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

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Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised August 8, 2011 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Form C-141

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			Rele	ase Notific	atio	n and Co	orrective A	ction				
						OPERA	,			al Report	\bowtie	Final Report
Name of Co	mpany: S	outhern Unic	on Gas Se	rvices		Contact: Ro				F		
		464, Monah	ans, Texa	s 79756			No.: 817.302.97			47		
Facility Nar	ne Califor	nia B (4 <u>-10)</u>				Facility Typ	e: Natural Gas I	Pipelin	e			
Surface Ow	ner: Dinw	iddie Cattle (Company	Mineral C	wner				API No	. 30-025-28	3822	
				LOCA		N OF REI	FASE					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/V	West Line	County		
М	5	26S	36Ĕ							Lea		
		I								<u> </u>		
			Latitud	e _32 03.897'		Longitude_	103 17.359'		<u> </u>			
					URE	OF REL						
		Oil, Produced		Natural Gas			Release: 154 bar			tecovered: 1 Hour of Dis		rels
Source of Re	lease: 16-in	ich steel pipeli	ine				lour of Occurrenc 011, approx. 0100			2011, approx		v 0200 hrs
Was Immedia	ate Notice (If YES, To	Whom? Geoffrey					
	<u>_</u>		Yes 🗌	No 🗌 Not Re	equired							
By Whom? C							lour April 14, 201					
Was a Watercourse Reached?						II YES, VC	olume Impacting t	ne wat	ercourse.	HO	BBS C	
If a Watercou	urse was Im	nacted Descr	ibe Fully *			·						
		p utte u, 2 .								MAY	10.	/il 1 -2
											. • (.013
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							pipeline pigging a					
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							ease was attributed					
released, is to	be determ	ined.	<u> </u>									_
							nples were collects indicated benzer					
							ed to original cond					
Environment	al Soil Inve	estigation Sum	mary and	Site Closure Req	uest dat	ed May 2013,	for further details	s				
I hereby certi regulations al	ty that the	information gi	iven above	is true and comp	elease r	the best of my	knowledge and u nd perform correc	indersta	nd that purs	suant to NM	OCD ri mav er	ules and
							arked as "Final R					
							on that pose a thr					
		ddition, NMC ws and/or regu		tance of a C-141	report o	does not reliev	e the operator of	respons	ibility for c	ompliance w	ith any	v other
rederal, state,		ws and/or logi		•			OIL CON	SERV	ATION	DIVISIO)N	
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Signature:	x p	- A CE	<u>/ ~ ~ ~</u>					en y	Carly a	- •		0
Printed Name	: Rose L. S	Slade				Approved by	Environmental S	periodes.	ironment	al Specia	181	¥
Title: Enviro	nmental Sp	ecialist				Approval Dat	e: 5/13/13		Expiration	Date: 🗕		
F-mail Addre	ss: rose ala	de@energytra	insfer com			Conditions of						
D-man Audit		ucuencigytia					парриотан.	~		Attached 1RP-269		
Date:5/13/20				Phone: 432.940.	5147				۰ 			-2698
Attach Addi	tional She	ets If Necess	ary									

.



SOIL INVESTIGATION SUMMARY

AND SITE

CLOSURE REQUEST

Southern Union Gas Services California "B" (4-10) Historical Release Site Lea County, New Mexico UNIT LTR "M" (SW ¼ /SW ¼), Section 5, Township 26 South, Range 36 East Latitude 32° 03.897' North, Longitude 103° 17.359' West NMOCD Reference # 1RP-2698



Prepared For:

Southern Union Gas Services 801 South Loop 464 Monahans, Texas 79756 HOE3S OCD

MAY 1 0 2013

RECEIVED

Prepared By:

NOVA Safety & Environmental 2057 Commerce Midland, Texas 79703

Camille J. Bryant Project Manager May 2013

Brittan K. Byerly, P.G. President

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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 California "B" (4-10) Historical Release Site. The legal description of the release site is Unit Letter "M" (SW ¼ SW ¼), Section 5, Township 26 South, Range 36 East, in Lea County, New Mexico. The property affected by the release is owned by the Dinwiddie Cattle Company. The release site GPS coordinates are 32° 03.897' North and 103° 17.359' 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 April 14, 2011, SUGS discovered a release of crude oil, produced water and natural gas had occurred from a sixteen (16) inch steel pipeline during pigging activities. The cause of the release was attributed to external corrosion of the steel pipeline. SUGS submitted the Release Notification and Corrective Action (Form C-141) to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on April 15, 2011. The C-141 indicated approximately one hundred fifty-four (154) barrels of fluids were released from the pipeline, with approximately one hundred forty-seven (147) barrels of fluids recovered. 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 5, Township 26 South, Range 36 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately two hundred twenty-five (225) feet below ground surface (bgs). The depth to groundwater at the California "B" (4-10) 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 California "B" (4-10) 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)
- 1

