench-4 North S/W-2 @ 6'	S	06-04-13 10:57		464484-011
Trench-4 South S/W-1 @ 6'	S	06-04-13 11:00		464484-012
Trench-4 South S/W-2 @ 6'	S	06-04-13 11:35		464484-013
Trench-5 Floor @ 2'	S	06-04-13 13:20		464484-014
Trench-5 South S/W @ 1	S	06-04-13 13:30		464484-015

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project ID:
Work Order Number(s): *464484*

Report Date: *06-JUN-13*
Date Received: *06/05/2013*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 464484

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Wed Jun-05-13 03:27 pm
Report Date: 06-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	464484-001		464484-002		464484-003		464484-004		464484-005		464484-006	
	Field Id:	RP North S/W @ 13'		Trench-2 Floor @ 7'		Trench-2 East S/W @ 6'		Trench-2 West S/W @ 6'		Trench-3 Floor @ 2'		Trench-3 North S/W @ 1'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-03-13 10:30		Jun-03-13 11:20		Jun-03-13 11:40		Jun-03-13 11:45		Jun-03-13 13:40		Jun-03-13 14:05	
BTEX by EPA 8021B	***Extracted:***	Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45	
	Analyzed:	Jun-06-13 08:06		Jun-05-13 18:32		Jun-05-13 18:48		Jun-05-13 19:05		Jun-05-13 19:22		Jun-05-13 19:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00101	ND	0.000996	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000996
Toluene		ND	0.00202	ND	0.00199	ND	0.00202	ND	0.00200	ND	0.00201	ND	0.00199
Ethylbenzene		ND	0.00101	ND	0.000996	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000996
m,p-Xylenes		ND	0.00202	ND	0.00199	ND	0.00202	ND	0.00200	ND	0.00201	ND	0.00199
o-Xylene		ND	0.00101	ND	0.000996	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000996
Total Xylenes		ND	0.00101	ND	0.000996	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000996
Total BTEX		ND	0.00101	ND	0.000996	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000996
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00	
	Analyzed:	Jun-06-13 09:37		Jun-06-13 10:54		Jun-06-13 11:14		Jun-06-13 11:33		Jun-06-13 11:53		Jun-06-13 12:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		106	2.00	30.5	2.00	51.1	2.00	ND	2.00	156	2.00	64.8	2.00
Percent Moisture	***Extracted:***												
	Analyzed:	Jun-05-13 16:58		Jun-05-13 16:58		Jun-05-13 16:58		Jun-05-13 16:58		Jun-05-13 16:58		Jun-05-13 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		8.14	1.00	2.54	1.00	2.31	1.00	1.81	1.00	2.60	1.00	2.72	1.00
TPH By SW8015 Mod	***Extracted:***	Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30	
	Analyzed:	Jun-06-13 02:34		Jun-06-13 02:59		Jun-06-13 04:16		Jun-06-13 04:41		Jun-06-13 05:07		Jun-06-13 05:32	
	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	15.0	ND	14.9	ND	14.9	ND	14.9	ND	15.0	ND	15.0
C12-C28 Diesel Range Hydrocarbons		211	15.0	ND	14.9	ND	14.9	ND	14.9	ND	15.0	ND	15.0
C28-C35 Oil Range Hydrocarbons		43.7	15.0	ND	14.9	ND	14.9	ND	14.9	ND	15.0	ND	15.0
Total TPH		255	15.0	ND	14.9	ND	14.9	ND	14.9	ND	15.0	ND	15.0

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464484

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Wed Jun-05-13 03:27 pm
Report Date: 06-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	464484-007		464484-008		464484-009		464484-010		464484-011		464484-012	
	Field Id:	Trench-3 South S/W @ 1'		Trench-4 Floor @ 2'		Trench-4 Floor @ 7'		Trench-4 North S/W-1 @ 6'		Trench-4 North S/W-2 @ 6'		Trench-4 South S/W-1 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-03-13 14:10		Jun-04-13 08:45		Jun-04-13 08:50		Jun-04-13 10:00		Jun-04-13 10:57		Jun-04-13 11:00	
BTEX by EPA 8021B	*Extracted:*	Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45	
	Analyzed:	Jun-05-13 19:55		Jun-05-13 20:11		Jun-05-13 20:27		Jun-05-13 20:43		Jun-05-13 21:16		Jun-05-13 21:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00101	ND	0.000996	ND	0.000990	ND	0.000996	ND	0.000996	ND	0.000994
Toluene		ND	0.00201	ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00199	ND	0.00199
Ethylbenzene		ND	0.00101	ND	0.000996	ND	0.000990	ND	0.000996	ND	0.000996	ND	0.000994
m,p-Xylenes		ND	0.00201	ND	0.00199	ND	0.00198	ND	0.00199	ND	0.00199	ND	0.00199
o-Xylene		ND	0.00101	ND	0.000996	ND	0.000990	ND	0.000996	ND	0.000996	ND	0.000994
Total Xylenes		ND	0.00101	ND	0.000996	ND	0.000990	ND	0.000996	ND	0.000996	ND	0.000994
Total BTEX		ND	0.00101	ND	0.000996	ND	0.000990	ND	0.000996	ND	0.000996	ND	0.000994
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00	
	Analyzed:	Jun-06-13 13:10		Jun-06-13 13:30		Jun-06-13 13:49		Jun-06-13 14:08		Jun-06-13 14:28		Jun-06-13 14:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		89.2	2.00	450	2.00	325	1.95	297	2.00	158	2.00	458	2.00
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-05-13 17:00		Jun-05-13 17:00		Jun-05-13 17:00		Jun-05-13 17:00		Jun-05-13 17:15		Jun-05-13 17:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.37	1.00	4.65	1.00	4.16	1.00	5.05	1.00	3.42	1.00	4.47	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30	
	Analyzed:	Jun-06-13 05:58		Jun-06-13 06:23		Jun-06-13 07:16		Jun-06-13 07:42		Jun-06-13 08:08		Jun-06-13 08:33	
	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	14.9	ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	14.9
C12-C28 Diesel Range Hydrocarbons		ND	14.9	ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	14.9
C28-C35 Oil Range Hydrocarbons		ND	14.9	ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	14.9
Total TPH		ND	14.9	ND	15.0	ND	14.9	ND	15.0	ND	15.0	ND	14.9

