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.

34

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Southern Union Gas Services	Contact Rose Slade
Address 801 South Loop 464, Monahans, Texas 79756	Telephone No. 432.940.5147 or 817.302.9716
Facility Name Monahans Field Office	Facility Type TX HP Relief Valve

Surface Owner El Paso Natural Gas	Mineral Owner	API No. 30-025-38822

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	7	26S	37E					Lea

Latitude 32 03.554 **Longitude** 103 12.053

NATURE OF RELEASE

Type of Release Natural Gas/Crude oil/Iron sulfide	Volume of Release 800 MCF Gas and 36 bbls crude oil and iron sulfide	Volume Recovered 20 bbls
Source of Release 4" x 6" Relief valve	Date and Hour of Occurrence 12/3/2006 @ 6:30 am	Date and Hour of Discovery 12/3/2006 @ 6:40 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink NMOCD on call supervisor	
By Whom? Rusty Savoie	Date and Hour 12/3/2006 @ 7:30 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

HOBBS OCD

MAR 01 2013

RECEIVED

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 4" x 6" relief valve inadvertently opened on an 18" sweet natural gas pipeline. Normal operating pressure on the line is 25 psi. A valve was closed to block off the relief valve.

Describe Area Affected and Cleanup Action Taken.* Soil samples were collected and submitted to the laboratory for benzene, BTEX, TPH and chloride analysis. Laboratory results indicated benzene, BTEX, TPH, and chloride concentrations were less than the NMOCD Regulatory Guidelines. Please reference the NOVA Safety and Environmental Investigation Summary and Site Closure Request dated February 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: Rose Slade

Printed Name: Rose Slade

Title: EH&S Specialist

E-mail Address: rose.slade@sug.com

Date: 3/1/2013 Phone: 432.940.5147

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Gerbery Lekins

Environmental Specialist

Approval Date: 3/1/13 Expiration Date: —

Conditions of Approval: —

Attached ☐

1RP-1390

* Attach Additional Sheets If Necessary

MAR 04 2013

SOIL INVESTIGATION SUMMARY

AND SITE

CLOSURE REQUEST

Southern Union Gas Services
TX HP Relief Valve Historical Release Site
Lea County, New Mexico
UNIT LTR "G" (SW ¼ /NE ¼), Section 7, Township 26 South, Range 37 East
Latitude 32° 03.554' North, Longitude 103° 12.053' West
NMOCD Reference # 1RP-1390

NOVA
safety and environmental

Prepared For:

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

HOBBS OCD

MAR 01 2013

RECEIVED

Prepared By:

NOVA Safety & Environmental
2057 Commerce
Midland, Texas 79703

February 2013

Camille J. Bryant
Project Manager

Brittan K. Byerly, P.G.
President

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 NMOCD SITE CLASSIFICATION 1

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES 2
4.0 QA/QC PROCEDURES 2
4.1 Soil Sampling 2
4.2 Decontamination of Equipment 3
4.3 Laboratory Protocol 3

5.0 SITE CLOSURE REQUEST 3

6.0 LIMITATIONS 3

7.0 DISTRUBUTION 4

FIGURES

Figure 1 – Site Location Map
Figure 2 – Site Details Schematic and Confirmation Soil Sample Locations Map

TABLES

Table 1 – Concentrations of BTEX, TPH and Chlorides in Soil

APPENDICES

Appendix A – Analytical Reports
Appendix B – Release Notification and Corrective Action (Form-C-141)

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 the TX HP Relief Valve Historical Release Site. The legal description of the release site is Unit Letter "G" (SW ¼ NE ¼), Section 7, Township 26 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by El Paso Natural Gas Services. The release site GPS coordinates are 32° 03.554' North and 103° 12.053' West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Details Schematic and Confirmation Soil Sample Locations Map. The Release Notification and Corrective Action (Form C-141) is provided as Appendix B.

On December 3, 2006, SUGS discovered a release of crude oil, iron sulfide, and natural gas had occurred when a relief valve on an eighteen (18) inch gas pipeline was inadvertently opened. SUGS submitted the Release Notification and Corrective Action (Form C-141) to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on December 7, 2006. The C-141 indicated approximately thirty-six (36) barrels of crude oil/iron sulfide and 800 MCF's of natural gas were released from the pipeline, with approximately twenty (20) barrels of fluids recovered.