• 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 February 26, 2013, NOVA commenced soil investigation activities at the California "B" (4-10) Historical Release Site. Based on historical documentation and stressed vegetation, six (6) trenches were excavated in the caliche road. The trenches were completed to a total depth of approximately twelve (12) feet bgs, with the exception of trench Road 2, which was completed to a total depth of approximately fourteen (14) feet bgs. Due to the trenches being located in a highly travelled road, soil samples were collected and the trenches were backfilled. In addition, a trench was excavated on the south and north sides of the caliche road. The north trench was completed to a total depth of approximately twelve (12) feet bgs, while the south trench was determined by review of historical data and by field observations conducted during excavation activities. The six (6) trenches installed in the caliche road were installed from west to east approximately fifty (50) linear feet apart. Please reference Figure 2 for site details.

On February 27, 2013, four (4) trenches (Road-1, Road-2, Road-3, and Release Point Road) were excavated in the road. During excavation activities of the first trench, four (4) soil samples (Road-1 Surface, Road-1 @ 6', Road-1 @ 12', and Road-1 West S/W @ 11'), were collected and submitted to the laboratory for analysis. On completion of soil sampling activities the trench was backfilled. The soil samples were 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. Chloride concentrations ranged from 5.46 mg/Kg for soil sample Road-1 Surface to 421 mg/Kg for soil sample Road-1 @ 6'. A review of analytical results indicated benzene, BTEX, TPH, and Chlorides in Soil. Laboratory analytical reports are provided as Appendix A

During excavation activities of the second trench, three (3) soil samples (Road-2 Surface, Road-2 @ 6', and Road-2 @ 14') were collected from the trench and submitted to the laboratory for analysis. On completion of soil sampling activities the trench was backfilled. 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 10.9 mg/Kg for soil sample Road-2 Surface to 499 mg/Kg for soil sample Road-2 @ 6'. 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.

During excavation activities of the third trench, seven (7) soil samples (Road-3 Surface, Road-3 @ 2', Road-3 @ 4', Road-3 @ 6', Road-3 @ 8', Road-3 @ 10', and Road-3 @ 12') were collected from the trench. On completion of soil sampling activities the trench was backfilled.

2

The soil samples were submitted to the laboratory for benzene, BTEX and TPH analysis. In addition, soil samples Road-3 Surface, Road-3 (a) 8', and Road-3 (a) 12' were analyzed for chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil sample Road-3 (a) 10' to 0.11244 mg/Kg for soil sample Road-3 (a) 4'. TPH concentrations ranged from less than the appropriate laboratory MDL for soil sample Road-3 (a) 10' to 0.11244 mg/Kg for soil sample Road-3 (a) 4'. TPH concentrations ranged from less than the appropriate laboratory MDL for soil sample Road-3 (a) 10', and Road-3 (a) 12' to 87.8 mg/Kg for soil sample Road-3 (a) 4'. Analytical results indicated chloride concentrations ranged from 43.8 mg/Kg for soil sample Road-3 Surface to 264 mg/Kg for soil sample Road-3 (a) 8'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines.

During excavation activities of the fourth trench, seven (7) soil samples (Release Point Road Surface, Release Point Road @ 2', Release Point Road @ 4', Release Point Road @ 6', Release Point Road @ 8', Release Point Road @ 10', and Release Point Road @ 12') were collected from the trench. On completion soil sampling activities the trench was backfilled. The soil samples were submitted to the laboratory for benzene, BTEX, and TPH analysis. In addition, soil samples Release Point Road Surface, Release Point Road @ 8', and Release Point Road @ 12' were analyzed for chloride concentrations. Laboratory analytical results indicated benzene and TPH concentrations were less than the appropriate laboratory MDL for all submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples Release Point Road Surface, Release Point Road @ 2', and Release Point Road @ 4' to 0.00869 mg/Kg for soil sample Release Point Road @ 8'. Analytical results indicated chloride concentrations ranged from Si sample Release Point Road @ 8'. Analytical results indicated to 423 mg/Kg for soil sample Release Point Road @ 8'. A review of analytical results indicated benzene to 423 mg/Kg for soil sample Release Point Road @ 8'. A review of analytical results indicated to 423 mg/Kg for soil sample Release Point Road @ 8'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines (Table 1).

