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: Southern Union Gas Services | Contact: Rachel Johnson |
| Address: P.O. Box 1226 Jal, New Mexico 88252 | Telephone No.: 325.514.2636 |
| Facility Name Grobe 4 Inch | Facility Type: Natural Gas Pipeline |

| | | |
|---|---|---|
| Surface Owner: Elena Grobe | Mineral Owner | API No. 30-025-28822 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| J | 15 | 24S | 37E | | | | | Lea |

**Latitude** 32 13.110' **Longitude** 103 09.038'

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Crude Oil, Produced Water and Natural Gas | Volume of Release: Less than 50 mcf's natural gas, 10 barrels of crude oil | Volume Recovered: None |
| Source of Release: 4-inch Natural Gas Pipeline | Date and Hour of Occurrence: Unknown | Date and Hour of Discovery April 27, 2009, @ 11:08 am |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? HOBBS OCD | |
| By Whom? | Date and Hour | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

AUG 23 2013

RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The 4-inch natural gas pipeline developed a leak operating at approximately 30 psi. A temporary clamp was placed on the line until permanent repairs were made in June 2009. The first assessment estimated the leak at less than five barrels. Once the impacted soil was removed a new assessment was made on 6/22/09 estimating the loss at ten barrels of crude oil and produced water.

Describe Area Affected and Cleanup Action Taken.* The area was excavated, soil samples were collected from the excavated areas and stockpiled soil. The soil samples were submitted to the laboratory for benzene, BTEX, TPH and chloride analysis. Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory guidelines. The excavated areas were backfilled and the site was restored to original conditions. Please reference NOVA Safety and Environmental Soil Investigation Summary and Site Closure Request dated June 2013, for further details.

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: Rachel Johnson | OIL CONSERVATION DIVISION | |
| Printed Name: Rachel Johnson | Approved by Environmental Specialist: Geoffrey Leking | |
| Title: Environmental Specialist | Approval Date: 8/30/13 | Expiration Date: – |
| E-mail Address: Rachel.johnson@regencygas.com | Conditions of Approval: – | Attached ☐ IRP-2217 |
| Date:8/2/2013 Phone: 325.514.2636 | | |

* Attach Additional Sheets If Necessary

SEP 03 2013

# SOIL INVESTIGATION SUMMARY

# AND SITE

# CLOSURE REQUEST

**Southern Union Gas Services**
**Grobe 4-Inch Historical Release Site**
**Lea County, New Mexico**
**UNIT LTR "J" (NW ¼ /SE ¼), Section 15, Township 24 South, Range 37 East**
**Latitude 32° 13.110' North, Longitude 103° 09.038' West**
**NMOCD Reference # 1RP-2217**

NOVA safety and environmental

Prepared For:

**Southern Union Gas Services**
801 South Loop 464
Monahans, Texas 79756

HOBBS OCD

AUG 2 3 2013

RECEIVED

Prepared By:

**NOVA Safety & Environmental**
2057 Commerce
Midland, Texas 79703

**July 2013**

Camille J. Bryant
Project Manager

Brittan K. Byerly, P.G.
President

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

Nova Safety & Environmental (NOVA), on behalf of Southern Union Gas Services (SUGS), has prepared this Soil Investigation Summary and Site Closure Request for Grobe 4-Inch Historical Release Site. The legal description of the release site is Unit Letter "J" (NW ¼ SE ¼), Section 15, Township 24 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Mrs. Elena Grobe. The release site GPS coordinates are 32° 13.110 North and 103° 09.038' West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Details and Confirmation Soil Sample Locations Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix B.

On April 27, 2009, SUGS discovered a release of crude oil, produced water, and natural gas had occurred from a four (4) inch low pressure steel pipeline. The cause of the release was attributed to failure of a segment of the steel pipeline. The release volume was initially estimated to be less than five (5) barrels and non-reportable under New Mexico Oil Conservation Division (NMOCD) rules. Following further investigation of the release, SUGS opted to increase the estimated volume of the release and re-classify the release as a reportable quantity. SUGS submitted the Release Notification and Corrective Action (Form C-141) to the NMOCD Hobbs District Office on June 26, 2009. The C-141 indicated approximately ten (10) barrels of crude oil/produced water and less than 50 mcf's of natural gas were released from the pipeline, with no recovery.

SUGS has researched and identified various historical release sites located in New Mexico. At the request of SUGS, NOVA has reviewed the historical data for these sites and conducted the necessary activities to ensure the sites meet the criteria for closure in accordance with NMOCD regulatory guidelines.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database did not identify the average depth to groundwater information for Section 15, Township 24 South, Range 37 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately seventy-five (75) feet below ground surface (bgs). The depth to groundwater at the Grobe 4-Inch Historical Release Site results in a score of ten (10) points being assigned to the site, based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

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

The NMOCD guidelines indicate the Grobe 4-Inch Historical Release Site has ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

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

The NMOCD chloride cleanup level concentrations are site specific and will be determined by the NMOCD Hobbs District Office.

## 3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On March 25, 2013, NOVA commenced soil investigation activities at the Grobe 4-Inch Historical Release Site. Based on historical documentation and stressed vegetation, four (4) trenches were excavated in the vicinity of the inferred release point and Flowpath area. The trenches were completed to varying depths of approximately five (5) to eleven (11) feet bgs. The depth of the trenches was determined on review of historical data and by field observations conducted during excavation activities. The first trench was excavated at the inferred release point in a north-south direction. The north-south trench measured approximately forty (40) feet in length, and was approximately six (6) feet in width. The second trench was excavated in an easterly direction and intersected the north-south trench. The east trench measured approximately twelve (12) feet in length and was approximately six (6) feet in width. The third trench was excavated in a westerly direction. The west trench measured approximately ten (10) feet in length and was approximately six (6) feet in width. The west trench did not intersect the north-south trench due to safety concerns associated with supporting the SUGS above ground piping. The fourth trench was excavated in a southeasterly direction along the inferred Flowpath area. The Flowpath trench intersected the north-south trench. The Flowpath trench measured approximately sixty (60) feet in length and was approximately six (6) feet in width. The excavated soil was stockpiled adjacent to the excavated area. Please reference Figure 2 for site details.

