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: Phillip Little
Address: P.O. Box 1226 Jal, New Mexico 88252	Telephone No.: 575.631.2586
Facility Name Trunk "D"	Facility Type: Natural Gas Pipeline

Surface Owner: State of New Mexico	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
D	13	23S	36E					Lea

Latitude 32 18.617' **Longitude** 103 13.444'

NATURE OF RELEASE

Type of Release: Crude Oil, Produced Water and Natural Gas	Volume of Release: 20 barrels of Fluids and 29 mcf's of natural gas	Volume Recovered: None
Source of Release: 16-inch Natural Gas Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery August 22, 2007 @ 10:22 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink the NMOCD on call representative	
By Whom? Tony Savoie	Date and Hour August 22, 2007, @ 2:49pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

HOBBS OCD
AUG 23 2013
RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The 16-inch natural gas gathering line operating at approximately 30psi developed a leak. A repair crew arrived on-site and started excavation at 12:30 pm. The damaged area of the 16-inch pipeline was temporarily repaired with a leak clamp.

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. NMOCD granted verbal approval to backfill the excavated area with the stockpiled soil. 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 August 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: Phillip Little	OIL CONSERVATION DIVISION	
Printed Name: Phillip Little	Approved by Environmental Specialist: Geoffrey Leking	
Title: Environmental Specialist	Approval Date: 8/30/13	Expiration Date: —
E-mail Address: Phillip.little@regencygas.com	Conditions of Approval: —	Attached ☐ 1RP-1539
Date:8/2/2013 Phone: 575.631.2586		

Environmental Specialist

* Attach Additional Sheets If Necessary

SEP 03 2013

SOIL INVESTIGATION SUMMARY

AND SITE

CLOSURE REQUEST

Southern Union Gas Services
Trunk "D" Historical Release Site
Lea County, New Mexico
UNIT LTR "D" (NW ¼ /NW ¼), Section 13, Township 23 South, Range 36 East
Latitude 32° 18.617' North, Longitude 103° 13.444' West
NMOCD Reference # 1RP-1539

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

August 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 Trunk "D" Historical Release Site. The legal description of the release site is Unit Letter "D" (NW ¼ NW ¼), Section 13, Township 23 South, Range 36 East, in Lea County, New Mexico. The property affected by the release is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO). A Right-of-Entry permit (ROE-2280) was granted by the NMSLO, Santa Fe Office. The release site GPS coordinates are 32° 18.617' North and 103° 13.444' 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 C.

On August 22, 2007, SUGS discovered a release of crude oil, produced water, and natural gas had occurred from a sixteen (16) inch pipeline. The cause of the release was attributed to failure of a segment of the steel pipeline. The line was excavated and a temporary pipeline clamp was installed on the pipeline. SUGS submitted the Release Notification and Corrective Action (Form C-141) to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on August 31, 2007. The C-141 indicated approximately twenty (20) barrels of crude oil/produced water and 29 mcf's of natural gas were released from the pipeline, with no recovery. General photographs of the site are provided as Appendix B.

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 13, Township 23 South, Range 36 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately one hundred twenty-five (125) feet below ground surface (bgs). The depth to groundwater at the Trunk "D" Historical Release Site results in a score of zero (0) 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 Trunk "D" Historical Release Site has ranking score of zero (0). Based on this score, the soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 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 May 21, 2013, NOVA commenced soil investigation activities at the Trunk "D" Historical Release Site. Based on historical documentation and vegetation indicators, a trench was excavated in the vicinity of the inferred release point. The trench was completed to a total depth of approximately fifteen (15) feet bgs. The depth of the trench was determined on review of historical data and by field observations conducted during excavation activities. The trench was excavated along SUGS's pipeline in a north-south direction. The trench measured approximately forty (40) feet in length and was approximately twelve (12) feet in width. In addition, five (5) test holes were installed around the trenched area. One (1) test hole was installed to the north, south and west of the trenched area and two (2) test holes were installed to the east of the trenched area. The excavated soil was stockpiled to the west of the trenched area. Please reference Figure 2 for site details.

On May 22, 2013, one (1) soil sample (RP @ 15') was collected from the trenched area 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 laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory method detection limits (MDL). The soil sample exhibited a chloride concentrations ranged of 55.3 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines. Table 1 summarizes the Concentrations of Benzene, BTEX, TPH, and Chlorides in Soil. Laboratory analytical reports are provided as Appendix A

In addition, one (1) soil sample (East TH-2 @ 2') was collected from the eastern most test hole 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 146 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.

On May 23, 2013, one (1) soil sample (East TH-1 @ 2') was collected from the east test hole 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 523 mg/Kg (Table 1).

On May 28, 2013, one (1) soil sample (South S/W @ 14') was collected from the trenched area and submitted to the laboratory. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL. The soil sample exhibited a

chloride concentration of 9.78 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.

In addition, three (3) soil samples (South TH @ 2', North TH @ 2', and West TH @ 2') were collected from the test holes 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. Chloride concentrations ranged from 8.97 mg/Kg for soil sample West TH @ 2' to 14.9 mg/Kg for soil sample North TH @ 2' (Table 1).

On May 29, 2013, three (3) soil samples (West S/W @ 14', East S/W @ 14', and North S/W @ 14') were collected from the trenched area 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 the submitted soil samples. Chloride concentrations ranged from 8.98 mg/Kg for soil sample North S/W @ 14' to 62.7 mg/Kg for soil sample East S/W @ 14'. A review of analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD guidelines. Please reference Figure 2 for soil sample locations.

In addition, one (1) soil sample (East TH-1 @ 4') was collected from the east test hole 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 104 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines.

On May 29, 2013, one (1) composite sample (SP-1) 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 soil sample exhibited a TPH concentration of 62.6 mg/Kg and a chloride concentration of 30.6 mg/Kg. A review of analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory guidelines.