On February 28, 2013, three (3) trenches (Road-4, Road-5, and North) were excavated at the site. The first trench was excavated in the road. Seven (7) soil samples (Road-4 Surface, Road-4 @ 2', Road-4 @ 4', Road-4 @ 6', Road-4 @ 8', Road-4 @ 10', and Road-4 @ 12') were collected from the trench. On completion of soil sampling activities the trench was backfilled. The soil samples were submitted to the laboratory for benzene, BTEX, and TPH analysis. In addition, soil samples Road-4 Surface, Road-4 @ 6', and Road-4 @ 12' were analyzed for chloride concentrations. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples Road-4 Surface and Road-4 @ 2' to 0.0534 mg/Kg for soil sample Road-4 @ 6'. BTEX concentrations ranged from 0.0435 mg/Kg for soil sample Road-4 @ 2' to 1.1854 mg/Kg for soil sample Road-4 @ 6'. TPH concentrations ranged from less than the appropriate laboratory MDL for soil samples Road-4 Surface and Road-4 @ 2'to 5,220 mg/Kg for soil sample Road-4 @ 6'. Analytical results indicated chloride concentrations ranged from 16.8 mg/Kg for soil sample Road-4 Surface to 313 mg/Kg for soil sample Road-4 @ 12'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines for all submitted soil samples with the exception of soil samples Road-4 @ 6' and Road-4 @ 12. Soil sample Road-4 (a) 6' exhibited a TPH concentration of 5,220 mg/Kg, which is slightly above the NMOCD regulatory guideline. The soil samples collected immediately above and beneath soil sample Road-4 @ 6', at four and eight feet, exhibited TPH concentrations less than NMOCD regulatory guidelines. Soil sample Road-4 @ 12' exhibited a chloride concentration above 250 mg/Kg but

less than 1,000 mg/Kg. Due to the soil samples being located in a highly travelled road and the limited area of impact, the NMOCD granted verbal approval to leave the concentrations in-situ.

The second trench was excavated on the east end of the road. Four (4) soil samples (Road-5 Surface, Road-5 @ 6', Road-5 @ 12', and Road-5 East S/W @ 11') were collected from the trench and submitted to the laboratory for analysis. On completion of soil sampling activities the trench was backfilled. 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 32.1 mg/Kg for soil sample Road-5 @ 12' to 359 mg/Kg for soil sample Road-5 Surface. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines (Table 1).

The third trench was excavated on the north side of the road. Three (3) soil samples (North-1 Surface, North-1 @ 6', and North S-W @ 5') were collected from the trench and submitted to the laboratory for analysis. On completion of soil sampling activities the trench was backfilled. 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 2.41 mg/Kg for soil sample North-1 Surface to 18.6 mg/Kg for soil sample North-1 @ 6'. A review of analytical results indicated benzene, BTEX, TPH, and chloride concentrations were less than NMOCD regulatory guidelines.

On March 1, 2013, the final trench was excavated on the south side of the road at the inferred release point. Four (4) soil samples (Release Point Surface, Release Point @ 8', Release Point @ 12', and Release Point S-W @ 11') were collected from the trench and submitted to the laboratory for analysis. On completion of soil sampling activities the trench was backfilled. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples Release Point Surface and Release Point @ 12' to 0.00319 mg/Kg for soil sample Release Point S-W @ 11'. BTEX concentrations ranged from 0.02446 mg/Kg for soil sample Release Point Surface to 0.21609 mg/Kg for soil sample Release Point Surface to 0.21609 mg/Kg for soil sample Release Point S-W @ 11'. TPH concentrations ranged from less than the appropriate laboratory MDL for soil sample Release Point @ 12', and Release Point S-W @ 11' to 29.7 mg/Kg for soil sample Release Point @ 8'. Analytical results indicated chloride concentrations ranged from 16.1 mg/Kg for soil sample Release Point Surface to 290 mg/Kg for soil sample Release Point @ 8'. 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 March 27, 2013, SUGS and NOVA representatives met with a NMOCD Hobbs District Office representative to present the results of the soil investigation, and request closure approval for the site. The NMOCD Hobbs District Office representative granted verbal approval to close the site.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to 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-ofcustody (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 California "B" (4-10) 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.