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464484

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Wed Jun-05-13 03:27 pm
Report Date: 06-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	464484-013		464484-014		464484-015					
	Field Id:	Trench-4 South S/W-2 @ 6'		Trench-5 Floor @ 2'		Trench-5 South S/W @ 1					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jun-04-13 11:35		Jun-04-13 13:20		Jun-04-13 13:30					
BTEX by EPA 8021B	***Extracted:***	Jun-05-13 16:45		Jun-05-13 16:45		Jun-05-13 16:45					
	Analyzed:	Jun-05-13 21:49		Jun-05-13 22:06		Jun-05-13 22:22					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.000994	ND	0.00100	ND	0.000994				
Toluene		ND	0.00199	ND	0.00200	ND	0.00199				
Ethylbenzene		ND	0.000994	ND	0.00100	ND	0.000994				
m,p-Xylenes		ND	0.00199	ND	0.00200	ND	0.00199				
o-Xylene		ND	0.000994	ND	0.00100	ND	0.000994				
Total Xylenes		ND	0.000994	ND	0.00100	ND	0.000994				
Total BTEX		ND	0.000994	ND	0.00100	ND	0.000994				
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Jun-06-13 08:00		Jun-06-13 08:00		Jun-06-13 08:00					
	Analyzed:	Jun-06-13 15:07		Jun-06-13 15:26		Jun-06-13 15:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		85.8	2.00	42.8	2.00	2.96	1.96				
Percent Moisture	***Extracted:***										
	Analyzed:	Jun-05-13 17:15		Jun-05-13 17:15		Jun-05-13 17:15					
	Units/RL:	%	RL	%	RL	%	RL				
Percent Moisture		3.99	1.00	5.86	1.00	5.63	1.00				
TPH By SW8015 Mod	***Extracted:***	Jun-05-13 16:30		Jun-05-13 16:30		Jun-05-13 16:30					
	Analyzed:	Jun-06-13 08:59		Jun-06-13 09:25		Jun-06-13 09:51					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0				
C12-C28 Diesel Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0				
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.0	ND	15.0				
Total TPH		ND	15.0	ND	15.0	ND	15.0				

Kelsey Brooks
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

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
6017 Financial Drive, Norcross, GA 30071	(770) 449-8800	(770) 449-5477
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915497 **Sample:** 464484-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 18:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0245	0.0300	82	80-120	

Lab Batch #: 915497 **Sample:** 464484-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 18:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0243	0.0300	81	80-120	

Lab Batch #: 915497 **Sample:** 464484-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 19:05

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 915497 **Sample:** 464484-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 19:22

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 915497 **Sample:** 464484-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 19:38

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0294	0.0300	98	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915497 **Sample:** 464484-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 19:55 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0253	0.0300	84	80-120	

Lab Batch #: 915497 **Sample:** 464484-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 20:11 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0247	0.0300	82	80-120	

Lab Batch #: 915497 **Sample:** 464484-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 20:27 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0242	0.0300	81	80-120	

Lab Batch #: 915497 **Sample:** 464484-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 20:43 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 915497 **Sample:** 464484-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 21:16 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915497 **Sample:** 464484-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 21:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 915497 **Sample:** 464484-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 21:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 915497 **Sample:** 464484-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 22:06

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0258	0.0300	86	80-120	

Lab Batch #: 915497 **Sample:** 464484-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 22:22

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 915496 **Sample:** 464484-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 02:34

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	99.7	100	70-135	
o-Terphenyl	55.1	49.9	110	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915496 **Sample:** 464484-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 02:59 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	99.6	99	70-135	
o-Terphenyl	53.4	49.8	107	70-135	

Lab Batch #: 915496 **Sample:** 464484-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 04:16 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.5	99.6	95	70-135	
o-Terphenyl	52.3	49.8	105	70-135	

Lab Batch #: 915496 **Sample:** 464484-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 04:41 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.2	99.5	96	70-135	
o-Terphenyl	52.2	49.8	105	70-135	

Lab Batch #: 915496 **Sample:** 464484-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 05:07 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	53.5	50.0	107	70-135	

Lab Batch #: 915496 **Sample:** 464484-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 05:32 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	53.3	50.2	106	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915496 **Sample:** 464484-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 05:58 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.5	102	70-135	
o-Terphenyl	54.0	49.8	108	70-135	

Lab Batch #: 915496 **Sample:** 464484-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 06:23 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	100	95	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 915496 **Sample:** 464484-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 07:16 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.6	112	70-135	
o-Terphenyl	59.9	49.8	120	70-135	

Lab Batch #: 915496 **Sample:** 464484-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 07:42 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	100	96	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 915497 **Sample:** 464484-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 08:06 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0320	0.0300	107	80-120	
4-Bromofluorobenzene	0.0317	0.0300	106	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915496 **Sample:** 464484-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 08:08

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	99.8	97	70-135	
o-Terphenyl	52.7	49.9	106	70-135	

Lab Batch #: 915496 **Sample:** 464484-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 08:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.5	96	70-135	
o-Terphenyl	51.3	49.8	103	70-135	

Lab Batch #: 915496 **Sample:** 464484-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 08:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	99.7	95	70-135	
o-Terphenyl	50.4	49.9	101	70-135	

Lab Batch #: 915496 **Sample:** 464484-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 09:25

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	54.6	50.0	109	70-135	

Lab Batch #: 915496 **Sample:** 464484-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 09:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.7	99.9	98	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915497 **Sample:** 639240-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/05/13 17:59 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 915496 **Sample:** 639238-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/13 01:15 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	55.0	49.9	110	70-135	

Lab Batch #: 915497 **Sample:** 639240-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/05/13 17:26 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0347	0.0300	116	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 915496 **Sample:** 639238-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/13 00:23 **SURROGATE RECOVERY STUDY**

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	99.9	99	70-135	
o-Terphenyl	61.3	50.0	123	70-135	

Lab Batch #: 915497 **Sample:** 639240-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/05/13 17:43 **SURROGATE RECOVERY STUDY**

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0317	0.0300	106	80-120	
4-Bromofluorobenzene	0.0255	0.0300	85	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464484, 464484 **Project ID:**

Lab Batch #: 915496 **Sample:** 639238-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/13 00:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	61.6	50.1	123	70-135	

Lab Batch #: 915497 **Sample:** 464484-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 23:11

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 915496 **Sample:** 464484-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 03:25

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	58.2	50.1	116	70-135	

Lab Batch #: 915497 **Sample:** 464484-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/05/13 23:27

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0355	0.0300	118	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 915496 **Sample:** 464484-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 03:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.7	99	70-135	
o-Terphenyl	60.0	49.9	120	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Blank Spike Recovery

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464484

Project ID:

Lab Batch #: 915597 **Sample:** 639259-1-BKS **Matrix:** Solid

Date Analyzed: 06/06/2013 **Date Prepared:** 06/06/2013 **Analyst:** RKO

Reporting Units: mg/kg **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<2.00	100	101	101	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464484, 464484 **Project ID:**