On June 19, 2013, 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 Trunk "D" 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:

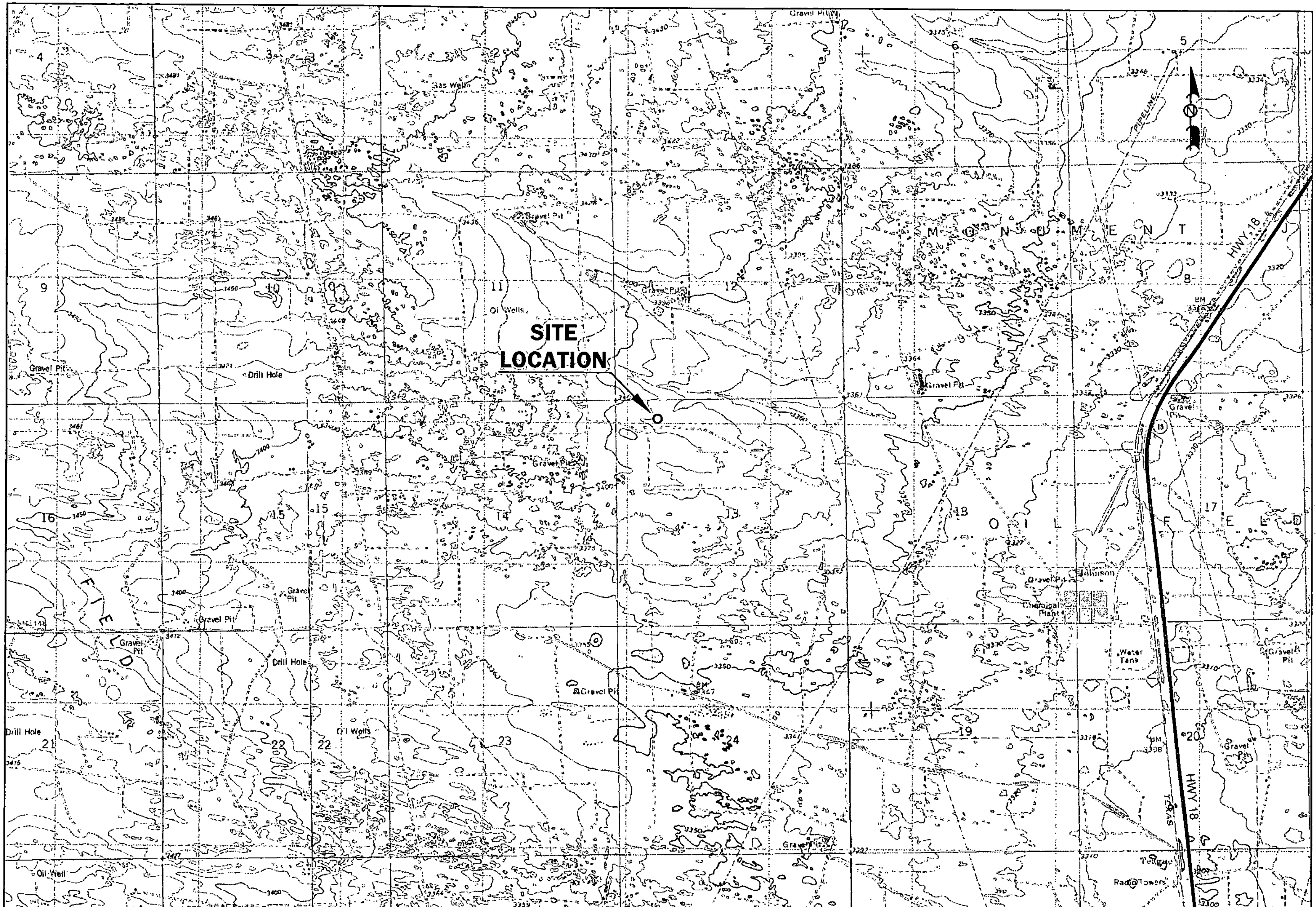
Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
1625 French Drive
Hobbs, New Mexico 88240

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

Copy 3: Anthony Vigil
New Mexico State Land Office
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

Copy 4: 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.

Fine red dashed lines indicate selected fence lines.