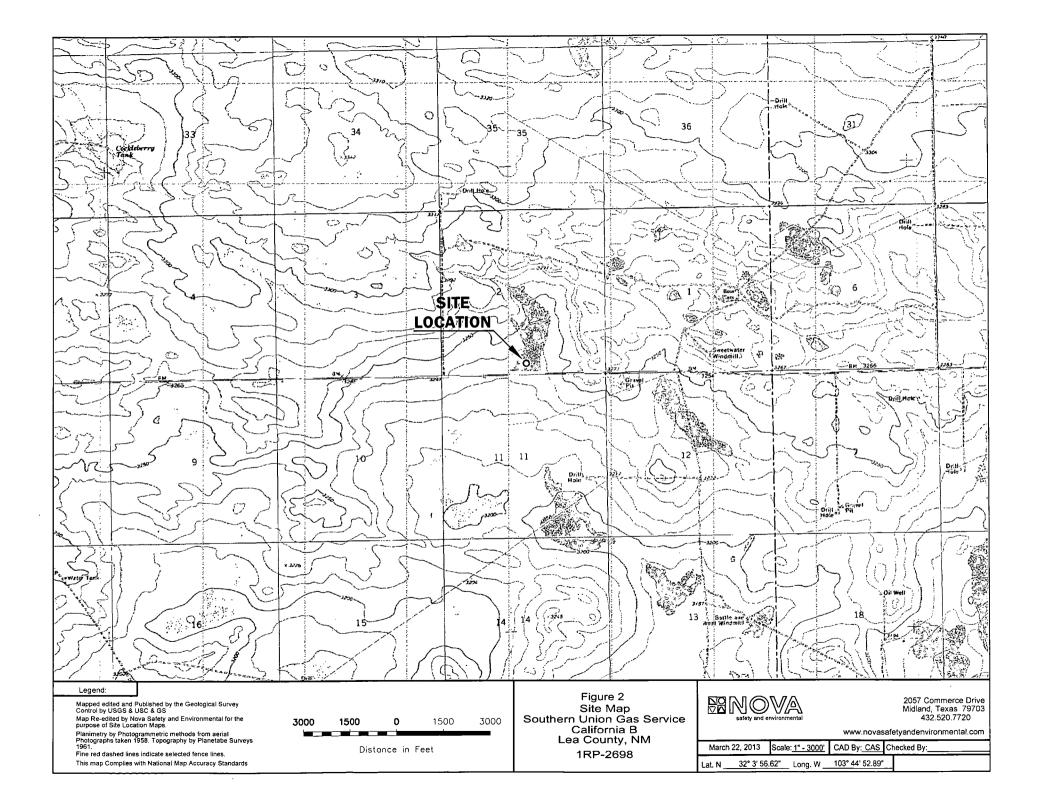
NOVA Safety and Environmental has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. NOVA Safety and Environmental has not conducted an independent examination of the facts contained in referenced materials and statements. We have 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.

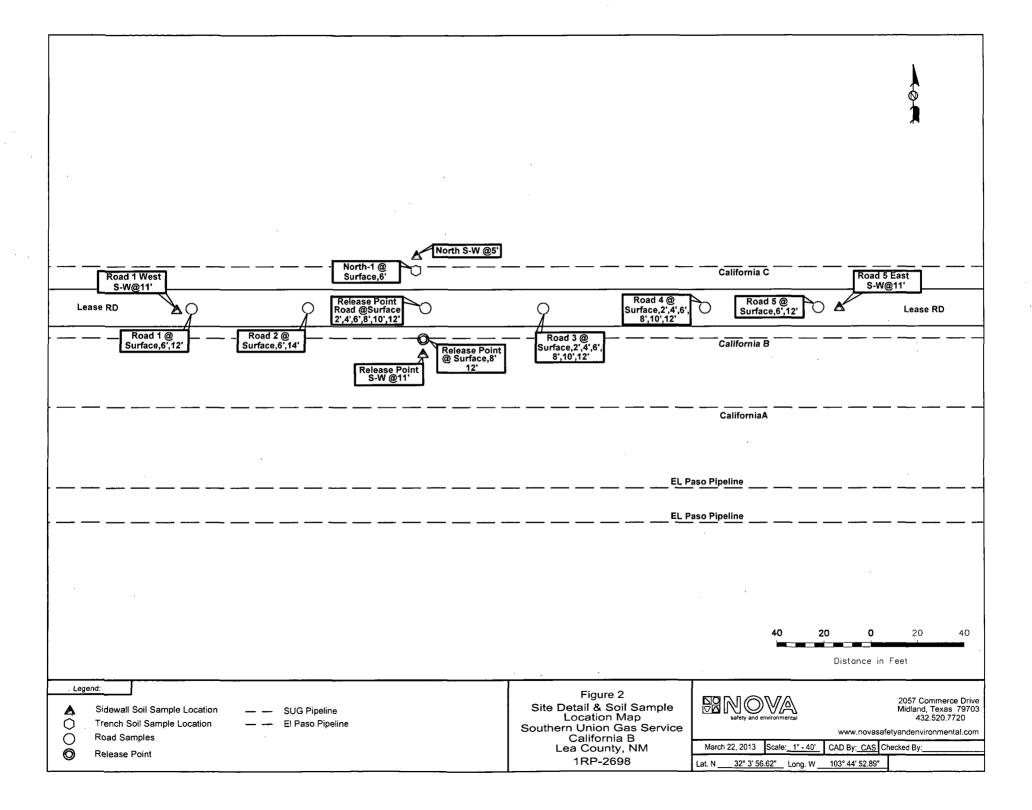
This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of NOVA Safety and Environmental and/or Southern Union Gas.