Analyst: DYV **Date Prepared:** 06/05/2013 **Date Analyzed:** 06/05/2013

Lab Batch ID: 915497 **Sample:** 639240-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.0903	90	0.0994	0.0827	83	9	70-130	35	
Toluene	<0.00200	0.100	0.0986	99	0.0994	0.0932	94	6	70-130	35	
Ethylbenzene	<0.00100	0.100	0.109	109	0.0994	0.0986	99	10	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.203	102	0.199	0.180	90	12	70-135	35	
o-Xylene	<0.00100	0.100	0.111	111	0.0994	0.0937	94	17	71-133	35	

Analyst: DYV **Date Prepared:** 06/05/2013 **Date Analyzed:** 06/06/2013

Lab Batch ID: 915496 **Sample:** 639238-1-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	999	1100	110	1000	1120	112	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	1160	116	1000	1170	117	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: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464484 **Project ID:**

Lab Batch ID: 915497 **QC- Sample ID:** 464484-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/05/2013 **Date Prepared:** 06/05/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000990	0.0990	0.0806	81	0.100	0.0815	82	1	70-130	35	
Toluene	<0.00198	0.0990	0.0850	86	0.100	0.0828	83	3	70-130	35	
Ethylbenzene	<0.000990	0.0990	0.0887	90	0.100	0.0906	91	2	71-129	35	
m,p-Xylenes	<0.00198	0.198	0.165	83	0.200	0.165	83	0	70-135	35	
o-Xylene	<0.000990	0.0990	0.0889	90	0.100	0.0821	82	8	71-133	35	

Lab Batch ID: 915597 **QC- Sample ID:** 464484-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/06/2013 **Date Prepared:** 06/06/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	106	100	187	81	100	188	82	1	80-120	20	

Lab Batch ID: 915597 **QC- Sample ID:** 464486-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/06/2013 **Date Prepared:** 06/06/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	63.8	100	197	133	100	197	133	0	80-120	20	X

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464484 **Project ID:**

Lab Batch ID: 915496 **QC- Sample ID:** 464484-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/06/2013 **Date Prepared:** 06/05/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.4	1030	1090	106	1020	1070	105	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.4	1030	1190	116	1020	1140	112	4	70-135	35	

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

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

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: SUGS Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464484

Lab Batch #: 915505 **Project ID:**

Date Analyzed: 06/05/2013 14:50 **Date Prepared:** 06/05/2013 **Analyst:** WRU

QC- Sample ID: 464291-001 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	<1.00	<1.00	0	20	U

Lab Batch #: 915509

Date Analyzed: 06/05/2013 17:15 **Date Prepared:** 06/05/2013 **Analyst:** WRU

QC- Sample ID: 464484-011 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	3.42	3.52	3	20	

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

BRL - Below Reporting Limit

Analytical Report 464685

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUG Historical A-14 6 Inch Lateral 1RP-1062

14-JUN-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)

14-JUN-13

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

Reference: XENCO Report No(s): **464685**
SUG Historical A-14 6 Inch Lateral 1RP-1062
Project Address: Lea County, New Mexico

Camille Bryant:

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) 464685. 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. 464685 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 464685

Southern Union Gas Services- Monahans, Monahans, TX

SUG Historical A-14 6 Inch Lateral 1RP-1062

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Trench-5 North S/W-1 @ 1'	S	06-04-13 14:45		464685-001
Trench-5 North S/W-2 @ 1'	S	06-04-13 14:50		464685-002
Trench-6 Floor @ 2'	S	06-05-13 09:30		464685-003
Trench-6 Floor @ 6'	S	06-05-13 10:25		464685-004
Trench-6 North S/W-1 @ 5'	S	06-05-13 10:50		464685-005
Trench-6 South S/W-1 @ 5'	S	06-05-13 11:45		464685-006
Trench-6 North S/W-2 @ 5'	S	06-05-13 14:33		464685-007
Trench-6 South S/W-2 @ 5'	S	06-05-13 14:45		464685-008
Trench-7 Floor @ 4'	S	06-06-13 09:45		464685-009
Trench-7 Floor @ 10'	S	06-06-13 12:00		464685-010
Trench-7 North S/W @ 9'	S	06-06-13 13:45		464685-011
Trench-7 South S/W-1 @ 9'	S	06-06-13 13:50		464685-012
Trench-7 South S/W-2 @ 9'	S	06-06-13 15:00		464685-013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-916078 Inorganic Anions by EPA 300/300.1
E300

Batch 916078, Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 464685-005, -004, -011, -009, -006, -012, -008, -003, -007, -010, -013.
The Laboratory Control Sample for Chloride is within laboratory Control Limits

Certificate of Analysis Summary 464685

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Fri Jun-07-13 02:18 pm
Report Date: 14-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	464685-001		464685-002		464685-003		464685-004		464685-005		464685-006	
	Field Id:	Trench-5 North S/W-1 @ 1'		Trench-5 North S/W-2 @ 1'		Trench-6 Floor @ 2'		Trench-6 Floor @ 6'		Trench-6 North S/W-1 @ 5'		Trench-6 South S/W-1 @ 5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-04-13 14:45		Jun-04-13 14:50		Jun-05-13 09:30		Jun-05-13 10:25		Jun-05-13 10:50		Jun-05-13 11:45	
BTEX by EPA 8021B	*Extracted:*	Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00	
	Analyzed:	Jun-10-13 19:39		Jun-11-13 08:40		Jun-10-13 20:12		Jun-10-13 20:28		Jun-11-13 09:13		Jun-10-13 21:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.000990	ND	0.000996	ND	0.000992	ND	0.000998	ND	0.000994	ND	0.00100
Toluene		ND	0.00198	ND	0.00199	ND	0.00198	ND	0.00200	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.000990	ND	0.000996	ND	0.000992	ND	0.000998	ND	0.000994	ND	0.00100
m,p-Xylenes		ND	0.00198	ND	0.00199	ND	0.00198	ND	0.00200	ND	0.00199	ND	0.00200
o-Xylene		ND	0.000990	ND	0.000996	ND	0.000992	ND	0.000998	ND	0.000994	ND	0.00100
Total Xylenes		ND	0.000990	ND	0.000996	ND	0.000992	ND	0.000998	ND	0.000994	ND	0.00100
Total BTEX		ND	0.000990	ND	0.000996	ND	0.000992	ND	0.000998	ND	0.000994	ND	0.00100
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Jun-11-13 11:30		Jun-11-13 11:30		Jun-11-13 11:30		Jun-12-13 09:20		Jun-12-13 09:20		Jun-12-13 09:20	
	Analyzed:	Jun-12-13 08:50		Jun-12-13 09:08		Jun-12-13 09:29		Jun-12-13 22:04		Jun-12-13 22:22		Jun-12-13 22:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		950	2.00	39.9	2.00	1610 D	20.0	242	2.00	738	2.00	190	2.00
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.64	1.00	5.38	1.00	5.05	1.00	1.44	1.00	4.39	1.00	4.86	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00	
	Analyzed:	Jun-12-13 05:29		Jun-12-13 05:54		Jun-12-13 06:20		Jun-12-13 06:45		Jun-12-13 07:11		Jun-12-13 07:37	
	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	15.7	ND	15.8	ND	15.8	ND	15.1	ND	15.6	ND	15.7
C12-C28 Diesel Range Hydrocarbons		ND	15.7	ND	15.8	ND	15.8	ND	15.1	ND	15.6	ND	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.7	ND	15.8	ND	15.8	ND	15.1	ND	15.6	ND	15.7
Total TPH		ND	15.7	ND	15.8	ND	15.8	ND	15.1	ND	15.6	ND	15.7