On March 25, 2013, three (3) soil samples (RP @ 11', North S-W @ 10', and South S-W @ 10') were collected from the north-south trench and submitted to the laboratory for determination of concentrations of benzene, toluene, ethyl-benzene, and xylene (BTEX), total petroleum hydrocarbons (TPH), and chlorides using EPA SW-846 8021b, 8015M, and E 300, respectively. The analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory method detection limits (MDL) for all submitted soil samples. Chloride concentrations ranged from 31.1 mg/Kg for soil sample North S-W @ 10' to 123 mg/Kg for soil sample South S-W @ 10'. Table 1 summarizes the Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil. Laboratory analytical reports are provided as Appendix A

On March 26, 2013, one (1) soil sample (East S-W @ 10') was collected from the east trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL. The soil sample exhibited a chloride concentration of 50.2 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines. Please reference Figure 2 for soil sample locations.

One (1) soil sample (West S-W @ 10') was collected from the west trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH

concentrations were less than the appropriate laboratory MDL. The soil sample exhibited a chloride concentration of 17.6 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines.

On March 26, 2013, three (3) soil samples (Flowpath Floor @ 10', Flowpath Floor @ 5', and Flowpath S/W @ 4') were collected from the Flowpath trench and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all submitted soil samples with the exception of soil sample Flowpath Floor @ 5', which exhibited a TPH concentration of 70.6 mg/Kg. Chloride concentrations ranged from 12.2 mg/Kg for soil sample Flowpath S/W @ 4' to 96.9 mg/Kg for soil sample Flowpath Floor @ 10'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines. Please reference Figure 2 for soil sample locations.

In addition, one (1) composite soil sample (Stockpile) was collected from the excavated stockpiled soil and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. The stockpile soil sample exhibited a TPH concentration of 21.2 mg/Kg and a chloride concentration of 31.7 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines.

On May 13, 2013, SUGS and NOVA representatives met with a NMOCD Hobbs District Office representative to present the results of the soil investigation, and request closure approval for the site. The NMOCD Hobbs District Office representative granted verbal approval to close the site.

## 4.0 QA/QC PROCEDURES

### 4.1 Soil Sampling

Soil Samples were delivered to Xenco Laboratories of Odessa, Texas for BTEX and/or TPH and/or chloride analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH and/or chloride concentrations within fourteen (14) days following the sampling event.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO
- Chloride concentration in accordance with Method E 300.

### 4.2 Decontamination of Equipment

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

### 4.3 Laboratory Protocol

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

## 5.0 SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples, NOVA recommends SUGS provide the NMOCD a copy of this Soil Investigation Summary and Site Closure Request and request the NMOCD grant final closure to the Grobe 4-Inch Historical Release Site.

## 6.0 LIMITATIONS

NOVA Safety and Environmental has prepared this Soil Investigation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

NOVA Safety and Environmental has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA Safety and Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. NOVA Safety and Environmental has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. NOVA Safety and Environmental also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

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

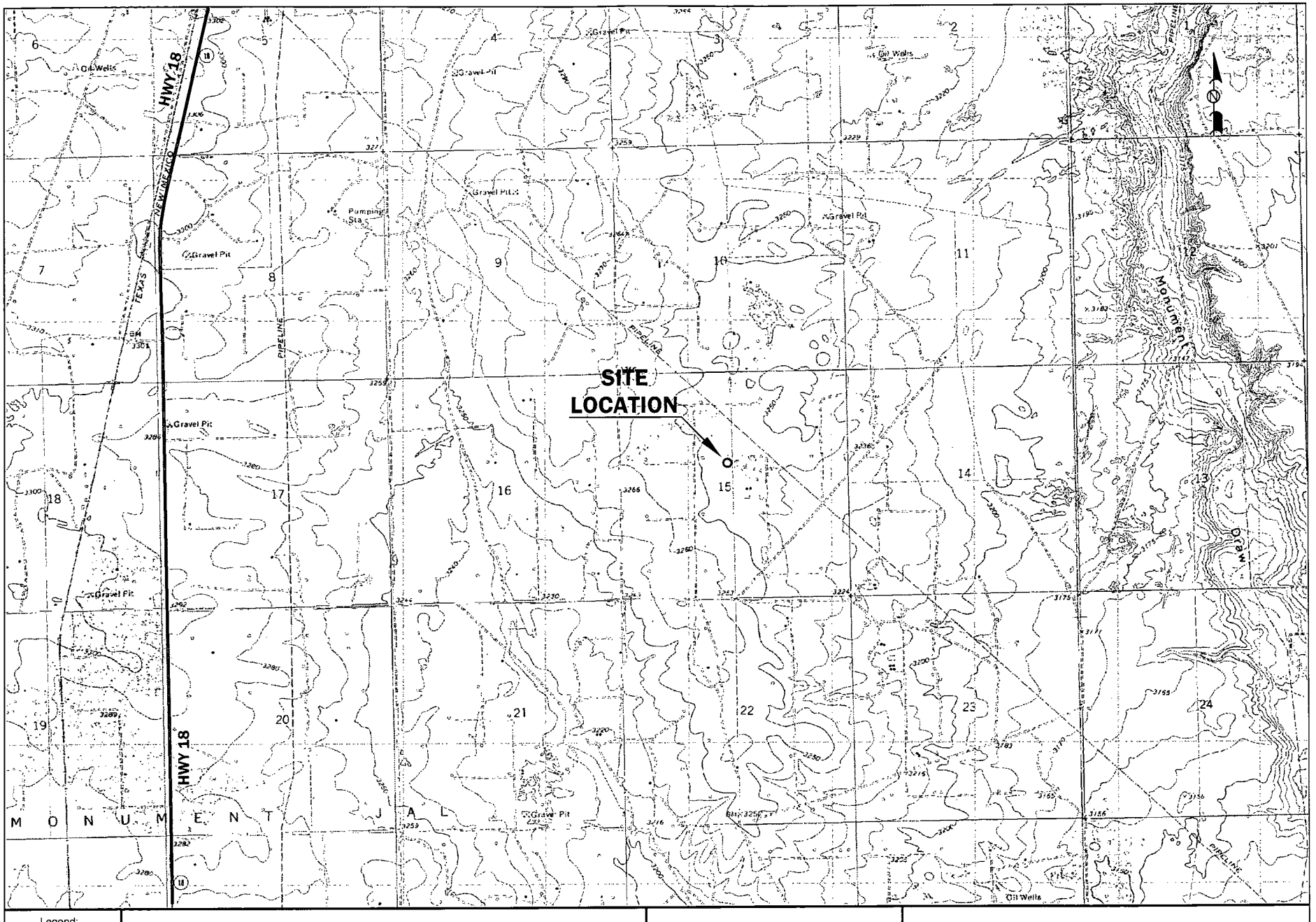
## 7.0 DISTRIBUTION:

Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, New Mexico 88240

Copy 2: Jake Krautsch
Southern Union Gas Services
301 Commerce Street, Suite 700
Fort Worth, Texas 76102

Copy 3: Nova Safety & Environmental
2057 Commerce Street
Midland, Texas 79703

# Figures




Legend:

Mapped edited and Published by the Geological Survey Control by USGS & USC & GS

Map Re-edited by Nova Safety and Environmental for the purpose of Site Location Maps.

Planimetry by Photogrammetric methods from aerial Photographs taken 1958. Topography by Planetabe Surveys 1961.

Fine red dashed lines indicate selected fence lines.

This map Complies with National Map Accuracy Standards

3000 1500 0 1500 3000

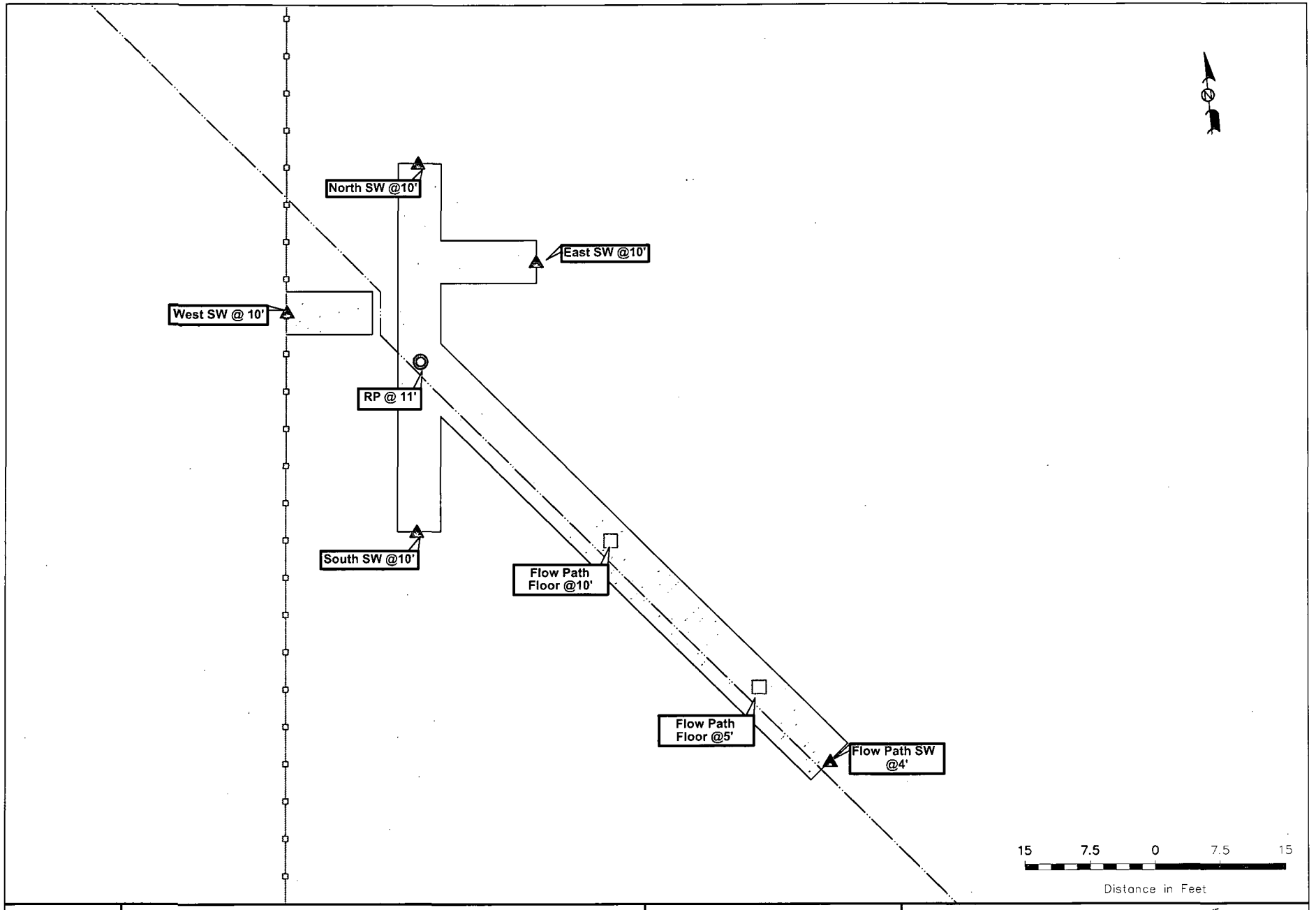
Distance in Feet

Figure 1
Site Location Map
Southern Union Gas Service
Grobe 4"
Lea County, NM
1RP-2217

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

| April 3, 2013 | Scale: 1" - 3000' | CAD By: CAS | Checked By: |
|---|---|---|---|