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 7, Township 26 South, Range 37 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately one hundred (100) feet below ground surface (bgs). The depth to groundwater at the TX HP Relief Valve 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 TX HP Relief Valve 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 November 16, 2012, NOVA commenced soil investigation activities at the TX HP Relief Valve Historical Release Site. Based on historical documentation and stressed vegetation, ten soil samples were collected utilizing a hand auger. The three (3) auger samples located at the inferred release point were completed to a total depth of three (3) feet bgs. The remaining seven (7) auger sample locations were completed to approximately one (1) foot bgs. The depth of the auger samples was determined on review of historical data and by field observations conducted during sampling activities. Please reference Figure 2 for site details.

On November 16, 2012, ten (10) soil samples (RP Floor @ 3', NE RP Floor @ 3', SW RP Floor @ 3', FP-1 @ 1', FP-2 @ 1', FP-3 @ 1', FP-4 @ 1', FP-5 @ 1', FP-6 @ 1', and FP-7 @ 1') were collected from the auger locations 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 8012b, 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 with the exception of soil sample FP-7 @ 1', which exhibited a TPH concentration of 47.2 mg/Kg. Chloride concentrations ranged from less than the appropriate laboratory MDL for soil samples FP-4 @ 1', FP-6 @ 1', and FP-7 @ 1' to 95.3 mg/Kg for soil sample NE RP Floor @ 3'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines for all the submitted soil samples. Table 1 summarizes the Concentrations of BTEX, TPH, and Chlorides in Soil. Laboratory analytical reports are provided as Appendix A.

On December 12, 2012, 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 Permian Basin Environmental Lab, LP, of Midland, 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 TX HP Relief Valve 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.

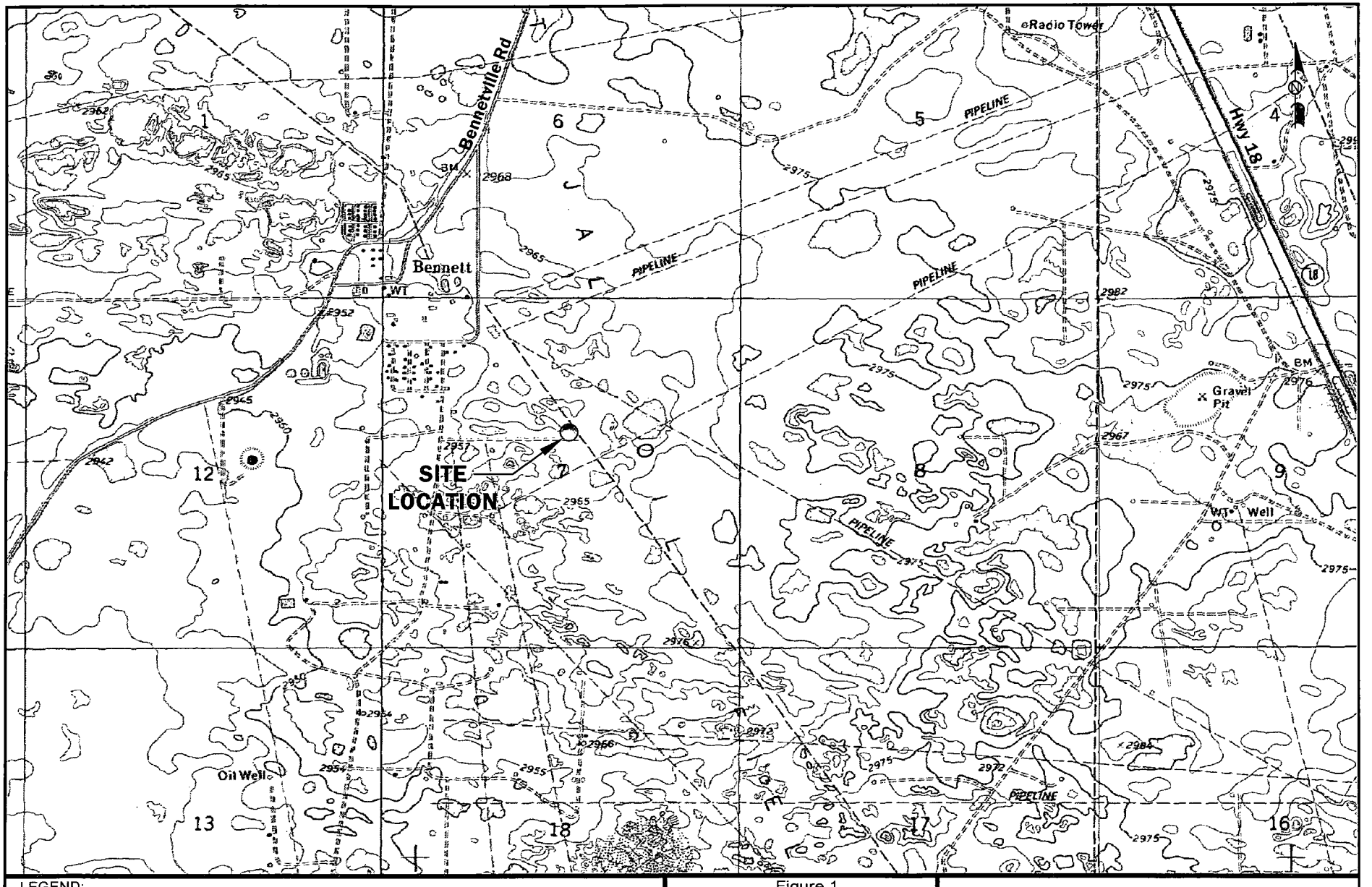
7.0 DISTRIBUTION:

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: Rose Slade
Southern Union Gas Services
801 South Loop 464
Monahans, Texas 79756

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

FIGURES



LEGEND:

2000 1000 0 1000 2000

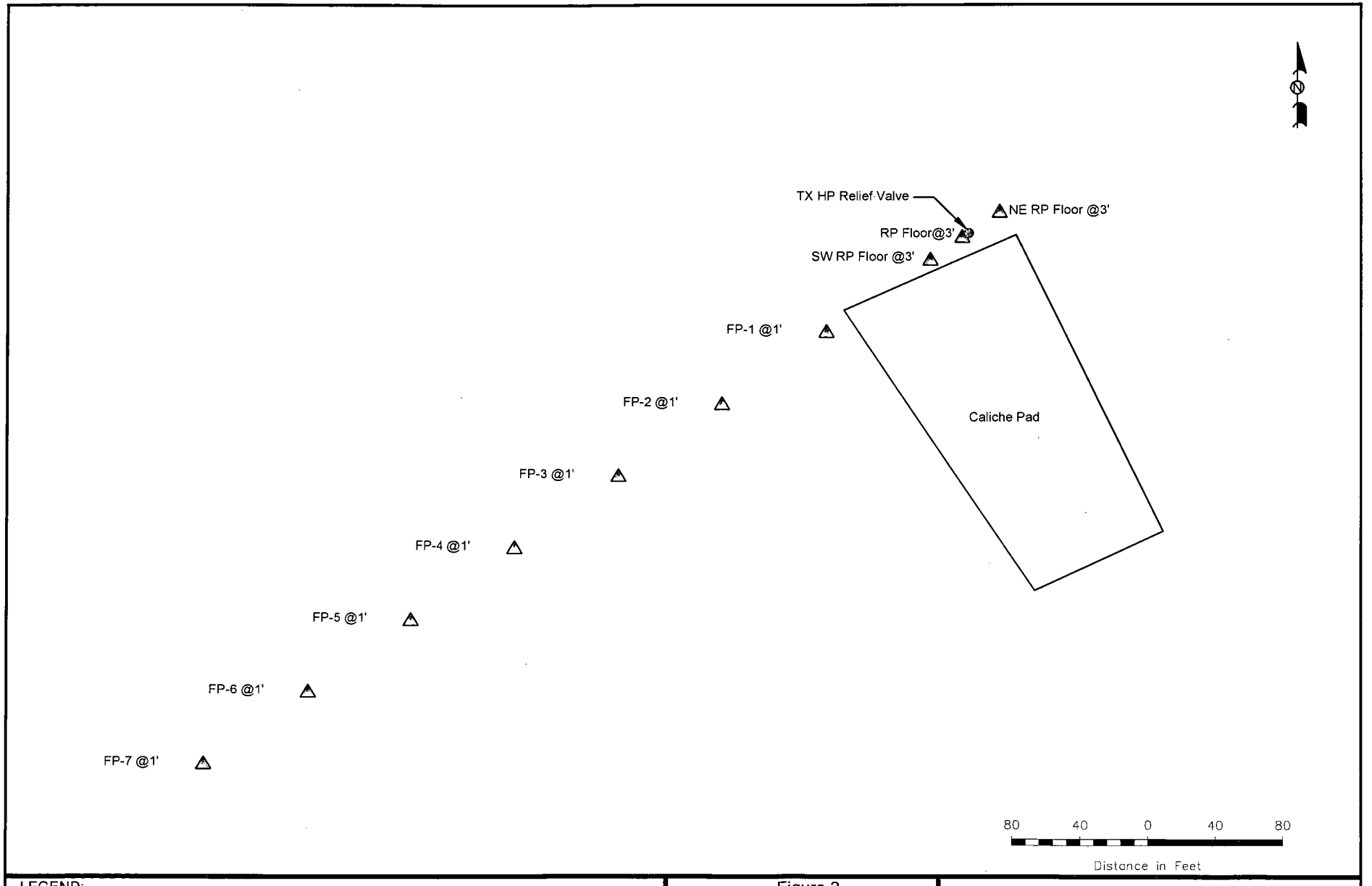
Distance in Feet

Figure 1

Site Location Map
Southern Union Gas Services
TX HP Relief Valve
Lea County, NM

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

November 21, 2012	Scale: 1" = 2000'	CAD By: CS	Checked By: CJB
Lat. N 32° 3.554' Long. W 103° 12.053'			1RP-1390



LEGEND:

Floor Soil Sample Location

Figure 2

Site Map
Southern Union Gas Services
TX HP Relief Valve
Lea County, NM

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

February 4, 2013	Scale: 1" = 80'	CAD By: CS	Checked By: CJB
Lat. N 32° 3.554' Long. W 103° 12.053'			

TABLES

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
TX HP RELIEF VALVE HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD Ref# 1RP-1390

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
RP Floor @ 3'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	11.6
NE RP Floor @ 3'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	95.3
SW RP Floor @ 3'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	18.6
FP-1 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	2.15
FP-2 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	2.73
FP-3 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	15.7
FP-4 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<28.1	<28.1	<28.1	<28.1	<1.12
FP-5 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.5	<27.5	<27.5	<27.5	1.79
FP-6 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.2	<27.2	<27.2	<27.2	<1.09
FP-7 @ 1'	11/16/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.2	47.2	<27.2	47.2	<1.09

APPENDICES

APPENDIX A:
Analytical Reports

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
10014 SCR 1213
Midland, TX 79706

PBELAB

Analytical Report

Prepared for:

Camille Bryant
Nova Safety & Environment
2057 Commerce
Midland, TX 79703