This map Complies with National Map Accuracy Standards

3000 1500 0 1500 3000

Distance in Feet

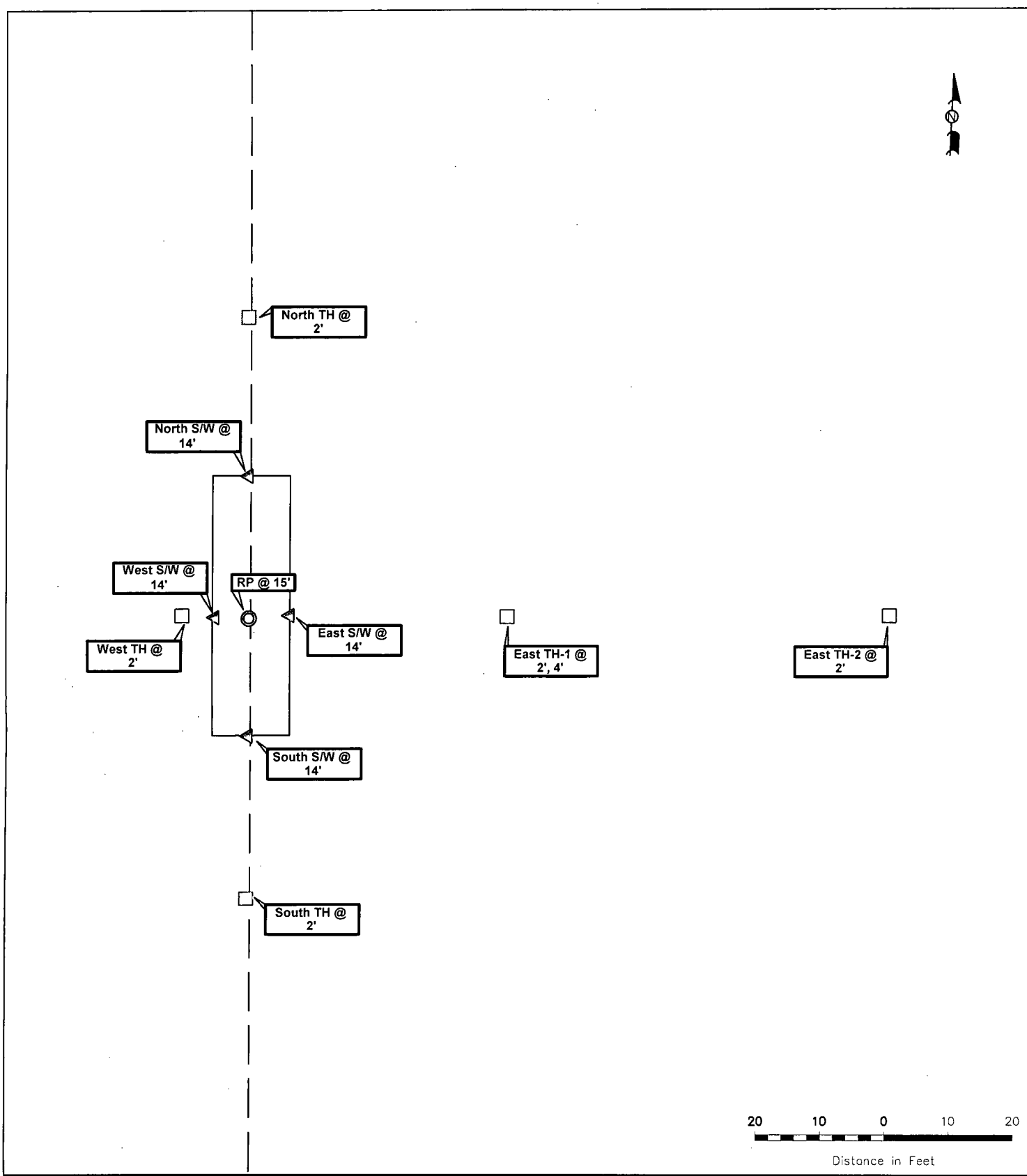
Figure 1
Site Location Map
Southern Union Gas Service
1RP-1539
Trunk D
Lea County, NM

NOVA
safety and environmental

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

www.novasafetyandenvironmental.com

July 26, 2013	Scale: 1" - 20'	CAD By: CAS	Checked By:
Lat. N 32° 18' 37.05"	Long. W 103° 13' 26.04"		



Legend:

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

Figure 2
Site Details and Confirmation
Soil Sample Location Map
Southern Union Gas Service
1RP-1539
Trunk D
Lea County, NM

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

June 18, 2013	Scale: 1" - 20'	CAD By: CAS	Checked By:

Lat. N 32° 18' 37.05" Long. W 103° 13' 26.04"

Tables

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
TRUNK"D" HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE # 1RP-1539

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 @ 15'	05/22/13	<0.00106	<0.00212	<0.00106	<0.00212	<0.00106	<0.00212	<16.0	<16.0	<16.0	<16.0	55.3
East TH-2 @ 2'	05/22/13	<0.00104	<0.00208	<0.00104	<0.00208	<0.00104	<0.00208	<15.9	<15.9	<15.9	<15.9	146
East TH-1 @ 2'	05/23/13	<0.00107	<0.00214	<0.00107	<0.00214	<0.00107	<0.00214	<16.1	<16.1	<16.1	<16.1	523
South S/W @ 14'	05/28/13	<0.00103	<0.00206	<0.00103	<0.00206	<0.00103	<0.00206	<15.7	<15.7	<15.7	<15.7	9.78
South TH @ 2'	05/28/13	<0.00101	<0.00202	<0.00101	<0.00202	<0.00101	<0.00202	<15.3	<15.3	<15.3	<15.3	9.98
North TH @ 2'	05/28/13	<0.00102	<0.00204	<0.00102	<0.00204	<0.00102	<0.00204	<15.5	<15.5	<15.5	<15.5	14.9
West TH @ 2'	05/28/13	<0.00103	<0.00207	<0.00103	<0.00207	<0.00103	<0.00207	<15.7	<15.7	<15.7	<15.7	8.97
West S/W @ 14'	05/29/13	<0.00101	<0.00201	<0.00101	<0.00201	<0.00101	<0.00201	<15.7	<15.7	<15.7	<15.7	11.5
East S/W @ 14'	05/29/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.7	<15.7	<15.7	<15.7	62.7
North S/W @ 14'	05/29/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<16.0	<16.0	<16.0	<16.0	8.98
East TH-1 @ 4'	05/29/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.8	<15.8	<15.8	<15.8	104
SP-1	05/29/13	<0.000998	<0.00200	<0.000998	<0.00200	<0.000998	<0.00200	<15.2	62.6	<15.2	62.6	30.6

Appendices

Appendix A

Analytical Report 463959

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUGS Historical Trunk "D" 1RP-1539

07-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)

07-JUN-13

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

Reference: XENCO Report No(s): **463959**
SUGS Historical Trunk "D" 1RP-1539
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) 463959. 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. 463959 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 463959

Southern Union Gas Services- Monahans, Monahans, TX

SUGS Historical Trunk "D" 1RP-1539

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
RP@ 15'	S	05-22-13 09:34		463959-001
East TH-1 @ 2'	S	05-23-13 10:44		463959-002
East TH-2 @ 2'	S	05-22-13 13:00		463959-003
South S/W @ 14'	S	05-28-13 11:35		463959-004
South TH @ 2'	S	05-28-13 13:32		463959-005
North TH @ 2'	S	05-28-13 14:12		463959-006
West TH @ 2'	S	05-28-13 15:11		463959-007

CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans
Project Name: SUGS Historical Trunk "D" 1RP-1539

Project ID:
Work Order Number(s): *463959*

Report Date: *07-JUN-13*
Date Received: *05/29/2013*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 463959

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical Trunk "D" 1RP-1539

Project Id:

Contact: Camille Bryant

Project Location: Lea County, New Mexico

Date Received in Lab: Wed May-29-13 10:58 am

Report Date: 07-JUN-13

Project Manager: Kelsey Brooks

Analysis Requested	*Lab Id:*	463959-001		463959-002		463959-003		463959-004		463959-005		463959-006	
	Field Id:	RP@ 15'		East TH-1 @ 2'		East TH-2 @ 2'		South S/W @ 14'		South TH @ 2'		North TH @ 2'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-13 09:34		May-23-13 10:44		May-22-13 13:00		May-28-13 11:35		May-28-13 13:32		May-28-13 14:12	
BTEX by EPA 8021B	*Extracted:*	May-30-13 10:30		May-30-13 10:30		May-30-13 10:30		May-30-13 10:30		May-30-13 10:30		May-30-13 10:30	
	Analyzed:	May-30-13 13:01		May-30-13 13:17		May-30-13 13:33		May-30-13 13:50		May-31-13 09:01		May-30-13 14:23	
	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	0.00107	ND	0.00104	ND	0.00103	ND	0.00101	ND	0.00102
Toluene		ND	0.00212	ND	0.00214	ND	0.00208	ND	0.00206	ND	0.00202	ND	0.00204
Ethylbenzene		ND	0.00106	ND	0.00107	ND	0.00104	ND	0.00103	ND	0.00101	ND	0.00102
m,p-Xylenes		ND	0.00212	ND	0.00214	ND	0.00208	ND	0.00206	ND	0.00202	ND	0.00204
o-Xylene		ND	0.00106	ND	0.00107	ND	0.00104	ND	0.00103	ND	0.00101	ND	0.00102
Total Xylenes		ND	0.00106	ND	0.00107	ND	0.00104	ND	0.00103	ND	0.00101	ND	0.00102
Total BTEX		ND	0.00106	ND	0.00107	ND	0.00104	ND	0.00103	ND	0.00101	ND	0.00102
Inorganic Anions by EPA 300/300.1	*Extracted:*	Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00	
	Analyzed:	Jun-06-13 14:27		Jun-06-13 11:40		Jun-06-13 13:00		Jun-06-13 13:21		Jun-06-13 13:43		Jun-06-13 14:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		55.3	4.00	523	20.0	146	10.0	9.78	4.00	9.98	2.00	14.9	2.00
Percent Moisture	*Extracted:*												
	Analyzed:	May-31-13 12:00		May-31-13 12:00		May-31-13 12:00		May-31-13 12:00		May-31-13 12:00		May-31-13 12:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		5.65	1.00	6.77	1.00	4.92	1.00	3.92	1.00	1.83	1.00	2.72	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-05-13 13:00		Jun-05-13 13:00		Jun-05-13 13:00		Jun-05-13 13:00		Jun-05-13 13:00		Jun-05-13 13:00	
	Analyzed:	Jun-06-13 18:05		Jun-06-13 18:30		Jun-06-13 18:55		Jun-06-13 19:21		Jun-06-13 19:46		Jun-06-13 20:12	
	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	16.0	ND	16.1	ND	15.9	ND	15.7	ND	15.3	ND	15.5
C12-C28 Diesel Range Hydrocarbons		ND	16.0	ND	16.1	ND	15.9	ND	15.7	ND	15.3	ND	15.5
C28-C35 Oil Range Hydrocarbons		ND	16.0	ND	16.1	ND	15.9	ND	15.7	ND	15.3	ND	15.5
Total TPH		ND	16.0	ND	16.1	ND	15.9	ND	15.7	ND	15.3	ND	15.5

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 463959

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical Trunk "D" 1RP-1539

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

Date Received in Lab: Wed May-29-13 10:58 am
Report Date: 07-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	463959-007					
	Field Id:	West TH @ 2'					
	Depth:						
	Matrix:	SOIL					
	Sampled:	May-28-13 15:11					
BTEX by EPA 8021B	***Extracted:***	May-30-13 10:30					
	Analyzed:	May-30-13 14:40					
	Units/RL:	mg/kg	RL				
Benzene		ND	0.00103				
Toluene		ND	0.00207				
Ethylbenzene		ND	0.00103				
m,p-Xylenes		ND	0.00207				
o-Xylene		ND	0.00103				
Total Xylenes		ND	0.00103				
Total BTEX		ND	0.00103				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-05-13 10:00					
	Analyzed:	Jun-06-13 15:10					
	Units/RL:	mg/kg	RL				
Chloride		8.97	4.00				
Percent Moisture	***Extracted:***						
	Analyzed:	May-31-13 12:00					
	Units/RL:	%	RL				
Percent Moisture		3.95	1.00				
TPH By SW8015 Mod	***Extracted:***	Jun-05-13 13:00					
	Analyzed:	Jun-06-13 21:02					
	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: SUGS Historical Trunk "D" 1RP-1539

Work Orders : 463959, **Project ID:**

Lab Batch #: 915155 **Sample:** 463959-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 13:01

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

Lab Batch #: 915155 **Sample:** 463959-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 13:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 915155 **Sample:** 463959-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 13:33

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 915155 **Sample:** 463959-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 13:50

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 915155 **Sample:** 463959-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 14:23

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0339	0.0300	113	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 Trunk "D" 1RP-1539

Work Orders : 463959,

Project ID:

Lab Batch #: 915155 **Sample:** 463959-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 14:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 915155 **Sample:** 463959-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/31/13 09:01

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0264	0.0300	88	80-120	

Lab Batch #: 915600 **Sample:** 463959-001 / SMP **Batch:** 1 **Matrix:** Soil

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.1	100	97	70-135	
o-Terphenyl	52.3	50.2	104	70-135	

Lab Batch #: 915600 **Sample:** 463959-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 18:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

Lab Batch #: 915600 **Sample:** 463959-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 18:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.4	101	94	70-135	
o-Terphenyl	51.2	50.3	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 Trunk "D" 1RP-1539

Work Orders : 463959,

Project ID:

Lab Batch #: 915600 **Sample:** 463959-004 / SMP **Batch:** 1 **Matrix:** Soil

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

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	100	95	70-135	
o-Terphenyl	50.0	50.2	100	70-135	

Lab Batch #: 915600 **Sample:** 463959-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 19:46

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	100	90	70-135	
o-Terphenyl	46.6	50.1	93	70-135	

Lab Batch #: 915600 **Sample:** 463959-006 / SMP **Batch:** 1 **Matrix:** Soil

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.4	100	82	70-135	
o-Terphenyl	43.0	50.1	86	70-135	

Lab Batch #: 915600 **Sample:** 463959-007 / SMP **Batch:** 1 **Matrix:** Soil

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.1	101	89	70-135	
o-Terphenyl	47.6	50.3	95	70-135	

Lab Batch #: 915155 **Sample:** 638951-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/30/13 12:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	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: SUGS Historical Trunk "D" 1RP-1539

Work Orders : 463959, **Project ID:**

Lab Batch #: 915600 **Sample:** 639242-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/06/13 14:36

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	99.5	100	70-135	
o-Terphenyl	53.6	49.8	108	70-135	

Lab Batch #: 915155 **Sample:** 638951-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/30/13 11:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0329	0.0300	110	80-120	
4-Bromofluorobenzene	0.0343	0.0300	114	80-120	

Lab Batch #: 915600 **Sample:** 639242-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.3	100	98	70-135	
o-Terphenyl	60.3	50.0	121	70-135	

Lab Batch #: 915155 **Sample:** 638951-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 05/30/13 11:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 915600 **Sample:** 639242-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

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

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	63.0	50.2	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 Trunk "D" 1RP-1539

Work Orders : 463959,

Project ID:

Lab Batch #: 915600 **Sample:** 464097-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 15:29

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.8	100	70-135	
o-Terphenyl	59.2	49.9	119	70-135	

Lab Batch #: 915155 **Sample:** 463959-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 05/30/13 15:12

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0333	0.0300	111	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 915600 **Sample:** 464097-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/06/13 15:55

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.6	102	70-135	
o-Terphenyl	57.1	49.8	115	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 Trunk "D" 1RP-1539

Work Order #: 463959 **Project ID:**

Analyst: DYV **Date Prepared:** 05/30/2013 **Date Analyzed:** 05/30/2013

Lab Batch ID: 915155 **Sample:** 638951-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000992	0.0992	0.111	112	0.0990	0.0894	90	22	70-130	35	
Toluene	<0.00198	0.0992	0.112	113	0.0990	0.0968	98	15	70-130	35	
Ethylbenzene	<0.000992	0.0992	0.117	118	0.0990	0.107	108	9	71-129	35	
m,p-Xylenes	<0.00198	0.198	0.236	119	0.198	0.197	99	18	70-135	35	
o-Xylene	<0.000992	0.0992	0.117	118	0.0990	0.0959	97	20	71-133	35	

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

Lab Batch ID: 915630 **Sample:** 639280-1-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	46.4	93	50.0	46.7	93	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 Trunk "D" 1RP-1539

Work Order #: 463959 **Project ID:**

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

Lab Batch ID: 915600 **Sample:** 639242-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	1120	112	1000	1140	114	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1150	115	1000	1200	120	4	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 Trunk "D" 1RP-1539

Work Order #: 463959

Lab Batch #: 915630 **Project ID:**

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

QC- Sample ID: 463959-001 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	55.3	100	152	97	80-120	

Lab Batch #: 915630

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

QC- Sample ID: 464122-005 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	12.7	100	107	94	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 Trunk "D" 1RP-1539

Work Order # : 463959 **Project ID:**

Lab Batch ID: 915600 **QC- Sample ID:** 464097-001 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	<16.1	1070	1150	107	1070	1160	108	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.1	1070	1200	112	1070	1210	113	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 Trunk "D" 1RP-1539

Work Order #: 463959

Lab Batch #: 915115 **Project ID:**

Date Analyzed: 05/31/2013 12:00 **Date Prepared:** 05/31/2013 **Analyst:** WRU

QC- Sample ID: 463917-001 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	3.13	3.25	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

Project Name: SUGS Historical Trunk "D" 1RP-1539

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

(lab use only) ORDER #: 463959

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 8015M 418.1	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	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Q E 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	RP @ 15'			5/22/2013	9:34		1	X								Soil	X								X			X				X
02	East TH-1 @ 2'			5/23/2013	10:44		1	X								Soil	X								X			X				X
03	East TH-2 @ 2'			5/22/2013	13:00		1	X								Soil	X								X			X				X
04	South S/W @ 14'			5/28/2013	11:35		1	X								Soil	X								X			X				X
05	South TH @ 2'			5/28/2013	13:32		1	X								Soil	X								X			X				X
06	North TH @ 2'			5/28/2013	14:12		1	X								Soil	X								X			X				X
07	West TH @ 2'			5/28/2013	15:11		1	X								Soil	X								X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	5/29/13	1039	Nikki Green	5/29/13	1039
Nikki Green	5/29/13	1058			
			Received by ELOT:	5-29-13	10:58

Laboratory Comments:

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

Temperature Upon Receipt: 3.0 °C

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 05/29/2013 10:58:00 AM

Work Order #: 463959

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: 05/29/2013

Checklist reviewed by: Kelsey Brooks Date: 05/29/2013

Appendix B

Analytical Report 464243

for

Southern Union Gas Services- Monahans

Project Manager: Camille Bryant

SUGS Historical Trunk "D" 1RP-1539

10-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)

10-JUN-13

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

Reference: XENCO Report No(s): **464243**
SUGS Historical Trunk "D" 1RP-1539
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) 464243. 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. 464243 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 464243

Southern Union Gas Services- Monahans, Monahans, TX

SUGS Historical Trunk "D" 1RP-1539

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
West S/W @ 14'	S	05-29-13 09:00		464243-001
East S/W @ 14'	S	05-29-13 09:20		464243-002
North S/W @ 14'	S	05-29-13 09:40		464243-003
East TH-1 @ 4'	S	05-29-13 10:00		464243-004
SP-1	S	05-29-13 10:15		464243-005