Lat. N 32° 13' 6.68" Long. W 103° 9' 2.31"




Legend:

- Sidewall Soil Sample Location
- Floor Soil Sample Location
- Release Point
- Pipeline
- Fence

Figure 2
Site Detail & Soil Sample Location Map
Southern Union Gas Service
Grobe 4"
Lea County, NM
1RP-2217

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

| May 13, 2013 | Scale: 1" - 15' | CAD By: CAS | Checked By: |
|---|---|---|---|

Lat. N 32° 13' 6.68" Long. W 103° 9' 2.31"

# Tables

**TABLE 1**

**CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL**

**SOUTHERN UNION GAS SERVICES**
**GROBE 4 INCH HISTORICAL RELEASE SITE**
**LEA COUNTY, NEW MEXICO**
**NMOCD REFERENCE # 1RP-2217**

*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** | **-** | **-** | **-** | **1,000** | **-** |
| RP @ 11' | 03/25/13 | <0.00106 | <0.00211 | <0.00106 | <0.00211 | <0.00106 | <0.00211 | <15.8 | <15.8 | <15.8 | <15.8 | 34.8 |
| North S-W @ 10' | 03/25/13 | <0.00103 | <0.00207 | <0.00103 | <0.00207 | <0.00103 | <0.00207 | <15.5 | <15.5 | <15.5 | <15.5 | 31.1 |
| South S-W @ 10' | 03/25/13 | <0.00105 | <0.00211 | <0.00105 | <0.00211 | <0.00105 | <0.00211 | <15.8 | <15.8 | <15.8 | <15.8 | 123 |
| | | | | | | | | | | | | |
| West S-W @ 10' | 03/26/13 | <0.00110 | <0.00219 | <0.00110 | <0.00219 | <0.00110 | <0.00219 | <16.4 | <16.4 | <16.4 | <16.4 | 17.6 |
| East S-W @ 10' | 03/26/13 | <0.00105 | <0.00210 | <0.00105 | <0.00210 | <0.00105 | <0.00210 | <15.8 | <15.8 | <15.8 | <15.8 | 50.2 |
| Flowpath Floor @ 10' | 03/26/13 | <0.00106 | <0.00212 | <0.00106 | <0.00212 | <0.00106 | <0.00212 | <15.8 | <15.8 | <15.8 | <15.8 | 96.9 |
| Flowpath Floor @ 5' | 03/26/13 | <0.00104 | <0.00208 | <0.00104 | <0.00208 | <0.00104 | <0.00208 | <15.6 | 70.6 | <15.6 | 70.6 | 13.5 |
| Flowpath S-W @ 4' | 03/26/13 | <0.00106 | <0.00212 | <0.00106 | <0.00212 | <0.00106 | <0.00212 | <15.9 | <15.9 | <15.9 | <15.9 | 12.2 |
| Stockpile | 03/26/13 | <0.00103 | <0.00207 | <0.00103 | <0.00207 | <0.00103 | <0.00207 | <15.6 | 21.2 | <15.6 | 21.2 | 31.7 |
| | | | | | | | | | | | | |

# Appendices

# Appendix A

# Analytical Reports

# Analytical Report 460328

## for

## Southern Union Gas Services- Monahans

**Project Manager: Camille Bryant**

**SUGS Historical Grobe 4" 1 RP-2217**

**08-APR-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)

08-APR-13

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

Reference: XENCO Report No(s): **460328**
**SUGS Historical Grobe 4" 1 RP-2217**
Project Address: Lea County, NM

**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) 460328. 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. 460328 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

**Nicholas Straccione**
Project Manager

# Sample Cross Reference 460328

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

SUGS Historical Grobe 4" 1 RP-2217

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| RP @ 11' | S | 03-25-13 14:50 | | 460328-001 |
| North S-W @ 10' | S | 03-25-13 15:30 | | 460328-002 |
| South S-W @ 10' | S | 03-25-13 16:40 | | 460328-003 |
| West S-W @ 10' | S | 03-26-13 09:25 | | 460328-004 |
| East S-W @ 10' | S | 03-26-13 10:50 | | 460328-005 |
| Flowpath Floor @ 10' | S | 03-26-13 11:50 | | 460328-006 |
| Flowpath Floor @ 5' | S | 03-26-13 14:00 | | 460328-007 |
| Flowpath S-W @ 4' | S | 03-26-13 14:05 | | 460328-008 |
| Stockpile | S | 03-26-13 14:25 | | 460328-009 |

# CASE NARRATIVE

*Client Name: Southern Union Gas Services- Monahans*
*Project Name: SUGS Historical Grobe 4" 1 RP-2217*

Project ID:
Work Order Number(s): *460328*

Report Date: *08-APR-13*
Date Received: *04/01/2013*

**Sample receipt non conformances and comments:**
None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**
Batch: LBA-910347 BTEX by EPA 8021B
SW8021BM

Batch 910347, Ethylbenzene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 460328-009, -002, -003, -001, -006, -005, -007, -008, -004.
The Laboratory Control Sample for Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

# Certificate of Analysis Summary 460328

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

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Project Id:**
**Contact:** Camille Bryant
**Project Location:** Lea County, NM