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464685

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Fri Jun-07-13 02:18 pm
Report Date: 14-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	464685-007		464685-008		464685-009		464685-010		464685-011		464685-012	
	Field Id:	Trench-6 North S/W-2 @ 5'		Trench-6 South S/W-2 @ 5'		Trench-7 Floor @ 4'		Trench-7 Floor @ 10'		Trench-7 North S/W @ 9'		Trench-7 South S/W-1 @ 9'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-05-13 14:33		Jun-05-13 14:45		Jun-06-13 09:45		Jun-06-13 12:00		Jun-06-13 13:45		Jun-06-13 13:50	
BTEX by EPA 8021B	*Extracted:*	Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00		Jun-10-13 16:00	
	Analyzed:	Jun-10-13 21:50		Jun-11-13 09:30		Jun-11-13 09:46		Jun-10-13 22:55		Jun-10-13 23:12		Jun-10-13 23:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.000998	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000994	ND	0.00100
Toluene		ND	0.00200	ND	0.00201	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00200
Ethylbenzene		ND	0.000998	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000994	ND	0.00100
m,p-Xylenes		ND	0.00200	ND	0.00201	ND	0.00200	ND	0.00200	ND	0.00199	ND	0.00200
o-Xylene		ND	0.000998	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000994	ND	0.00100
Total Xylenes		ND	0.000998	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000994	ND	0.00100
Total BTEX		ND	0.000998	ND	0.00101	ND	0.000998	ND	0.00100	ND	0.000994	ND	0.00100
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	*Extracted:*	Jun-12-13 09:20		Jun-12-13 09:20		Jun-12-13 09:20		Jun-12-13 09:20		Jun-12-13 09:20		Jun-12-13 09:20	
	Analyzed:	Jun-12-13 22:59		Jun-12-13 23:17		Jun-13-13 00:13		Jun-13-13 00:31		Jun-13-13 00:49		Jun-13-13 01:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		87.8	2.00	128	2.00	1940 D	4.00	248	2.00	59.9	2.00	714	2.00
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38		Jun-10-13 15:38	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.35	1.00	3.53	1.00	7.75	1.00	3.49	1.00	4.73	1.00	4.49	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00		Jun-11-13 15:00	
	Analyzed:	Jun-12-13 08:03		Jun-12-13 08:28		Jun-12-13 09:46		Jun-12-13 10:13		Jun-12-13 11:06		Jun-12-13 12:29	
	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	15.3	ND	15.5	ND	16.2	ND	15.5	ND	15.8	ND	15.7
C12-C28 Diesel Range Hydrocarbons		ND	15.3	ND	15.5	ND	16.2	ND	15.5	ND	15.8	ND	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.3	ND	15.5	ND	16.2	ND	15.5	ND	15.8	ND	15.7
Total TPH		ND	15.3	ND	15.5	ND	16.2	ND	15.5	ND	15.8	ND	15.7

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 464685

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Fri Jun-07-13 02:18 pm
Report Date: 14-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	464685-013					
	Field Id:	Trench-7 South S/W-2 @ 9'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Jun-06-13 15:00					
BTEX by EPA 8021B	***Extracted:***	Jun-10-13 16:00					
	Analyzed:	Jun-10-13 23:45					
	Units/RL:	mg/kg	RL				
Benzene		ND	0.00106				
Toluene		ND	0.00211				
Ethylbenzene		ND	0.00106				
m,p-Xylenes		ND	0.00211				
o-Xylene		ND	0.00106				
Total Xylenes		ND	0.00106				
Total BTEX		ND	0.00106				
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	***Extracted:***	Jun-12-13 09:20					
	Analyzed:	Jun-13-13 02:03					
	Units/RL:	mg/kg	RL				
Chloride		333	2.00				
Percent Moisture	***Extracted:***						
	Analyzed:	Jun-10-13 16:00					
	Units/RL:	%	RL				
Percent Moisture		4.90	1.00				
TPH By SW8015 Mod	***Extracted:***	Jun-11-13 15:00					
	Analyzed:	Jun-12-13 12:57					
	Units/RL:	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	15.7				
C12-C28 Diesel Range Hydrocarbons		ND	15.7				
C28-C35 Oil Range Hydrocarbons		ND	15.7				
Total TPH		ND	15.7				

Kelsey Brooks
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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 915863 **Sample:** 464685-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 19:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 915863 **Sample:** 464685-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 20:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0286	0.0300	95	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 915863 **Sample:** 464685-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 20:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 915863 **Sample:** 464685-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 21:34

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0314	0.0300	105	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 915863 **Sample:** 464685-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 21:50

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 915863 **Sample:** 464685-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 22:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 915863 **Sample:** 464685-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 23:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 915863 **Sample:** 464685-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 23:28

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0358	0.0300	119	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 915863 **Sample:** 464685-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 23:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0354	0.0300	118	80-120	

Lab Batch #: 915863 **Sample:** 464685-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/11/13 08:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0328	0.0300	109	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 915863 **Sample:** 464685-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/11/13 09:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 915863 **Sample:** 464685-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/11/13 09:30

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 915863 **Sample:** 464685-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/11/13 09:46

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 916004 **Sample:** 464685-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 05:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	49.3	50.0	99	70-135	

Lab Batch #: 916004 **Sample:** 464685-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 05:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.2	99.5	90	70-135	
o-Terphenyl	48.9	49.8	98	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 916004 **Sample:** 464685-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 06:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.5	100	97	70-135	
o-Terphenyl	53.2	50.1	106	70-135	

Lab Batch #: 916004 **Sample:** 464685-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 06:45

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.4	99.5	93	70-135	
o-Terphenyl	48.7	49.8	98	70-135	