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 464243

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: SUGS Historical Trunk "D" 1RP-1539

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

Date Received in Lab: Fri May-31-13 04:43 pm
Report Date: 10-JUN-13
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	464243-001		464243-002		464243-003		464243-004		464243-005	
	Field Id:	West S/W @ 14'		East S/W @ 14'		North S/W @ 14'		East TH-1 @ 4'		SP-1	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-29-13 09:00		May-29-13 09:20		May-29-13 09:40		May-29-13 10:00		May-29-13 10:15	
BTEX by EPA 8021B	***Extracted:***	Jun-03-13 17:30		Jun-03-13 17:30		Jun-03-13 17:30		Jun-03-13 17:30		Jun-03-13 17:30	
	Analyzed:	Jun-04-13 03:03		Jun-04-13 11:03		Jun-04-13 03:35		Jun-04-13 03:51		Jun-04-13 04:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00101	ND	0.00100	ND	0.000998	ND	0.00100	ND	0.000998
Toluene		ND	0.00201	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
Ethylbenzene		ND	0.00101	ND	0.00100	ND	0.000998	ND	0.00100	ND	0.000998
m,p-Xylenes		ND	0.00201	ND	0.00200	ND	0.00200	ND	0.00200	ND	0.00200
o-Xylene		ND	0.00101	ND	0.00100	ND	0.000998	ND	0.00100	ND	0.000998
Total Xylenes		ND	0.00101	ND	0.00100	ND	0.000998	ND	0.00100	ND	0.000998
Total BTEX		ND	0.00101	ND	0.00100	ND	0.000998	ND	0.00100	ND	0.000998
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00		Jun-05-13 10:00	
	Analyzed:	Jun-06-13 22:46		Jun-07-13 01:18		Jun-06-13 23:51		Jun-07-13 00:12		Jun-07-13 00:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		11.5	2.00	62.7	4.00	8.98	2.00	104	4.00	30.6	20.0
Percent Moisture	***Extracted:***										
	Analyzed:	Jun-05-13 14:35		Jun-05-13 14:35		Jun-05-13 14:35		Jun-05-13 14:35		Jun-05-13 14:50	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.34	1.00	4.70	1.00	6.40	1.00	4.90	1.00	1.68	1.00
TPH By SW8015 Mod	***Extracted:***	Jun-07-13 10:00		Jun-07-13 10:00		Jun-07-13 10:00		Jun-07-13 10:00		Jun-07-13 10:00	
	Analyzed:	Jun-08-13 20:05		Jun-08-13 20:31		Jun-08-13 20:55		Jun-08-13 21:20		Jun-08-13 21:45	
	Units/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	15.7	ND	1600	ND	15.8	ND	15.2
C12-C28 Diesel Range Hydrocarbons		ND	15.7	ND	15.7	ND	1600	ND	15.8	62.6	15.2
C28-C35 Oil Range Hydrocarbons		ND	15.7	ND	15.7	ND	1600	ND	15.8	ND	15.2
Total TPH		ND	15.7	ND	15.7	ND	1600	ND	15.8	62.6	15.2

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 Trunk "D" 1RP-1539

Work Orders : 464243,

Project ID:

Lab Batch #: 915344 **Sample:** 464243-001 / SMP **Batch:** 1 **Matrix:** Soil

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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0255	0.0300	85	80-120	

Lab Batch #: 915344 **Sample:** 464243-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 03:35

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 915344 **Sample:** 464243-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 03:51

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0241	0.0300	80	80-120	

Lab Batch #: 915344 **Sample:** 464243-005 / SMP **Batch:** 1 **Matrix:** Soil

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

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

Lab Batch #: 915344 **Sample:** 464243-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 11:03

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0256	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 Trunk "D" 1RP-1539

Work Orders : 464243, **Project ID:**

Lab Batch #: 915771 **Sample:** 464243-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 20:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.8	99.9	96	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 915771 **Sample:** 464243-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 20:31

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	99.7	85	70-135	
o-Terphenyl	45.3	49.9	91	70-135	

Lab Batch #: 915771 **Sample:** 464243-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 20:55

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	8640	10000	86	70-135	
o-Terphenyl	4690	5000	94	70-135	

Lab Batch #: 915771 **Sample:** 464243-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 21:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	100	93	70-135	
o-Terphenyl	49.8	50.1	99	70-135	

Lab Batch #: 915771 **Sample:** 464243-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 21:45

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	99.6	95	70-135	
o-Terphenyl	50.6	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 Trunk "D" 1RP-1539

Work Orders : 464243, **Project ID:**

Lab Batch #: 915344 **Sample:** 639111-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 22:41

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	0.0251	0.0300	84	80-120	

Lab Batch #: 915771 **Sample:** 639345-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/13 19:40

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	53.6	50.2	107	70-135	

Lab Batch #: 915344 **Sample:** 639111-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 22:08

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0330	0.0300	110	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 915771 **Sample:** 639345-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/13 18:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 915344 **Sample:** 639111-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/03/13 22:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0356	0.0300	119	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	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 Trunk "D" 1RP-1539

Work Orders : 464243, **Project ID:**

Lab Batch #: 915771 **Sample:** 639345-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/08/13 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	99.8	100	100	70-135	
o-Terphenyl	60.7	50.2	121	70-135	

Lab Batch #: 915344 **Sample:** 464243-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 04:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 915771 **Sample:** 464104-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 22:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.4	99.8	98	70-135	
o-Terphenyl	57.6	49.9	115	70-135	

Lab Batch #: 915344 **Sample:** 464243-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/04/13 04:56

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	0.0328	0.0300	109	80-120	

Lab Batch #: 915771 **Sample:** 464104-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/08/13 23:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.9	99.9	97	70-135	
o-Terphenyl	56.8	50.0	114	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 Trunk "D" 1RP-1539