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





TABLES

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

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SOUTHERN UNION GAS SERVICES CALIFORNIA "B" (4-10) HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD # 1RP-2698

All concentrations are reported in mg/Kg

					SW 846-8021b				METHOD: S	SW 8015M		E 300.1
SAMPLE LOCATION	SAMPLE			ETHYL-		0 -	TOTAL	ТРН	TPH	ТРН	TOTAL	
SAMI LE LOCATION	DATE	BENZENE	TOLUENE		m, p - XYLENES		BTEX	GRO	DRO	ORO	TPH	CHLORIDE
				DEINZEINE	ATLENES		DILA	$C_{6}-C_{12}$	$C_{12}-C_{28}$	C28-C35	$C_{6}-C_{35}$	
Road-1 Surface	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.3	<25.3	<25.3	<25.3	5.46
Road-1 @ 6'	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<26.0	<26.0	<26.0	<26.0	421
Road-1 @ 12'	02/27/13	<0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	153
Road-1 West S/W @ 11'	02/27/13	< 0.00100	<0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.5	<25.5	<25.5	<25.5	35.7
Road-2 Surface	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<27.2	<27.2	<27.2	<27.2	10.9
Road-2 @ 6'	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<26.3	<26.3	<26.3	<26.3	499
Road-2 @ 14'	02/27/13	< 0.00100	< 0.00200	<0.00100	< 0.00200	< 0.00100	< 0.00200	<25.3	<25.3	<25.3	<25.3	111
Road-3 Surface	02/27/13	< 0.00100	< 0.00200	< 0.00100	0.0140	< 0.00100	0.0140	<25.8	<25.8	<25.8	<25.8	43.8
Road-3 @ 2'	02/27/13	< 0.00100	< 0.00200	< 0.00100	0.0336	< 0.00100	0.0336	46.0	29.6	<25.3	75.6	-
Road-3 @ 4'	02/27/13	<0.00100	< 0.00200	< 0.00100	0.111	0.00144	0.11244	32.6	55.2	<26.9	87.8	-
Road-3 @ 6'	02/27/13	<0.00100	< 0.00200	< 0.00100	0.0207	< 0.00100	0.0207	<26.0	32.9	<26.0	32.9	-
Road-3 @ 8'	02/27/13	< 0.00100	< 0.00200	0.00264	0.00648	< 0.00100	0.00912	<25.8	<25.8	<25.8	<25.8	264
Road-3 @ 10'	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.5	<25.5	<25.5	<25.5	•
Road-3 @ 12'	02/27/13	< 0.00100	< 0.00200	0.00216	0.00622	< 0.00100	0.00838	<25.3	<25.3	<25.3	<25.3	140
Release Point Road Surface	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.8	<25.8	<25.8	<25.8	37.1
Release Point Road @ 2'	02/27/13	<0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.3	<25.3	<25.3	<25.3	-
Release Point Road @ 4'	02/27/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<26.6	<26.6	<26.6	<26.6	-
Release Point Road @ 6'	02/27/13	< 0.00100	< 0.00200	<u>≤0.00100</u>	0.00228	< 0.00100	0.00228	<26.0	<26.0	<26.0	<26.0	-
Release Point Road @ 8'	02/27/13	< 0.00100	< 0.00200	0.00298	0.00571	< 0.00100	0.00869	<26.0	<26.0	<26.0	<26.0	423
Release Point Road @ 10'	02/27/13	<0.00100	< 0.00200	0.00191	0.00372	< 0.00100	0.00563	<25.5	<25.5	<25.5	<25.5	-
Release Point Road @ 12'	02/27/13	<0.00100	< 0.00200	< 0.00100	0.00315	< 0.00100	0.00315	<25.5	<25.5	<25.5	<25.5	191
	•											
Road-4 Surface	02/28/13	< 0.00100	< 0.00200	0.00203	0.0319	0.0227	0.05663	<25.8	<25.8	<25.8	<25.8	16.8
Road-4 @ 2'	02/28/13	< 0.00100	< 0.00200	< 0.00100	0.0435	< 0.00100	0.0435	<25.8	<25.8	<25.8	<25.8	-
Road-4 @ 4'	02/28/13	0.00253	< 0.00200	< 0.00100	0.207	0.0320	0.24153	62.5	37.6	<26.9	100	-
Road-4 @ 6'	02/28/13	0.0534	0.345	0.107	0.520	0.160	1.1854	4,640	549	27.9	5,220	89
Road-4 @ 8'	02/28/13	0.0178	0.0614	< 0.00100	0.275	0.0429	0.3971	532	83.4	<25.5	616	-
Road-4 @ 10'	02/28/13	0.0103	0.0222	< 0.00100	0.146	< 0.00100	0.1785	91.6	<25.5	<25.5	91.6	-
Road-4 @ 12'	02/28/13	0.0127	< 0.00200	0.0523	0.101	<0.00100	0.166	45.7	<26.3	<26.3	45.7	313
Road-5 Surface	02/28/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<27.8	<27.8	<27.8	<27.8	359
Road-5 @ 6'	02/28/13	<0.00100	< 0.00200	< 0.00100	< 0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	95.9
Road-5 @ 12'	02/28/13	<0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.8	<25.8	<25.8	<25.8	32.1
Road-5 East S/W @ 11'	02/28/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.5	<25.5	<25.5	<25.5	32.8
North-1 Surface	02/28/13	<0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<25.8	<25.8	<25.8	<25.8	2.41