Lab Batch #: 916004 **Sample:** 464685-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 07:11

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	99.7	96	70-135	
o-Terphenyl	50.6	49.9	101	70-135	

Lab Batch #: 916004 **Sample:** 464685-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 07:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	99.8	96	70-135	
o-Terphenyl	51.1	49.9	102	70-135	

Lab Batch #: 916004 **Sample:** 464685-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 08:03

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	99.7	97	70-135	
o-Terphenyl	51.2	49.9	103	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 916004 **Sample:** 464685-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 08:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	99.5	94	70-135	
o-Terphenyl	48.8	49.8	98	70-135	

Lab Batch #: 916004 **Sample:** 464685-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 09:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.7	99.5	93	70-135	
o-Terphenyl	49.8	49.8	100	70-135	

Lab Batch #: 916004 **Sample:** 464685-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 10:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.4	100	93	70-135	
o-Terphenyl	49.9	50.0	100	70-135	

Lab Batch #: 916004 **Sample:** 464685-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 11:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	100	96	70-135	
o-Terphenyl	51.2	50.1	102	70-135	

Lab Batch #: 916004 **Sample:** 464685-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 12:29

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.2	99.7	96	70-135	
o-Terphenyl	51.1	49.9	102	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 916004 **Sample:** 464685-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 12:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.5	99.7	100	70-135	
o-Terphenyl	53.2	49.9	107	70-135	

Lab Batch #: 915863 **Sample:** 639469-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/10/13 19:06

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 916004 **Sample:** 639551-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 05:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	99.8	99	70-135	
o-Terphenyl	54.4	49.9	109	70-135	

Lab Batch #: 915863 **Sample:** 639469-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/10/13 18:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0360	0.0300	120	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 916004 **Sample:** 639551-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 04:13

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.9	100	96	70-135	
o-Terphenyl	58.2	50.2	116	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 915863 **Sample:** 639469-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/10/13 18:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 916004 **Sample:** 639551-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 04:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.9	95	70-135	
o-Terphenyl	59.8	50.0	120	70-135	

Lab Batch #: 915863 **Sample:** 464685-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 20:45

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 916004 **Sample:** 464685-008 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 08:54

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	62.3	50.0	125	70-135	

Lab Batch #: 915863 **Sample:** 464685-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/10/13 21:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0349	0.0300	116	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464685,

Project ID:

Lab Batch #: 916004 **Sample:** 464685-008 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 09:20

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	99.7	96	70-135	
o-Terphenyl	61.0	49.9	122	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.

Blank Spike Recovery

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464685 **Project ID:**

Lab Batch #: 916039 **Sample:** 639474-1-BKS **Matrix:** Solid
Date Analyzed: 06/12/2013 **Date Prepared:** 06/11/2013 **Analyst:** RKO
Reporting Units: mg/kg **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<2.00	100	102	102	80-120	

Lab Batch #: 916078 **Sample:** 639592-1-BKS **Matrix:** Solid
Date Analyzed: 06/12/2013 **Date Prepared:** 06/12/2013 **Analyst:** RKO
Reporting Units: mg/kg **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<2.00	100	104	104	80-120	

Lab Batch #: 916198 **Sample:** 639653-1-BKS **Matrix:** Solid
Date Analyzed: 06/13/2013 **Date Prepared:** 06/13/2013 **Analyst:** RKO
Reporting Units: mg/kg **Batch #:** 1 **BLANK /BLANK SPIKE RECOVERY STUDY**

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<2.00	500	529	106	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464685 **Project ID:**

Analyst: DYV **Date Prepared:** 06/10/2013 **Date Analyzed:** 06/10/2013

Lab Batch ID: 915863 **Sample:** 639469-1-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	<0.000998	0.0998	0.0851	85	0.0996	0.0824	83	3	70-130	35	
Toluene	<0.00200	0.0998	0.0838	84	0.0996	0.0905	91	8	70-130	35	
Ethylbenzene	<0.000998	0.0998	0.0954	96	0.0996	0.0932	94	2	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.180	90	0.199	0.174	87	3	70-135	35	
o-Xylene	<0.000998	0.0998	0.0919	92	0.0996	0.0833	84	10	71-133	35	

Analyst: DYV **Date Prepared:** 06/11/2013 **Date Analyzed:** 06/12/2013

Lab Batch ID: 916004 **Sample:** 639551-1-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	<15.1	1000	1020	102	999	1020	102	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.1	1000	1070	107	999	1060	106	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464685 **Project ID:**

Lab Batch ID: 915863 **QC- Sample ID:** 464685-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/10/2013 **Date Prepared:** 06/10/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000998	0.0998	0.0953	95	0.0996	0.0875	88	9	70-130	35	
Toluene	<0.00200	0.0998	0.104	104	0.0996	0.0912	92	13	70-130	35	
Ethylbenzene	<0.000998	0.0998	0.107	107	0.0996	0.0998	100	7	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.200	100	0.199	0.185	93	8	70-135	35	
o-Xylene	<0.000998	0.0998	0.108	108	0.0996	0.0920	92	16	71-133	35	

Lab Batch ID: 916039 **QC- Sample ID:** 464683-014 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/12/2013 **Date Prepared:** 06/11/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	100	100	182	82	100	183	83	1	80-120	20	

Lab Batch ID: 916078 **QC- Sample ID:** 464552-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/12/2013 **Date Prepared:** 06/12/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	24200	10000	25900	17	10000	26200	20	1	80-120	20	X

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464685 **Project ID:**

Lab Batch ID: 916078 **QC- Sample ID:** 464685-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/12/2013 **Date Prepared:** 06/12/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	128	100	206	78	100	208	80	1	80-120	20	X

Lab Batch ID: 916198 **QC- Sample ID:** 464741-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/13/2013 **Date Prepared:** 06/13/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	39.1	100	137	98	100	137	98	0	80-120	20	

Lab Batch ID: 916004 **QC- Sample ID:** 464685-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/12/2013 **Date Prepared:** 06/11/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1040	1040	100	1030	1010	98	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1040	1100	106	1030	1080	105	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464685

Lab Batch #: 915869 **Project ID:**

Date Analyzed: 06/10/2013 15:38 **Date Prepared:** 06/10/2013 **Analyst:** WRU

QC- Sample ID: 464683-014 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	3.56	3.41	4	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

The 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: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project #:

Project Loc: Lea County, New Mexico

PO #:

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

(lab use only) ORDER #: 464685

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/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1	8015M	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride E 300.0	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Trench-5 North S/W-1 @ 1'			6/4/2013	2:45		1	X								Soil	X										X			X		X
02	Trench-5 North S/W-2 @ 1'			6/4/2013	2:50		1	X								Soil	X										X			X		X
03	Trench-6 Floor @ 2'			6/5/2013	9:30		1	X								Soil	X										X			X		X
04	Trench-6 Floor @ 6'			6/5/2013	10:25		1	X								Soil	X										X			X		X
05	Trench-6 North S/W-1 @ 5'			6/5/2013	10:50		1	X								Soil	X										X			X		X
06	Trench-6 South S/W-1 @ 5'			6/5/2013	11:45		1	X								Soil	X										X			X		X
07	Trench-6 North S/W-2 @ 5'			6/5/2013	2:33		1	X								Soil	X										X			X		X
08	Trench-6 South S/W-2 @ 5'			6/5/2013	2:45		1	X								Soil	X										X			X		X
09	Trench-7 Floor @ 4'			6/6/2013	9:45		1	X								Soil	X										X			X		X
10	Trench-7 Floor @ 10'			6/6/2013	12:00		1	X								Soil	X										X			X		X

Special Instructions:

Relinquished by: Camille Bryant	Date 6/7/13	Time 12:03	Received by: Matt Reynolds	Date 6/7/13	Time 1203
Relinquished by: Matt Reynolds	Date 6/7/13	Time 14:18	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Shaunee Smith	Date 6-7-13	Time 14:18

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	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 1.5 °C

Final 1.000

Xenco Laboratories

The 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: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project #:

Project Loc: Lea County, New Mexico

PO #:

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

(lab use only) **ORDER #:** 464685

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/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride E 300.0			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
11	Trench-7 North S/W @ 9'			6/6/2013	1:45		1	X								Soil	X								X			X				X
12	Trench-7 South S/W-1 @ 9'			6/6/2013	1:50		1	X								Soil	X								X			X				X
13	Trench-7 South S/W-2 @ 9'			6/6/2013	3:00		1	X								Soil	X								X			X				X

Special Instructions:

	Date	Time		Date	Time
Relinquished by: Camille Bryant	6/7/13	12:03	Received by: Jonathan Rapue	6/7/13	12:03
Relinquished by: Jonathan Rapue	6/7/13	14:18	Received by:		
Relinquished by:			Received by ELOT: Shawnea Smith	6-7-13	14:18

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	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 1.5 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 06/07/2013 02:18:00 PM

Work Order #: 464685

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)?	1.5
#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: Kelsey Brooks Date: 06/07/2013

Checklist reviewed by: Kelsey Brooks Date: 06/07/2013

Analytical Report 464773

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUG Historical A-14 6 Inch Lateral 1RP-1062

17-JUN-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)

17-JUN-13

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

Reference: XENCO Report No(s): **464773**
SUG Historical A-14 6 Inch Lateral 1RP-1062
Project Address: Lea County, New Mexico

Camille Bryant:

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) 464773. 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. 464773 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,

Kelsey Brooks
Project Manager

Sample Cross Reference 464773

Southern Union Gas Services- Monahans, Monahans, TX

SUG Historical A-14 6 Inch Lateral 1RP-1062

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Trench-8 Topsoil	S	06-07-13 08:35		464773-001
Trench-8 Floor @ 2'	S	06-07-13 08:40		464773-002
Trench-8 North S/W @ 1'	S	06-07-13 09:20		464773-003
Trench-8 East S/W @ 1'	S	06-07-13 09:30		464773-004
Trench-8 South S/W @ 1'	S	06-07-13 09:35		464773-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 464773

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project Id:
Contact: Camille Bryant
Project Location: Lea County, New Mexico

Date Received in Lab: Mon Jun-10-13 04:50 pm
Report Date: 17-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	464773-001		464773-002		464773-003		464773-004		464773-005	
	Field Id:	Trench-8 Topsoil		Trench-8 Floor @ 2'		Trench-8 North S/W @ 1'		Trench-8 East S/W @ 1'		Trench-8 South S/W @ 1'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-07-13 08:35		Jun-07-13 08:40		Jun-07-13 09:20		Jun-07-13 09:30		Jun-07-13 09:35	
BTEX by EPA 8021B	**Extracted:**	Jun-12-13 10:00		Jun-12-13 10:00		Jun-12-13 10:00		Jun-12-13 10:00		Jun-12-13 10:00	
	Analyzed:	Jun-12-13 12:43		Jun-12-13 15:44		Jun-12-13 13:48		Jun-12-13 16:00		Jun-12-13 16:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00102	ND	0.00114	ND	0.00108	ND	0.00110	ND	0.00107
Toluene		ND	0.00205	ND	0.00229	ND	0.00217	ND	0.00221	ND	0.00215
Ethylbenzene		ND	0.00102	ND	0.00114	ND	0.00108	ND	0.00110	ND	0.00107
m,p-Xylenes		ND	0.00205	ND	0.00229	ND	0.00217	ND	0.00221	ND	0.00215
o-Xylene		ND	0.00102	ND	0.00114	ND	0.00108	ND	0.00110	ND	0.00107
Total Xylenes		ND	0.00102	ND	0.00114	ND	0.00108	ND	0.00110	ND	0.00107
Total BTEX		ND	0.00102	ND	0.00114	ND	0.00108	ND	0.00110	ND	0.00107
Inorganic Anions by EPA 300/300.1 SUB: TX104704215	**Extracted:**	Jun-13-13 17:33		Jun-13-13 17:33		Jun-13-13 17:33		Jun-13-13 17:33		Jun-13-13 17:33	
	Analyzed:	Jun-13-13 23:11		Jun-14-13 00:13		Jun-14-13 00:33		Jun-14-13 00:53		Jun-14-13 01:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26.2	2.05	19.3	2.27	21.0	2.16	5.84	2.23	6.39	2.16
Percent Moisture	**Extracted:**										
	Analyzed:	Jun-11-13 16:00		Jun-11-13 16:00		Jun-11-13 16:00		Jun-11-13 16:00		Jun-11-13 16:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		2.21	1.00	12.0	1.00	7.42	1.00	10.2	1.00	7.23	1.00
TPH By SW8015 Mod	**Extracted:**	Jun-13-13 12:30		Jun-13-13 12:30		Jun-13-13 12:30		Jun-13-13 12:30		Jun-13-13 12:30	
	Analyzed:	Jun-13-13 19:36		Jun-13-13 20:02		Jun-13-13 20:27		Jun-13-13 20:53		Jun-13-13 21:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.3	ND	17.0	ND	16.3	ND	16.6	ND	16.3
C12-C28 Diesel Range Hydrocarbons		31.4	15.3	ND	17.0	ND	16.3	ND	16.6	ND	16.3
C28-C35 Oil Range Hydrocarbons		ND	15.3	ND	17.0	ND	16.3	ND	16.6	ND	16.3
Total TPH		31.4	15.3	ND	17.0	ND	16.3	ND	16.6	ND	16.3