**Date Received in Lab:** Mon Apr-01-13 09:25 am
**Report Date:** 08-APR-13
**Project Manager:** Nicholas Straccione

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 460328-001 | | 460328-002 | | 460328-003 | | 460328-004 | | 460328-005 | | 460328-006 | |
| | *Field Id:* | RP @ 11' | | North S-W @ 10' | | South S-W @ 10' | | West S-W @ 10' | | East S-W @ 10' | | Flowpath Floor @ 10' | |
| | *Depth:* | | | | | | | | | | | | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Mar-25-13 14:50 | | Mar-25-13 15:30 | | Mar-25-13 16:40 | | Mar-26-13 09:25 | | Mar-26-13 10:50 | | Mar-26-13 11:50 | |
| **BTEX by EPA 8021B** | *Extracted:* | Apr-01-13 10:00 | | Apr-01-13 10:00 | | Apr-01-13 10:00 | | Apr-01-13 10:00 | | Apr-01-13 10:00 | | Apr-01-13 10:00 | |
| | *Analyzed:* | Apr-01-13 10:34 | | Apr-01-13 10:51 | | Apr-01-13 13:36 | | Apr-01-13 11:24 | | Apr-01-13 11:40 | | Apr-01-13 11:57 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | ND | 0.00106 | ND | 0.00103 | ND | 0.00105 | ND | 0.00110 | ND | 0.00105 | ND | 0.00106 |
| Toluene | | ND | 0.00211 | ND | 0.00207 | ND | 0.00211 | ND | 0.00219 | ND | 0.00210 | ND | 0.00212 |
| Ethylbenzene | | ND | 0.00106 | ND | 0.00103 | ND | 0.00105 | ND | 0.00110 | ND | 0.00105 | ND | 0.00106 |
| m_p-Xylenes | | ND | 0.00211 | ND | 0.00207 | ND | 0.00211 | ND | 0.00219 | ND | 0.00210 | ND | 0.00212 |
| o-Xylene | | ND | 0.00106 | ND | 0.00103 | ND | 0.00105 | ND | 0.00110 | ND | 0.00105 | ND | 0.00106 |
| Total Xylenes | | ND | 0.00106 | ND | 0.00103 | ND | 0.00105 | ND | 0.00110 | ND | 0.00105 | ND | 0.00106 |
| Total BTEX | | ND | 0.00106 | ND | 0.00103 | ND | 0.00105 | ND | 0.00110 | ND | 0.00105 | ND | 0.00106 |
| **Inorganic Anions by EPA 300/300.1** | *Extracted:* | Apr-03-13 10:00 | | Apr-03-13 10:00 | | Apr-03-13 10:00 | | Apr-03-13 10:00 | | Apr-03-13 10:00 | | Apr-03-13 10:00 | |
| | *Analyzed:* | Apr-04-13 04:02 | | Apr-04-13 04:46 | | Apr-04-13 05:07 | | Apr-04-13 05:29 | | Apr-04-13 05:51 | | Apr-04-13 06:12 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 34.8 | 20.0 | 31.1 | 20.0 | 123 | 10.0 | 17.6 | 10.0 | 50.2 | 20.0 | 96.9 | 10.0 |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Apr-02-13 17:00 | | Apr-02-13 17:00 | | Apr-02-13 17:00 | | Apr-02-13 17:00 | | Apr-02-13 17:00 | | Apr-02-13 17:00 | |
| | *Units/RL:* | % | RL | % | RL | % | RL | % | RL | % | RL | % | RL |
| Percent Moisture | | 5.17 | 1.00 | 3.30 | 1.00 | 5.13 | 1.00 | 8.57 | 1.00 | 4.84 | 1.00 | 5.36 | 1.00 |
| **TPH By SW8015 Mod** | *Extracted:* | Apr-01-13 10:50 | | Apr-01-13 10:50 | | Apr-01-13 10:50 | | Apr-01-13 10:50 | | Apr-01-13 10:50 | | Apr-01-13 10:50 | |
| | *Analyzed:* | Apr-01-13 14:12 | | Apr-01-13 14:38 | | Apr-01-13 15:03 | | Apr-01-13 15:29 | | Apr-01-13 16:19 | | Apr-01-13 16:44 | |
| | *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 | 15.8 | ND | 15.5 | ND | 15.8 | ND | 16.4 | ND | 15.8 | ND | 15.8 |
| C12-C28 Diesel Range Hydrocarbons | | ND | 15.8 | ND | 15.5 | ND | 15.8 | ND | 16.4 | ND | 15.8 | ND | 15.8 |
| C28-C35 Oil Range Hydrocarbons | | ND | 15.8 | ND | 15.5 | ND | 15.8 | ND | 16.4 | ND | 15.8 | ND | 15.8 |
| Total TPH | | ND | 15.8 | ND | 15.5 | ND | 15.8 | ND | 16.4 | ND | 15.8 | ND | 15.8 |





Nicholas Straccione
Project Manager

# Certificate of Analysis Summary 460328

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

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Project Id:**
**Contact:** Camille Bryant
**Project Location:** Lea County, NM

**Date Received in Lab:** Mon Apr-01-13 09:25 am
**Report Date:** 08-APR-13
**Project Manager:** Nicholas Straccione

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 460328-007 | | 460328-008 | | 460328-009 | | | | | |
| | ***Field Id:*** | Flowpath Floor @ 5' | | Flowpath S-W @ 4' | | Stockpile | | | | | |
| | ***Depth:*** | | | | | | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | Mar-26-13 14:00 | | Mar-26-13 14:05 | | Mar-26-13 14:25 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Apr-01-13 10:00 | | Apr-01-13 10:00 | | Apr-01-13 10:00 | | | | | |
| | ***Analyzed:*** | Apr-01-13 12:13 | | Apr-01-13 12:29 | | Apr-01-13 12:46 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | ND | 0.00104 | ND | 0.00106 | ND | 0.00103 | | | | |
| Toluene | | ND | 0.00208 | ND | 0.00212 | ND | 0.00207 | | | | |
| Ethylbenzene | | ND | 0.00104 | ND | 0.00106 | ND | 0.00103 | | | | |
| m_p-Xylenes | | ND | 0.00208 | ND | 0.00212 | ND | 0.00207 | | | | |
| o-Xylene | | ND | 0.00104 | ND | 0.00106 | ND | 0.00103 | | | | |
| Total Xylenes | | ND | 0.00104 | ND | 0.00106 | ND | 0.00103 | | | | |
| Total BTEX | | ND | 0.00104 | ND | 0.00106 | ND | 0.00103 | | | | |
| **Inorganic Anions by EPA 300/300.1** | ***Extracted:*** | Apr-03-13 10:00 | | Apr-03-13 10:00 | | Apr-03-13 10:00 | | | | | |
| | ***Analyzed:*** | Apr-04-13 07:18 | | Apr-04-13 07:39 | | Apr-04-13 08:01 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 13.5 | 10.0 | 12.2 | 10.0 | 31.7 | 10.0 | | | | |
| **Percent Moisture** | ***Extracted:*** | | | | | | | | | | |
| | ***Analyzed:*** | Apr-02-13 17:00 | | Apr-02-13 17:00 | | Apr-02-13 17:00 | | | | | |
| | ***Units/RL:*** | % | RL | % | RL | % | RL | | | | |
| Percent Moisture | | 3.68 | 1.00 | 5.83 | 1.00 | 3.75 | 1.00 | | | | |
| **TPH By SW8015 Mod** | ***Extracted:*** | Apr-01-13 10:50 | | Apr-01-13 10:50 | | Apr-01-13 10:50 | | | | | |
| | ***Analyzed:*** | Apr-01-13 17:08 | | Apr-01-13 17:34 | | Apr-01-13 18:00 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 15.6 | ND | 15.9 | ND | 15.6 | | | | |
| C12-C28 Diesel Range Hydrocarbons | | 70.6 | 15.6 | ND | 15.9 | 21.2 | 15.6 | | | | |
| C28-C35 Oil Range Hydrocarbons | | ND | 15.6 | ND | 15.9 | ND | 15.6 | | | | |
| Total TPH | | 70.6 | 15.6 | ND | 15.9 | 21.2 | 15.6 | | | | |