Project: SUG Historical Tx HP Relief Valve 1RP-1390
Project Number: 1RP-1390
Location: Lea County, New Mexico

Lab Order Number: 2K20001

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-12-1

Report Date: 11/27/12

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RP Floor @ 3 ft	2K20001-01	Soil	11/16/12 14:10	11-20-2012 08:00
NE RP Floor @ 3 ft	2K20001-02	Soil	11/16/12 14:20	11-20-2012 08:00
SW RP Floor @ 3 ft	2K20001-03	Soil	11/16/12 14:30	11-20-2012 08:00
FP-1 @ 1 ft	2K20001-04	Soil	11/16/12 14:45	11-20-2012 08:00
FP-2 @ 1 ft	2K20001-05	Soil	11/16/12 14:55	11-20-2012 08:00
FP-3 @ 1 ft	2K20001-06	Soil	11/16/12 15:10	11-20-2012 08:00
FP-4 @ 1 ft	2K20001-07	Soil	11/16/12 15:20	11-20-2012 08:00
FP-5 @ 1 ft	2K20001-08	Soil	11/16/12 15:30	11-20-2012 08:00
FP-6 @ 1 ft	2K20001-09	Soil	11/16/12 15:40	11-20-2012 08:00
FP-7 @ 1 ft	2K20001-10	Soil	11/16/12 15:50	11-20-2012 08:00

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

RP Floor @ 3 ft

2K20001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11.6**	1.01	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*EK22609*	*11/21/12*	*11/21/12*	*8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*EK22609*	*11/21/12*	*11/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/21/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

NE RP Floor @ 3 ft

2K20001-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**95.3**	1.01	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/21/12	8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*EK22609*	*11/21/12*	*11/21/12*	*8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*EK22609*	*11/21/12*	*11/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/21/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

SW RP Floor @ 3 ft

2K20001-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*105 %*	*75-125*		*EK22701*	*11/26/12*	*11/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*EK22701*	*11/26/12*	*11/26/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**18.6**	1.02	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-1 @ 1 ft