Work Order #: 464243 **Project ID:**

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

Lab Batch ID: 915344 **Sample:** 639111-1-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	0.109	109	0.100	0.101	101	8	70-130	35	
Toluene	<0.00200	0.0998	0.115	115	0.100	0.101	101	13	70-130	35	
Ethylbenzene	<0.000998	0.0998	0.118	118	0.100	0.109	109	8	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.232	116	0.201	0.208	103	11	70-135	35	
o-Xylene	<0.000998	0.0998	0.112	112	0.100	0.0987	99	13	71-133	35	

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

Lab Batch ID: 915636 **Sample:** 639282-1-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	46.9	94	50.0	46.8	94	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 Trunk "D" 1RP-1539

Work Order #: 464243
Analyst: DYV
Lab Batch ID: 915771
Sample: 639345-1-BKS
Units: mg/kg

Date Prepared: 06/07/2013
Batch #: 1

Project ID:
Date Analyzed: 06/08/2013
Matrix: Solid

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	1030	103	1000	1030	103	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	1110	111	1000	1090	109	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 Trunk "D" 1RP-1539

Work Order #: 464243
Lab Batch #: 915636
Project ID:
Date Analyzed: 06/06/2013
Date Prepared: 06/05/2013
Analyst: AMB
QC- Sample ID: 464024-002 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	36.2	100	134	98	80-120	

Lab Batch #: 915636
Date Analyzed: 06/07/2013
Date Prepared: 06/05/2013
Analyst: AMB
QC- Sample ID: 464243-002 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	62.7	100	159	96	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 Trunk "D" 1RP-1539

Work Order # : 464243 **Project ID:**

Lab Batch ID: 915344 **QC- Sample ID:** 464243-002 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

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	<0.00100	0.100	0.109	109	0.0994	0.0976	98	11	70-130	35	
Toluene	<0.00200	0.100	0.107	107	0.0994	0.101	102	6	70-130	35	
Ethylbenzene	<0.00100	0.100	0.113	113	0.0994	0.110	111	3	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.210	105	0.199	0.203	102	3	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.0994	0.103	104	7	71-133	35	

Lab Batch ID: 915771 **QC- Sample ID:** 464104-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/08/2013 **Date Prepared:** 06/07/2013 **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	<15.7	1050	1080	103	1050	1050	100	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.7	1050	1150	110	1050	1120	107	3	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 Trunk "D" 1RP-1539

Work Order #: 464243

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 #: 915514

Date Analyzed: 06/05/2013 14:15 **Date Prepared:** 06/05/2013 **Analyst:** WRU

QC- Sample ID: 464118-004 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

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: SUGS Historical Trunk "D" 1RP-1539

Project #:

Project Loc: Lea County, New Mexico

PO #:

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

Final 1.000

(lab use only) ORDER #: 464243

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.	8260			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	West S/W @ 14'			5/29/2013	9:00		1	X								Soil	X								X			X				X
	East S/W @ 14'			5/29/2013	9:20		1	X								Soil	X								X			X				X
	North S/W @ 14'			5/29/2013	9:40		1	X								Soil	X								X			X				X
	East TH-1 @ 4'			5/29/2013	10:00		1	X								Soil	X								X			X				X
	SP-1			5/29/2013	10:15		1	X								Soil	X								X			X				X

Page 16 of 17

Special Instructions:

Relinquished by: Camille Bryant	Date 5/31/13	Time 11:00	Received by:	Date 5/31/13	Time 1100
Relinquished by:	Date 5/31/13	Time 1643	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date 5/31/13	Time 16:43

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 °C

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan

Date/ Time Received: 05/31/2013 04:43:00 PM

Work Order #: 464243

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	
#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: 06/03/2013

Checklist reviewed by: Kelsey Brooks Date: 06/03/2013

NOVA
safety and environmental

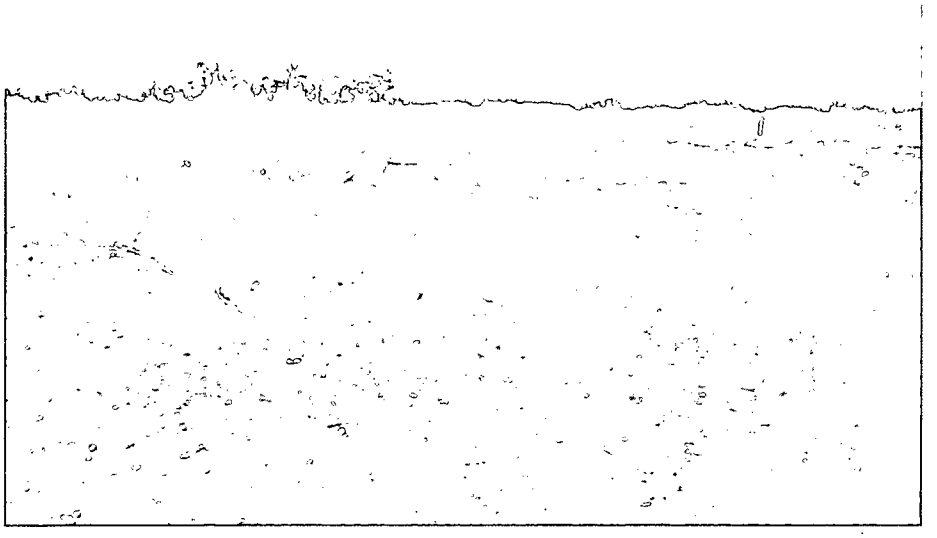
Photographic Documentation

Client: Southern Union Gas Services
Project Name: Trunk "D"

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 1

Direction:
Facing North



Description:
View of the initial release area.

Photograph No. 2

Direction:
Facing North

Description:
View of trenching activities.