Nicholas Straccione
Project Manager

# Flagging Criteria

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

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

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

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

**F** RPD exceeded lab control limits.

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

**U** Analyte was not detected.

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

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

**K** Sample analyzed outside of recommended hold time.

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

* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

\+ NELAC certification not offered for this compound.

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

# Form 2 - Surrogate Recoveries

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Work Orders :** 460328,

**Project ID:**

**Lab Batch #:** 910347 **Sample:** 460328-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 10:34

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0329 | 0.0300 | 110 | 80-120 | |
| 4-Bromofluorobenzene | 0.0296 | 0.0300 | 99 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-002 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 10:51

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

**Lab Batch #:** 910347 **Sample:** 460328-004 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 11:24

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0260 | 0.0300 | 87 | 80-120 | |
| 4-Bromofluorobenzene | 0.0267 | 0.0300 | 89 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-005 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 11:40

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0272 | 0.0300 | 91 | 80-120 | |
| 4-Bromofluorobenzene | 0.0252 | 0.0300 | 84 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-006 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 11:57

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0320 | 0.0300 | 107 | 80-120 | |
| 4-Bromofluorobenzene | 0.0309 | 0.0300 | 103 | 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 Grobe 4" 1 RP-2217

**Work Orders :** 460328,

**Project ID:**

**Lab Batch #:** 910347 **Sample:** 460328-007 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 12:13

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>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 | 0.0258 | 0.0300 | 86 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-008 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 12:29

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0322 | 0.0300 | 107 | 80-120 | |
| 4-Bromofluorobenzene | 0.0307 | 0.0300 | 102 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-009 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 12:46

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0275 | 0.0300 | 92 | 80-120 | |
| 4-Bromofluorobenzene | 0.0255 | 0.0300 | 85 | 80-120 | |

**Lab Batch #:** 910347 **Sample:** 460328-003 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 13:36

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0308 | 0.0300 | 103 | 80-120 | |
| 4-Bromofluorobenzene | 0.0276 | 0.0300 | 92 | 80-120 | |

**Lab Batch #:** 910363 **Sample:** 460328-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 14:12

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 100 | 100 | 100 | 70-135 | |
| o-Terphenyl | 52.5 | 50.1 | 105 | 70-135 | |

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

# Form 2 - Surrogate Recoveries

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Work Orders :** 460328,

**Project ID:**

**Lab Batch #:** 910363 **Sample:** 460328-002 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 14:38

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 98.9 | 99.8 | 99 | 70-135 | |
| o-Terphenyl | 51.1 | 49.9 | 102 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-003 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 15:03

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 98.7 | 99.8 | 99 | 70-135 | |
| o-Terphenyl | 51.9 | 49.9 | 104 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-004 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 15:29

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 99.0 | 99.9 | 99 | 70-135 | |
| o-Terphenyl | 51.8 | 50.0 | 104 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-005 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 16:19

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 52.6 | 50.0 | 105 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-006 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 16:44

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.5 | 99.6 | 98 | 70-135 | |
| o-Terphenyl | 51.0 | 49.8 | 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: SUGS Historical Grobe 4" 1 RP-2217

**Work Orders :** 460328, **Project ID:**

**Lab Batch #:** 910363 **Sample:** 460328-007 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 17:08

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 51.9 | 50.1 | 104 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-008 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 17:34

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 98.4 | 100 | 98 | 70-135 | |
| o-Terphenyl | 51.4 | 50.1 | 103 | 70-135 | |

**Lab Batch #:** 910363 **Sample:** 460328-009 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 18:00

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 96.6 | 99.8 | 97 | 70-135 | |
| o-Terphenyl | 51.4 | 49.9 | 103 | 70-135 | |

**Lab Batch #:** 910347 **Sample:** 635978-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 09:52

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

**Lab Batch #:** 910363 **Sample:** 635984-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 11:09

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 98.6 | 100 | 99 | 70-135 | |
| o-Terphenyl | 52.5 | 50.1 | 105 | 70-135 | |

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

# Form 2 - Surrogate Recoveries

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Work Orders :** 460328, **Project ID:**

**Lab Batch #:** 910347 **Sample:** 635978-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 09:35

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0329 | 0.0300 | 110 | 80-120 | |
| 4-Bromofluorobenzene | 0.0301 | 0.0300 | 100 | 80-120 | |

**Lab Batch #:** 910363 **Sample:** 635984-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 10:18

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 91.3 | 99.9 | 91 | 70-135 | |
| o-Terphenyl | 60.6 | 50.0 | 121 | 70-135 | |