2K20001-04 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2.15**	1.01	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*97.5 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-2 @ 1 ft

2K20001-05 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2.73**	1.01	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*87.5 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*92.3 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-3 @ 1 ft

2K20001-06 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*98.6 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15.7**	1.01	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-4 @ 1 ft

2K20001-07 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*99.1 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.12	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	28.1	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	28.1	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*90.6 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*96.3 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-5 @ 1 ft

2K20001-08 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1.79**	1.10	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	27.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	27.5	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*96.5 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-6 @ 1 ft

2K20001-09 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22701	11/26/12	11/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*EK22701*	*11/26/12*	*11/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*EK22701*	*11/26/12*	*11/26/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.09	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C12-C28	ND	27.2	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
>C28-C35	ND	27.2	mg/kg dry	1	EK22609	11/21/12	11/22/12	8015M	
Surrogate: 1-Chlorooctane		*124 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Surrogate: o-Terphenyl		*129 %*	*70-130*		*EK22609*	*11/21/12*	*11/22/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	11/21/12	11/22/12	8015M	

Nova Safety & Environment	Project: SUG Historical Tx HP Relief Valve 1RP-1390	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1390	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-7 @ 1 ft

2K20001-10 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EK22607	11/21/12	11/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*80.8 %*	*75-125*		*EK22607*	*11/21/12*	*11/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	ND	1.09	mg/kg dry	1	EK22702	11/27/12	11/27/12	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	EK22605	11/21/12	11/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	EK22609	11/21/12	11/26/12	8015M	
>C12-C28	**47.2**	27.2	mg/kg dry	1	EK22609	11/21/12	11/26/12	8015M	
>C28-C35	ND	27.2	mg/kg dry	1	EK22609	11/21/12	11/26/12	8015M	
Surrogate: 1-Chlorooctane		*124 %*	*70-130*		*EK22609*	*11/21/12*	*11/26/12*	*8015M*	
Surrogate: o-Terphenyl		*130 %*	*70-130*		*EK22609*	*11/21/12*	*11/26/12*	*8015M*	
Total Hydrocarbon nC6-nC35	**47.2**	25.0	mg/kg dry	1	[CALC]	11/21/12	11/26/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK22607 - General Preparation (GC)										
Blank (EK22607-BLK1)				Prepared & Analyzed: 11/21/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*66.3*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*62.6*		"	*60.0*		*104*	*75-125*			
LCS (EK22607-BS1)				Prepared & Analyzed: 11/21/12						
Benzene	0.0885	0.00100	mg/kg wet	0.100		88.5	80-120			
Toluene	0.116	0.00200	"	0.100		116	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*65.8*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*68.4*		"	*60.0*		*114*	*75-125*			
LCS Dup (EK22607-BSD1)				Prepared & Analyzed: 11/21/12						
Benzene	0.0866	0.00100	mg/kg wet	0.100		86.6	80-120	2.22	20	
Toluene	0.110	0.00200	"	0.100		110	80-120	5.24	20	
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120	4.92	20	
Xylene (p/m)	0.227	0.00200	"	0.200		114	80-120	4.76	20	
Xylene (o)	0.105	0.00100	"	0.100		105	80-120	5.59	20	
Surrogate: 1,4-Difluorobenzene	*65.8*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*65.3*		"	*60.0*		*109*	*75-125*			
Matrix Spike (EK22607-MS1)	**Source: 2K20001-10**			Prepared & Analyzed: 11/21/12						
Benzene	0.0773	0.00100	mg/kg dry	0.109	ND	71.1	80-120			QM-05
Toluene	0.0962	0.00200	"	0.109	ND	88.5	80-120			
Ethylbenzene	0.0962	0.00100	"	0.109	ND	88.5	80-120			
Xylene (p/m)	0.198	0.00200	"	0.217	ND	91.1	80-120			
Xylene (o)	0.0927	0.00100	"	0.109	ND	85.2	80-120			