Appendix C

NOVA
safety and environmental

Photographic Documentation

Client: Southern Union Gas Services
Project Name: Trunk "D"

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 3

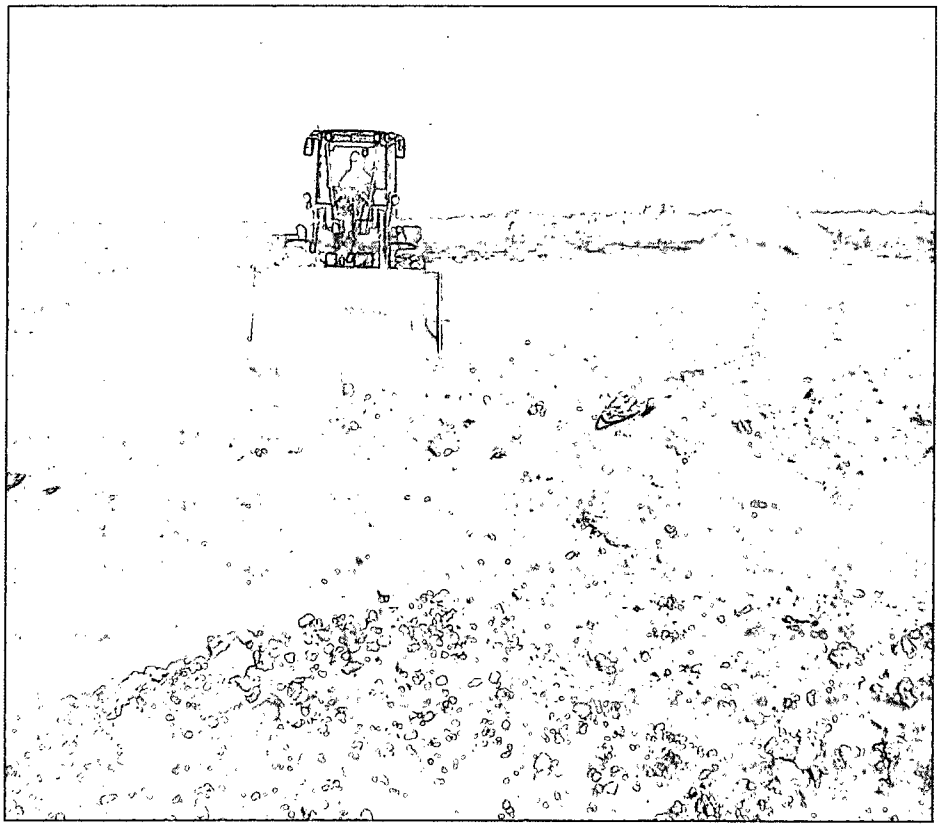
Direction:
Facing South

Description:
View of trenching activities.

Photograph No. 4

Direction:
Facing Northwest

Description:
View of backfilling activities.



NOVA
safety and environmental

Photographic Documentation

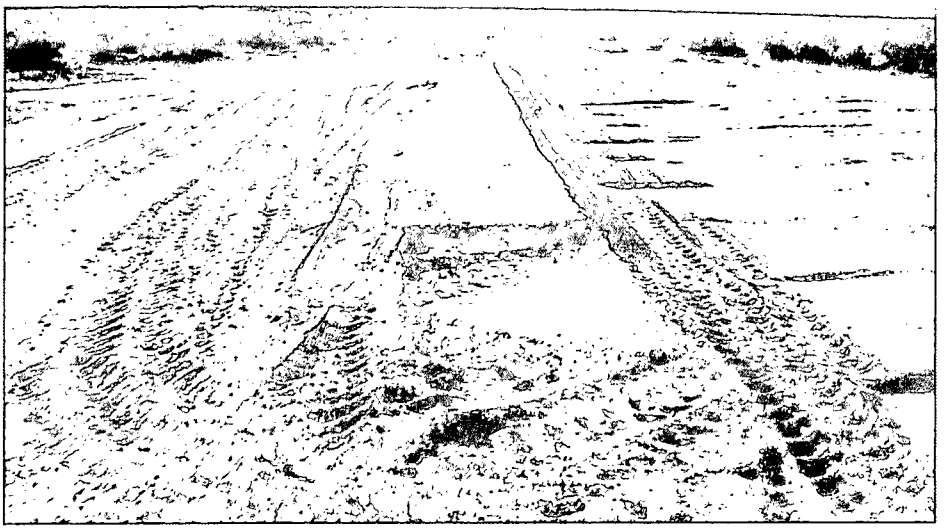
Client: Southern Union Gas Services
Project Name: Trunk "D"

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 5

Direction:
Facing North

Description:
View of restored site.



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

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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	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	13	23S	36E					Lea

Latitude N32 18.617 Longitude W103 13.444

NATURE OF RELEASE

WTR > 100'

Type of Release : Crude Oil, Produced water, and Natural Gas	Volume of Release: 20 Bbls Fluid and 29 MCF Nat. Gas	Volume Recovered 0
Source of Release : 16" Natural Gas Pipeline	Date and Hour of Occurrence not known	Date and Hour of Discovery 8/22/07 Time: 10:22 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink the NMOCD on call representative	
By Whom? Tony Savoie	Date and Hour: 8/22/07 2:49 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

AUG 2007 Received Hobbs OCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 16" Natural Gas gathering line operating at approximately 30 p.s.i. developed a leak. A repair crew arrived on-site and started excavation at 12:30 p.m. The damaged area of the 16" pipeline was temporarily repaired with a leak clamp.

Describe Area Affected and Cleanup Action Taken. Approximately 4,670 sq.ft. of pasture land was affected by the leak and temporary repair. All of the fluid released had soaked into the ground. The heavily saturated soil will be removed to prevent migration. 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: T. Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: John A. Savoie	Approved by District Supervisor: Johnson
Title: Remediation Supervisor	Approval Date: 8-31-07 Expiration Date: 11-1-07
E-mail Address: tony.savoie@sug.com	Conditions of Approval: Attached ☐
Date: 8/28/07 Phone: 505-395-2116	ENVIRONMENTAL ENGINEER

* Attach Additional Sheets If Necessary

RP#1539