**Lab Batch #:** 910347 **Sample:** 635978-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 10:08

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0298 | 0.0300 | 99 | 80-120 | |
| 4-Bromofluorobenzene | 0.0290 | 0.0300 | 97 | 80-120 | |

**Lab Batch #:** 910363 **Sample:** 635984-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg **Date Analyzed:** 04/01/13 10:44

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 95.0 | 100 | 95 | 70-135 | |
| o-Terphenyl | 59.6 | 50.1 | 119 | 70-135 | |

**Lab Batch #:** 910347 **Sample:** 460328-001 S / MS **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 14:08

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0316 | 0.0300 | 105 | 80-120 | |
| 4-Bromofluorobenzene | 0.0337 | 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: SUGS Historical Grobe 4" 1 RP-2217

**Work Orders :** 460328,

**Project ID:**

**Lab Batch #:** 910363 **Sample:** 460328-009 S / MS **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 19:17

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 96.6 | 99.6 | 97 | 70-135 | |
| o-Terphenyl | 54.3 | 49.8 | 109 | 70-135 | |

**Lab Batch #:** 910347 **Sample:** 460328-001 SD / MSD **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 14:25

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0315 | 0.0300 | 105 | 80-120 | |
| 4-Bromofluorobenzene | 0.0325 | 0.0300 | 108 | 80-120 | |

**Lab Batch #:** 910363 **Sample:** 460328-009 SD / MSD **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg **Date Analyzed:** 04/01/13 19:42

| TPH By SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 95.1 | 100 | 95 | 70-135 | |
| o-Terphenyl | 56.2 | 50.1 | 112 | 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 Grobe 4" 1 RP-2217

**Work Order #:** 460328 **Project ID:**

**Analyst:** KEB **Date Prepared:** 04/01/2013 **Date Analyzed:** 04/01/2013

**Lab Batch ID:** 910347 **Sample:** 635978-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| BTEX by EPA 8021B<br>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 | 0.103 | 103 | 0.0992 | 0.0914 | 92 | 12 | 70-130 | 35 | |
| Toluene | <0.00200 | 0.0998 | 0.102 | 102 | 0.0992 | 0.0902 | 91 | 12 | 70-130 | 35 | |
| Ethylbenzene | <0.000998 | 0.0998 | 0.0901 | 90 | 0.0992 | 0.0849 | 86 | 6 | 71-129 | 35 | |
| m_p-Xylenes | <0.00200 | 0.200 | 0.186 | 93 | 0.198 | 0.178 | 90 | 4 | 70-135 | 35 | |
| o-Xylene | <0.000998 | 0.0998 | 0.102 | 102 | 0.0992 | 0.0969 | 98 | 5 | 71-133 | 35 | |

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

**Lab Batch ID:** 910763 **Sample:** 636228-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| Inorganic Anions by EPA 300/300.1<br>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 | 48.8 | 98 | 50.0 | 49.1 | 98 | 1 | 80-120 | 20 | |

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

# BS / BSD Recoveries

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Work Order #:** 460328 **Project ID:**

**Analyst:** KEB **Date Prepared:** 04/01/2013 **Date Analyzed:** 04/01/2013

**Lab Batch ID:** 910363 **Sample:** 635984-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| TPH By SW8015 Mod<br>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 | 929 | 93 | 1000 | 910 | 91 | 2 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | <15.0 | 999 | 1030 | 103 | 1000 | 1010 | 101 | 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 Grobe 4" 1 RP-2217

**Work Order #:** 460328
**Lab Batch #:** 910763
**Project ID:**
**Date Analyzed:** 04/04/2013
**Date Prepared:** 04/03/2013
**Analyst:** AMB
**QC- Sample ID:** 460328-001 S
**Batch #:** 1
**Matrix:** Soil
**Reporting Units:** mg/kg

| Inorganic Anions by EPA 300 | MATRIX / MATRIX SPIKE RECOVERY STUDY | | | | | |
|---|---|---|---|---|---|---|
| Analytes | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | %R [D] | Control Limits %R | Flag |
| Chloride | 34.8 | 500 | 529 | 99 | 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 Grobe 4" 1 RP-2217

**Work Order # :** 460328 **Project ID:**

**Lab Batch ID:** 910347 **QC- Sample ID:** 460328-001 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 04/01/2013 **Date Prepared:** 04/01/2013 **Analyst:** KEB

**Reporting Units:** mg/kg

| BTEX by EPA 8021B Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| Benzene | <0.00106 | 0.106 | 0.0891 | 84 | 0.105 | 0.0784 | 75 | 13 | 70-130 | 35 | |
| Toluene | <0.00211 | 0.106 | 0.0876 | 83 | 0.105 | 0.0853 | 81 | 3 | 70-130 | 35 | |
| Ethylbenzene | <0.00106 | 0.106 | 0.0787 | 74 | 0.105 | 0.0697 | 66 | 12 | 71-129 | 35 | X |
| m_p-Xylenes | <0.00211 | 0.211 | 0.154 | 73 | 0.209 | 0.139 | 67 | 10 | 70-135 | 35 | X |
| o-Xylene | <0.00106 | 0.106 | 0.0895 | 84 | 0.105 | 0.0734 | 70 | 20 | 71-133 | 35 | X |

**Lab Batch ID:** 910363 **QC- Sample ID:** 460328-009 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 04/01/2013 **Date Prepared:** 04/01/2013 **Analyst:** KEB

**Reporting Units:** mg/kg

| TPH By SW8015 Mod Analytes | MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
| C6-C12 Gasoline Range Hydrocarbons | <15.5 | 1030 | 963 | 93 | 1040 | 962 | 93 | 0 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | 21.2 | 1030 | 1080 | 103 | 1040 | 1080 | 102 | 0 | 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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Sample Duplicate Recovery