Surrogate: 1,4-Difluorobenzene	*66.5*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*64.8*		"	*60.0*		*108*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK22701 - General Preparation (GC)										
Blank (EK22701-BLK1)				Prepared & Analyzed: 11/26/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*63.1*		*ug/kg*	*60.0*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.3*		*"*	*60.0*		*106*	*75-125*			
LCS (EK22701-BS1)				Prepared & Analyzed: 11/26/12						
Benzene	0.0807	0.00100	mg/kg wet	0.100		80.7	80-120			
Toluene	0.106	0.00200	"	0.100		106	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.226	0.00200	"	0.200		113	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*64.0*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*68.5*		*"*	*60.0*		*114*	*75-125*			
LCS Dup (EK22701-BSD1)				Prepared & Analyzed: 11/26/12						
Benzene	0.0816	0.00100	mg/kg wet	0.100		81.6	80-120	1.15	20	
Toluene	0.105	0.00200	"	0.100		105	80-120	1.20	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120	1.19	20	
Xylene (p/m)	0.223	0.00200	"	0.200		112	80-120	1.34	20	
Xylene (o)	0.104	0.00100	"	0.100		104	80-120	1.34	20	
Surrogate: 1,4-Difluorobenzene	*64.4*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*66.6*		*"*	*60.0*		*111*	*75-125*			
Matrix Spike (EK22701-MS1)		**Source: 2K20001-03**		Prepared & Analyzed: 11/26/12						
Benzene	0.0652	0.00100	mg/kg dry	0.102	ND	63.9	80-120			QM-05
Toluene	0.0868	0.00200	"	0.102	ND	85.1	80-120			
Ethylbenzene	0.0900	0.00100	"	0.102	ND	88.2	80-120			
Xylene (p/m)	0.187	0.00200	"	0.204	ND	91.7	80-120			
Xylene (o)	0.0885	0.00100	"	0.102	ND	86.8	80-120			
Surrogate: 1,4-Difluorobenzene	*64.2*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*67.2*		*"*	*60.0*		*112*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK22605 - * DEFAULT PREP *****										
Blank (EK22605-BLK1)				Prepared: 11/21/12 Analyzed: 11/26/12						
% Moisture	ND	0.1	%							
Duplicate (EK22605-DUP1)	**Source: 2K19001-01**			Prepared: 11/21/12 Analyzed: 11/26/12						
% Moisture	3.0	0.1	%		4.0			28.6	20	R2
Batch EK22702 - * DEFAULT PREP *****										
Blank (EK22702-BLK1)				Prepared & Analyzed: 11/27/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EK22702-BS1)				Prepared & Analyzed: 11/27/12						
Chloride	11.1		mg/kg Wet	10.0		111	80-120			
LCS Dup (EK22702-BSD1)				Prepared & Analyzed: 11/27/12						
Chloride	11.1		mg/kg Wet	10.0		111	80-120	0.325	20	
Duplicate (EK22702-DUP1)	**Source: 2K20001-01**			Prepared & Analyzed: 11/27/12						
Chloride	12.0	1.01	mg/kg dry		11.6			3.51	20	
Matrix Spike (EK22702-MS1)	**Source: 2K20001-01**			Prepared & Analyzed: 11/27/12						
Chloride	105	1.01	mg/kg dry	88.4	11.6	106	80-120			
Matrix Spike (EK22702-MS2)	**Source: 2K20002-01**			Prepared & Analyzed: 11/27/12						
Chloride	406	5.68	mg/kg dry	284	99.7	108	80-120			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical Tx HP Relief Valve 1RP-1390
Project Number: 1RP-1390
Project Manager: Camille Bryant

Fax: (432) 520-7701

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK22609 - 8015M										
Blank (EK22609-BLK1)				Prepared & Analyzed: 11/21/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*198*		"	*200*		*99.2*	*70-130*			
Surrogate: o-Terphenyl	*107*		"	*100*		*107*	*70-130*			
LCS (EK22609-BS1)				Prepared & Analyzed: 11/21/12						
C6-C12	925	25.0	mg/kg wet	1000		92.5	75-125			
>C12-C28	908	25.0	"	1000		90.8	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*219*		"	*200*		*109*	*70-130*			
Surrogate: o-Terphenyl	*105*		"	*100*		*105*	*70-130*			
LCS Dup (EK22609-BSD1)				Prepared & Analyzed: 11/21/12						
C6-C12	831	25.0	mg/kg wet	1000		83.1	75-125	10.6	20	
>C12-C28	854	25.0	"	1000		85.4	75-125	6.14	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*191*		"	*200*		*95.4*	*70-130*			
Surrogate: o-Terphenyl	*92.1*		"	*100*		*92.1*	*70-130*			
Matrix Spike (EK22609-MS1)	**Source: 2K20001-10**			Prepared: 11/21/12 Analyzed: 11/22/12						
C6-C12	957	27.2	mg/kg dry	1090	ND	88.0	75-125			
>C12-C28	910	27.2	"	1090	47.2	79.4	75-125			
>C28-C35	ND	27.2	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*208*		"	*217*		*95.8*	*70-130*			
Surrogate: o-Terphenyl	*107*		"	*109*		*98.5*	*70-130*			
Matrix Spike Dup (EK22609-MSD1)	**Source: 2K20001-10**			Prepared: 11/21/12 Analyzed: 11/22/12						
C6-C12	972	27.2	mg/kg dry	1090	ND	89.4	75-125	1.55	20	
>C12-C28	942	27.2	"	1090	47.2	82.3	75-125	3.61	20	
>C28-C35	ND	27.2	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*216*		"	*217*		*99.2*	*70-130*			
Surrogate: o-Terphenyl	*103*		"	*109*		*94.5*	*70-130*			