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES CALIFORNIA "B" (4-10) HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD # 1RP-2698

All concentrations are reported in mg/Kg

				METHODS:	SW 846-8021b				METHOD:	SW 8015M		E 300.1
SAMPLE LOCATION	SAMPLE DATE	BENZENE	TOLUENE	ETHYL- BENZENE	m, p - XYLENES	0 - 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
North-1 @ 6'	02/28/13	< 0.00100	< 0.00200	< 0.00100	< 0.00200	< 0.00100	< 0.00200	<26.9	<26.9	<26.9	<26.9	18.6
North S-W @ 5'	02/28/13	<0.00100	<0.00200	<0.00100	<0.00200	< 0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	3.74
Release Point Surface	03/01/13	<0.00100	< 0.00200	0.00462	0.0129	0.00694	0.02446	<25.3	<25.3	<25.3	<25.3	16.1
Release Point @ 8'	03/01/13	0.00107	< 0.00200	0.00569	0.0327	0.00116	0.04062	<25.8	29.7	<25.8	29.7	290
Release Point @ 12'	03/01/13	< 0.00100	< 0.00200	0.00542	0.0197	< 0.00100	0.02512	<25.5	<25.5	<25.5	<25.5	70.8
Release Point S-W @ 11'	03/01/13	0.00319	0.0158	0.0248	0.152	0.0203	0.21609	<26.3	<26.3	<26.3	<26.3	193

APPENDICES

APPENDIX A: Analytical Reports

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



Analytical Report

Prepared for:

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

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Location: Lea County, New Mexico