## Project Name: SUGS Historical Grobe 4" 1 RP-2217

**Work Order #:** 460328

**Lab Batch #:** 910482 **Project ID:**

**Date Analyzed:** 04/02/2013 17:00 **Date Prepared:** 04/02/2013 **Analyst:** WRU

**QC- Sample ID:** 460328-001 D **Batch #:** 1 **Matrix:** Soil

**Reporting Units:** %

| Percent Moisture<br>Analyte | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Percent Moisture | 5.17 | 5.11 | 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

Project Name: SUGS Historical Grobe 4" 1 RP-2217

Company Name: Nova Safety and Environmental

Project #:

Company Address: 2057 Commerce

Project Loc: Lea County, New Mexico

City/State/Zip: Midland, TX 79703

PO #:

Telephone No: 432.520.7720

Fax No: 432.520.7701

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

Sampler Signature: Camille Bryant

e-mail: cbryant@novatraining.cc
rose.slade@sug.com

(lab use only) ORDER #: 460328

| 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 | TOTAL: TPH: 8015B 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. | C 300 | | | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | RP @ 11' | | | 3/25/2013 | 14:50 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 02 | North S-W @ 10' | | | 3/25/2013 | 15:30 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 03 | South S-W @ 10' | | | 3/25/2013 | 16:40 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 04 | West S-W @ 10' | | | 3/26/2013 | 9:25 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 05 | East S-W @ 10' | | | 3/26/2013 | 10:50 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 06 | Flowpath Floor @ 10' | | | 3/26/2013 | 11:50 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 07 | Flowpath Floor @ 5' | | | 3/26/2013 | 14:00 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 08 | Flowpath S-W @ 4' | | | 3/26/2013 | 14:05 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| 09 | Stockpile | | | 3/26/2013 | 14:25 | | 1 | X | | | | | | | | Soil | X | | | | | | | | | X | | | X | | | | X |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Special Instructions:**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished by: Camille Bryant | 4/1/13 | 8:50 | Received by: Nathan Callicoatte | 4/1/13 | 8:50 |
| Relinquished by: Nathan Callicoatte | 4/1/13 | 9:25 | Received by: | | |
| Relinquished by: | | | Received by ELOT: | 4/1/13 | 9:25 |

**Laboratory Comments:**

| | | |
|---|---|---|
| Sample Containers Intact? | Y | N |
| VOCs Free of Headspace? | Y | N |
| Labels on container(s) | Y | N |
| Custody seals on container(s) | Y | N |
| Custody seals on cooler(s) | Y | N |
| Sample Hand Delivered | Y | N |
| by Sampler/Client Rep. ? | Y | N |
| by Courier? UPS DHL FedEx Lone Star | | |

Temperature Upon Receipt: 2.5 °C

Final 1.000

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** Southern Union Gas Services- Monahan

**Date/ Time Received:** 04/01/2013 09:25:00 AM

**Work Order #:** 460328

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

**Temperature Measuring device used :**

| Sample Receipt Checklist | Comments |
|---|---|
| #1 *Temperature of cooler(s)? | 2.5 |
| #2 *Shipping container in good condition? | Yes |
| #3 *Samples received on ice? | Yes |
| #4 *Custody Seals intact on shipping container/ cooler? | Yes |
| #5 Custody Seals intact on sample bottles? | Yes |
| #6 *Custody Seals Signed and dated? | Yes |
| #7 *Chain of Custody present? | Yes |
| #8 Sample instructions complete on Chain of Custody? | Yes |
| #9 Any missing/extra samples? | No |
| #10 Chain of Custody signed when relinquished/ received? | Yes |
| #11 Chain of Custody agrees with sample label(s)? | Yes |
| #12 Container label(s) legible and intact? | Yes |
| #13 Sample matrix/ properties agree with Chain of Custody? | Yes |
| #14 Samples in proper container/ bottle? | Yes |
| #15 Samples properly preserved? | Yes |
| #16 Sample container(s) intact? | Yes |
| #17 Sufficient sample amount for indicated test(s)? | Yes |
| #18 All samples received within hold time? | Yes |
| #19 Subcontract of sample(s)? | Yes |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | Yes |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4? | Yes |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH? | Yes |

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

| Analyst: | PH Device/Lot#: |
|---|---|

**Checklist completed by:** _____ Date: _____

**Checklist reviewed by:** _____ Date: _____

# Appendix B

# Release Notification & Corrective Action

# (Form –C-141)

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

RECEIVED
JUN 26 2009
HOBBSOCD

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: Elena Grobe | Mineral Owner: State | Lease No. |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| G | 15 | 24S | 37E | | | | | Lea |

Latitude N32 13.110 Longitude W103 09.038

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release : Crude Oil, Produced water and Natural Gas | Volume of Release: Less than 50 MCF gas, 10 bbls of crude oil | Volume Recovered NONE |
| Source of Release : 4" Natural Gas Pipeline | Date and Hour of Occurrence not known | Date and Hour of Discovery 4/27/09 11:08 a.m. |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour: | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The 4" Natural gas pipeline developed a leak operating at approximately 30 psi. a Temporary clamp was placed on the line until permanent repairs were made in June 2009. The first assessment estimated the leak at less than 5 bbls. Once the oily soil was removed a new assessment was made on 6/22/09 estimating the loss at 10bbls of crude oil and produced water.

Describe Area Affected and Cleanup Action Taken. Approximately 250 sq.ft. of pasture land was affected by the leak and temporary repair. Remediation started on 6/22/09 Final remediation will follow the NMOCD recommended guidelines for leaks and spills.

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 ENV ENGR ~~District Supervisor~~: Jeffrey Dobling |
| Title: Remediation Supervisor | Approval Date: 06/26/09 Expiration Date: 08/25/09 |
| E-mail Address: tony.savoie@sug.com | Conditions of Approval: DELINEATE TO CLEAN T1, SUBMIT FINAL C-141 BY 08/25/09. Attached ☐ |
| Date: 6/26/09 Phone: 505-395-2116 | IRP-09-6-2217 |

* Attach Additional Sheets If Necessary