Kelsey Brooks
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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464773,

Project ID:

Lab Batch #: 916079 **Sample:** 464773-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 12:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0257	0.0300	86	80-120	

Lab Batch #: 916079 **Sample:** 464773-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 13:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 916079 **Sample:** 464773-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 15:44

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 916079 **Sample:** 464773-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 16:00

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 916079 **Sample:** 464773-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 16:17

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464773,

Project ID:

Lab Batch #: 916300 **Sample:** 464773-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 19:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	99.7	98	70-135	
o-Terphenyl	53.4	49.9	107	70-135	

Lab Batch #: 916300 **Sample:** 464773-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 20:02

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	54.2	50.0	108	70-135	

Lab Batch #: 916300 **Sample:** 464773-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 20:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	101	90	70-135	
o-Terphenyl	49.9	50.3	99	70-135	

Lab Batch #: 916300 **Sample:** 464773-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 20:53

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	99.6	96	70-135	
o-Terphenyl	53.5	49.8	107	70-135	

Lab Batch #: 916300 **Sample:** 464773-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 21:18

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	101	93	70-135	
o-Terphenyl	51.8	50.3	103	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464773,

Project ID:

Lab Batch #: 916079 **Sample:** 639597-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 11:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 916300 **Sample:** 639745-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/13/13 19:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.5	100	100	70-135	
o-Terphenyl	54.8	50.2	109	70-135	

Lab Batch #: 916079 **Sample:** 639597-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 11:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0335	0.0300	112	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 916300 **Sample:** 639745-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/13/13 18:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	99.9	99	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 916079 **Sample:** 639597-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/12/13 11:20

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

Form 2 - Surrogate Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Orders : 464773,

Project ID:

Lab Batch #: 916300 **Sample:** 639745-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/13/13 18:44

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	99.5	99	70-135	
o-Terphenyl	57.9	49.8	116	70-135	

Lab Batch #: 916079 **Sample:** 464773-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 13:16

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0359	0.0300	120	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 916300 **Sample:** 464805-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/13/13 22:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.9	95	70-135	
o-Terphenyl	56.6	50.0	113	70-135	

Lab Batch #: 916079 **Sample:** 464773-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/12/13 13:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0351	0.0300	117	80-120	
4-Bromofluorobenzene	0.0342	0.0300	114	80-120	

Lab Batch #: 916300 **Sample:** 464805-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/14/13 07:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.6	100	92	70-135	
o-Terphenyl	60.6	50.0	121	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.

Blank Spike Recovery

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464773 **Project ID:**

Lab Batch #: 916198 **Sample:** 639653-1-BKS **Matrix:** Solid

Date Analyzed: 06/13/2013 **Date Prepared:** 06/13/2013 **Analyst:** RKO

Reporting Units: mg/kg **Batch #:** 1

BLANK /BLANK SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	<2.00	500	529	106	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464773 **Project ID:**

Analyst: DYV **Date Prepared:** 06/12/2013 **Date Analyzed:** 06/12/2013

Lab Batch ID: 916079 **Sample:** 639597-1-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	<0.000994	0.0994	0.0869	87	0.0996	0.0828	83	5	70-130	35	
Toluene	<0.00199	0.0994	0.0942	95	0.0996	0.0891	89	6	70-130	35	
Ethylbenzene	<0.000994	0.0994	0.108	109	0.0996	0.103	103	5	71-129	35	
m,p-Xylenes	<0.00199	0.199	0.198	99	0.199	0.190	95	4	70-135	35	
o-Xylene	<0.000994	0.0994	0.0951	96	0.0996	0.0975	98	2	71-133	35	

Analyst: DYV **Date Prepared:** 06/13/2013 **Date Analyzed:** 06/13/2013

Lab Batch ID: 916300 **Sample:** 639745-1-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	999	1020	102	995	1020	103	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	1060	106	995	1050	106	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: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order # : 464773 **Project ID:**

Lab Batch ID: 916079 **QC- Sample ID:** 464773-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/12/2013 **Date Prepared:** 06/12/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00113	0.113	0.0902	80	0.113	0.0926	82	3	70-130	35	
Toluene	<0.00225	0.113	0.104	92	0.113	0.112	99	7	70-130	35	
Ethylbenzene	<0.00113	0.113	0.114	101	0.113	0.127	112	11	71-129	35	
m,p-Xylenes	<0.00225	0.225	0.210	93	0.226	0.217	96	3	70-135	35	
o-Xylene	<0.00113	0.113	0.101	89	0.113	0.108	96	7	71-133	35	

Lab Batch ID: 916198 **QC- Sample ID:** 464741-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/13/2013 **Date Prepared:** 06/13/2013 **Analyst:** RKO

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	39.1	100	137	98	100	137	98	0	80-120	20	

Lab Batch ID: 916300 **QC- Sample ID:** 464805-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/13/2013 **Date Prepared:** 06/13/2013 **Analyst:** DYV

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.5	1040	1050	101	1040	1010	97	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.5	1040	1120	108	1040	1130	109	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Work Order #: 464773

Lab Batch #: 915976 **Project ID:**

Date Analyzed: 06/11/2013 13:00 **Date Prepared:** 06/11/2013 **Analyst:** WRU

QC- Sample ID: 464805-001 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	3.39	3.34	1	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

The 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: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: SUG Historical A-14 6 Inch Lateral 1RP-1062

Project #:

Project Loc: Lea County, New Mexico

PO #:

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

(lab use only)
ORDER #: 464773

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/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 8015M 418.1	TOTAL: 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	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chloride E 300.0			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Trench-8 Topsoil			6/7/2013	8:35		1	X								Soil	X										X			X				X
02	Trench-8 Floor @ 2'			6/7/2013	8:40		1	X								Soil	X										X			X				X
03	Trench-8 North S/W @ 1'			6/7/2013	9:20		1	X								Soil	X										X			X				X
04	Trench-8 East S/W @ 1'			6/7/2013	9:30		1	X								Soil	X										X			X				X
05	Trench-8 South S/W @ 1'			6/7/2013	9:35		1	X								Soil	X										X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	6/10/13	3:12	Jonathan Pepper	6/10/13	3:12
Jonathan Pepper	6/10/13	4:37			
			Received by ELOT:	6-10-13	4:50

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	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 1.0 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 06/10/2013 04:50:00 PM

Work Order #: 464773

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)?	1
#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: Kelsey Brooks Date: 06/11/2013

Checklist reviewed by: Kelsey Brooks Date: 06/11/2013

APPENDIX E

Bill of Lading

#-14 6" LAT. #1 - SITE #5
2006-047
1-15-08
7-LOADS TO RF LAND FARM (CONTAMINATED)
7-LOADS FROM RF PIT (TOPSOIL)

OCOTILLO ENVIRONMENTAL, LLC.