Lab Order Number: 3C03004



NELAP/TCEQ # T104704156-12-1

Report Date: 03/07/13

Nova Safety & Environment	Project: SUG Historical Cal "B" Line	IRP-2698 Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-2698	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Road-1 Surface	3C03004-01	Soil	02/27/13 15:30	03-01-2013 15:46
Road-1 @ 6'	3C03004-02	Soil	02/27/13 15:40	03-01-2013 15:46
Road-1 @ 12'	3C03004-03	Soil	02/27/13 15:50	03-01-2013 15:46
Road-1 West S/W @ 11'	3C03004-04	Soil	02/27/13 16:00	03-01-2013 15:46
Road-2 Surface	3C03004-05	Soil	02/27/13 16:10	03-01-2013 15:46
Road-2 @ 6'	3C03004-06	Soil	02/27/13 16:20	03-01-2013 15:46
Road-2 @ 14'	3C03004-07	Soil	02/27/13 16:30	03-01-2013 15:46
Release Point Road Surface	3C03004-08	Soil	02/27/13 16:40	03-01-2013 15:46
Release Point Road @ 2'	3C03004-09	Soil	02/27/13 16:45	03-01-2013 15:46
Release Point Road @ 4'	3C03004-10	Soil	02/27/13 16:50	03-01-2013 15:46
Release Point Road @ 6'	3C03004-11	Soil	02/27/13 17:00	03-01-2013 15:46
Release Point Road @ 8'	3C03004-12	Soil	02/27/13 17:05	03-01-2013 15:46
Release Point Road @ 10	3C03004-13	Soil	02/27/13 17:10	03-01-2013 15:46
Release Point Road @ 12'	3C03004-14	Soil	02/27/13 17:15	03-01-2013 15:46
Road-3 Surface	3C03004-15	Soil	02/27/13 17:20	03-01-2013 15:46
Road-3 @ 2'	3C03004-16	Soil	02/27/13 17:25	03-01-2013 15:46
Road-3 @ 4'	3C03004-17	Soil	02/27/13 17:30	03-01-2013 15:46
Road-3 @ 6'	3C03004-18	Soil	02/27/13 17:35	03-01-2013 15:46
Road-3 @ 8'	3C03004-19	Soil	02/27/13 17:40	03-01-2013 15:46
Road-3 @ 10'	3C03004-20	Soil	02/27/13 17:45	03-01-2013 15:46
Road-3 @ 12'	3C03004-21	Soil	02/27/13 17:50	03-01-2013 15:46
Road-4 Surface	3C03004-22	Soil	02/28/13 09:00	03-01-2013 15:46
Road-4 @ 2'	3C03004-23	Soil	02/28/13 09:05	03-01-2013 15:46
Road-4 @ 4'	3C03004-24	Soil	02/28/13 09:10	03-01-2013 15:46
Road-4 @ 6'	3C03004-25	Soil	02/28/13 09:15	03-01-2013 15:46
Road-4 @ 8'	3C03004-26	Soil	02/28/13 09:20	03-01-2013 15:46
Road-4 @ 10'	3C03004-27	Soil	02/28/13 09:25	03-01-2013 15:46
Road-4 @ 12'	3C03004-28	Soil	02/28/13 09:30	03-01-2013 15:46

Road-1 Surface 3C03004-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	rmian Basi	n Environn	nental Lal	b				
Organics by GC		_							
Benzene	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	I	EC30502	03/04/13	03/04/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B	
Xylene (p/m)	ND	. 0.00200	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30502	03/04/13	03/04/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		72.4 %	75-1	25	EC30502	03/04/13	03/04/13	EPA 8021B	S-GC
General Chemistry Parameters by El	PA / Standard Method	<u>s</u>						<u> </u>	
Chloride	5.46	1.01	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	1.0	0.1	%	1	EC30501	03/04/13	03/05/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 80	15M							<u> </u>
C6-C12	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		67.7 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	S-GC
Surrogate: o-Terphenyl		112 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Total Hydrocarbon nC6-nC35	ND	25.3	mg/kg dry	. 1	[CALC]	03/05/13	03/05/13	8015M	

Permian Basin Environmental Lab

Nova Safety & Environment 2057 Commerce Midland TX, 79703	Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant								Fax: (432) 520-7701	
			ad-1 @ 6' 004-02 (Soi	I)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Pe	ermian Basi	n Environn	ental La	b					
Organics by GC		x		·		_				
Benzene	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene	, ,	117 %	75-1	25	EC30502	03/04/13	03/04/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		68.2 %	75-1	25	EC30502	03/04/13	03/04/13	EPA 8021B	S-GC	
General Chemistry Parameters by El	PA / Standard Methor	ls								
Chloride	421	1.04	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0		
% Moisture	4.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 80)15M								
C6-C12	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C12-C28	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C28-C35	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
Surrogate: 1-Chlorooctane		81.6%	70-1.	30	EC30603	03/05/13	03/05/13	8015M		
Surrogate: o-Terphenyl		108 %	70-1.	30	EC30603	03/05/13	03/05/13	8015M		
Total Hydrocarbon nC6-nC35	ND	26.0	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M		