Notes and Definitions

R2	The RPD exceeded the acceptance limit.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 11/27/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: NOVA Safety and Environmental
Company Address: 2057 Commerce
City/State/Zip: Midland, Texas 79703
Telephone No: 432.520.7720 Fax No: 432.520.7701
Sampler Signature:
e-mail: cbryant@novatraining.cc
rose.slade@sug.com

Project Name: SUG Historical Tx HP Relief Valve 1RP-1390
Project #:
Project Loc: Lea County New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 2K20001

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: TOTAL: TPH: 418.1 / 8015M 8015B	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.			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	RP Floor @ 3'			11/16/2012	14:10		1	X								Soil	X								X		X				X
-02	NE RP Floor @ 3'			11/16/2012	14:20		1	X								Soil	X								X		X				X
-03	SW RP Floor @ 3'			11/16/2012	14:30		1	X								Soil	X								X		X				X
-04	FP-1 @ 1'			11/16/2012	14:45		1	X								Soil	X								X		X				X
-05	FP-2 @ 1'			11/16/2012	14:55		1	X								Soil	X								X		X				X
-06	FP-3 @ 1'			11/16/2012	15:10		1	X								Soil	X								X		X				X
-07	FP-4 @1'			11/16/2012	15:20		1	X								Soil	X								X		X				X
-08	FP-5 @ 1'			11/16/2012	15:30		1	X								Soil	X								X		X				X
-09	FP-6 @ 1'			11/16/2012	15:40		1	X								Soil	X								X		X				X
-10	FP-7 @ 1'			11/16/2012	15:50		1	X								Soil	X								X		X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	11/20/12	08:00			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	11/20/12	0:800

Laboratory Comments:

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

Temperature Upon Receipt:
Received: 4.4 °C
Adjusted °C Factor NCF

APPENDIX B:
Release Notification and Corrective Action
(Form-C-141)

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

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

Surface Owner: El Paso Nat. Gas Co.	Mineral Owner: Federal	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	7	26S	37E					Lea

Latitude N32 03.554 Longitude W103 12.053

NATURE OF RELEASE

Type of Release : Natural Gas Crude oil and Iron sulfide	Volume of Release: 800 mcf Gas and 36 bbls crude oil and iron sulfide	Volume Recovered 20 bbls
Source of Release : 4"X 6" Relief Valve.	Date and Hour of Occurrence 12/3/06 6:30 a.m.	Date and Hour of Discovery 12/3/06 6:40 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink NMOCD on call supervisor	
By Whom? Rusty Savoie	Date and Hour: 12/3/06 7:30 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 4" X 6" relief valve inadvertently opened on an 18" Sweet Natural Gas Pipeline. Normal operating pressure on this line is 25 PSI. A valve was closed to block of the relief valve.

Describe Area Affected and Cleanup Action Taken. The affected area consists of approximately 10,000 sq.ft. of caliche road and pad and approximately 78,470 sq. ft. of pasture land. All of the free liquid was removed with a vacuum truck. The affected soil will be removed and the area will be remediated in accordance to the NMOCD guidelines for the remediation of 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:	OIL CONSERVATION DIVISION	
Printed Name: John A. Savoie	Approved by District Supervisor:	
Title: EH&S Comp. Coord.	Approval Date:	Expiration Date:
E-mail Address: john.savoie@sug.com	Conditions of Approval:	Attached ☐
Date: 12/7/06 Phone: 505-395-2116		

* Attach Additional Sheets If Necessary