HOURS WORKED 10 @ $ _____ PER HOUR $ _____

TRUCKER O. TipTon 12YD. DUMP TRUCK # 1105 DATE 1-15-08

ADDRESS _____

COMPANY _____

PIT OWNER _____ TOTAL YDS. _____ RATE _____ TOTAL _____

ADDRESS _____ DATE PAID _____ CK. NO. _____

RE/Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	RATE	LOADS	TOTAL

A-14 PLOT #1 - SITE #5
2006-047
1-15-03
7- Loads To PF Land Farm (Contaminated
7- Loads From PF Pit (Topsoil)

OCOTILLO ENVIRONMENTAL, LLC.

HOURS WORKED 10 @ $ _____ PER HOUR $ _____

TRUCKER L. Combs 12YD. DUMP TRUCK # 1102 DATE 1-15-03

ADDRESS _____

COMPANY S.U.G.S.

IT OWNER Pitchfork Land Farm TOTAL YDS. _____ RATE _____ TOTAL _____

DDRESS _____ DATE PAID _____ CK. NO. _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	RATE	LOADS	TOTAL
Bed	X	X	X	X	X	X	X																									7	84 yds
Topsoil	X	X	X	X	X	X	X																									7	84 yds

SU.G.S.
H-14, 6" LAT. #1 - SITE #5
2006-047
1-16-08
8 - LOADS TO PITCH FORK LAND FARM (CONTAMINATED)
8 - LOADS FROM PITCH FORK PIT (TOPSOIL)

OCOTILLO ENVIRONMENTAL, LLC.

HOURS WORKED 10 @ $ _____ PER HOUR $ _____

TRUCKER O. Tipton ½ YD. DUMP TRUCK # 1105 DATE 1-16-08

ADDRESS _____

COMPANY SU.G.S.

IT OWNER Pitch Fork Land Farm TOTAL YDS. _____ RATE _____ TOTAL _____

DDRESS _____ DATE PAID _____ CK. NO. _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	RATE	LOADS	TOTAL
3rd	Y	X	X	X	X	X	Y	X																								8	96
ed	Y	X	X	X	X	X	X	X																								8	96

APPENDIX F

Initial and Final 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
E	2	24S	34E					Lea

Latitude N32 14.947 Longitude W103 26.813

NATURE OF RELEASE

Type of Release : Crude oil and natural gas	Volume of Release: 330 mcf gas, 80 bbls oil	Volume Recovered 0 bbls
Source of Release Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 9/12/06 Time: unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? Chris Williams was contacted regarding this release @08:45 on 9/15/06	
By Whom? Tony Savoie, Southern Union Gas Services	Date and Hour: 9/15/06 08:45 a.m.	
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 6" steel gathering pipeline, operating at 25 psi developed a leak, the line was excavated and the affected area was clamped on 9/12/06, time unknown. All of the oil released soaked into the ground. Clean soil was added to the impacted area to eliminate the risk to livestock and wildlife. Normal operating pressure on the line is 20 psi to 30 psi, with a potential H2S content of 4000 ppm.

Describe Area Affected and Cleanup Action Taken. The affected area is pasture. An area covering approximately 18,100 sq. ft. was affected by the release and response activities. An additional 6,668 of pasture land was affected by the oil residue migrating from the release site during a rain event in excess of 3".Remediation activities will start after a section of the pipeline has been replaced. All remediation activities will follow the NMOCD Recommended Guidelines For The Remediation of Leaks and Spills. WHAT WAS DONE?

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: *Tony Savoie*		OIL CONSERVATION DIVISION	
Printed Name: John A. Savoie		Approved by District Supervisor: ENVIRO ENGR	
Title: EH&S Comp. Coord.		Approval Date: 6-27-07	Expiration Date: 8-30-07
E-mail Address: tony.savoie@sugs.com		Conditions of Approval: SUBMIT FINAL C-141 w/ DOCUMENTATION OF IMPACTED SOIL DISPOSITION	Attached ☐
Date: 9/25/06	Phone: 505-395-2116		

* Attach Additional Sheets If Necessary

incident - nPAC0627637665 application - pPAC0627437848

RP# 1062

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Regency Field Services LLC.	Contact: Crystal Callaway
Address: 421 W. 3rd Street, Suite 250, Ft. Worth, TX 76102	Telephone No.: 817-302-9407
Facility Name: A-14 6 inch Lateral (#1RP-1062)	Facility Type: Natural Gas Gathering

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

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	2	24S	34E					Lea

Latitude 32.24915 **Longitude** -103.44687

NATURE OF RELEASE

Type of Release: Crude Oil and Natural Gas	Volume of Release: 330 mcf gas, 80 bbls oil	Volume Recovered: 0 bbls
Source of Release: Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 09/12/2006 Time: Unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? Chris Williams was contacted regarding this release @ 08:45 on 09/15/2006	
By Whom? Tony Savoie, Southern Union Gas Services	Date and Hour: 09/15/2006 08:45 a.m.	
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 6" steel gathering pipeline, operating at 25 psi developed a leak, the line was excavated and the affected area was clamped on 09/12/2006, time unknown. All of the oil released soaked into the ground. Clean soil was added to the impacted area to eliminate the risk to livestock and wildlife. Normal operating pressure on the line is 20 psi to 30 psi, with a potential H2S content of 4,000 ppm.
The affected area is pasture. An area covering approximately 18,100 sq. ft. was affected by the release and response activities. An additional 6,668 sq. ft. of pasture land was affected by the oil residue migrating from the release site during a rain event in excess of 3". Remediation activities will start after a section of the pipeline has been replaced. All remediation activities will follow the NMOCD Recommended Guidelines For The Remediation of Leaks and Spills.

Describe Area Affected and Cleanup Action Taken.*

The site was reportedly remediated by Ocotillo Environmental in 2007 and by NOVA Environmental in 2013, impacted material was excavated and transported to the Pitchfork Land farm for proper disposal. Based on the information provided by both Ocotillo and NOVA Environmental, the site has been determined to meet NMOCD regulatory standards.

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: Crystal Callaway	OIL CONSERVATION DIVISION
Printed Name: CRYSTAL CALLAWAY	Approved by Environmental Specialist:
Title: Sr. Environmental Remediation Spec.	Approval Date: / Expiration Date:
E-mail Address: Crystal.Callaway@RegencyGas.com	Conditions of Approval: / Attached ☐