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Nova Safety & Environment 2057 Commerce Midland TX, 79703	7 Commerce Project Number: 1RP-2698										
			ad-1 @ 12' 004-03 (Soil	n							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	Pe	rmian Basi	n Environm	ental La	b						
Organics by GC							···				
Benzene	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B			
Toluene	ND	0.00200	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B			
Ethylbenzene	ND	0.00100.0	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B			
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B			
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30502	03/04/13	03/04/13	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		117 %	75-12	25	EC30502	03/04/13	03/04/13	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		65.5 %	75-12	.5	EC30502	03/04/13	03/04/13	EPA 8021B	S-GC		
General Chemistry Parameters by EP.	A / Standard Method	ls									
Chloride	153	1.02	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0			
% Moisture	2.0	0.1	%	i	EC30601	03/05/13	03/06/13	% calculation			
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 8(15M									
C6-C12	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M			
>C12-C28	ND	25.5	mg/kg dry	1,	EC30603	03/05/13	03/05/13	8015M			
>C28-C35	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M			
Surrogate: 1-Chlorooctane		88.3 %	70-13	80	EC30603	03/05/13	03/05/13	8015M			
Surrogate: o-Terphenyl		111 %	70-13	80	EC30603	03/05/13	03/05/13	8015M			
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M			

Permian Basin Environmental Lab

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

10014 SCR 1213 Midland, TX 79706 432-686-7235

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Mana		98	I "B" Line 1	RP-2698		Fax: (432) 5	20-7701
			West S/W 004-04 (So	0					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environn	nental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry		EC30503	03/04/13	03/04/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		120 %	75-1	25	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		58.0 %	75-1	25	EC30503	03/04/13	03/04/13	EPA 8021B	QM-05
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ds							
Chloride	35.7	1.02	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	2.0	0.1	%	I	EC30601	03/05/13	03/06/13	% calculation	
<u>Fotal Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		95.3 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		125 %	70-1.	30	EC30603	03/05/13	03/05/13	8015M	
fotal Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Mana		98	l "B" Line 1	RP-2698		Fax: (432) 5	20-7701
			d-2 Surfac 004-05 (Soi	-					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environm	ental Lal	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Ethylbenzene	ND	. 0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		121 %	75-12	25	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		69.9 %	75-12	25	EC30503	03/04/13	03/04/13	EPA 8021B	QM-05
<u>General Chemistry Parameters by El</u>	PA / Standard Method	ls					_		
Chloride	10.9	1.09	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	8.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 80)15M							
C6-C12	ND	27.2	mg/kg dry	· 1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	27.2	mg/kg dry	ł	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	27.2	mg/kg dry	I	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		88.5 %	70-13	80	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		120 %	70-13	80	EC30603	03/05/13	03/05/13	8015M	
Total Hydrocarbon nC6-nC35	ND	27.2	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703	Fax: (432) 5	20-7701							
			ad-2 @ 6' 004-06 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environm	ental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Xylene (0)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		120 %	75-12	25	EC30503	03/04/13	03/04/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		70.3 %	• 75-12	25	EC30503	03/04/13	03/04/13	EPA 8021B	QM-05
<u>General Chemistry Parameters by El</u>	PA / Standard Method	ls							
Chloride	499	1.05	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	5.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80) <u>15M</u>							
C6-C12	ND	26.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		99.4 %	70-13	0	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		128 %	70-13	0	EC30603	03/05/13	03/05/13	8015M	
Fotal Hydrocarbon nC6-nC35	ND	26.3	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

Permian Basin Environmental Lab

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant								
			nd-2 @ 14' 004-07 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Pe	rmian Basi	n Environm	ental Lal	b					
Organics by GC								•		
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	I	EC30503	03/04/13	03/04/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	I.	EC30503	03/04/13	03/04/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/04/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		122 %	75-12	5	EC30503	03/04/13	03/04/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		70.2 %	75-12	5	EC30503	03/04/13	03/04/13	EPA 8021B	QM-05	
General Chemistry Parameters by Ef	A / Standard Method	s								
Chloride	111	1.01	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0		
% Moisture	1.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	15M								
C6-C12	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C12-C28	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C28-C35	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
Surrogate: 1-Chlorooctane	•	103 %	70-13	0	EC30603	03/05/13	03/05/13	8015M		
Surrogate: o-Terphenyl		127 %	70-13	0	EC30603	03/05/13	03/05/13	8015M		
Total Hydrocarbon nC6-nC35	ND	25.3	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M		

Nova Safety & Environment		Proj	ect: SUG H	istorical Ca	l "B" Line 1	RP-2698		Fax: (432) 52	20-7701
2057 Commerce		Project Num							
Midland TX, 79703		Project Mana	ger: Camille	Bryant					
		Release Po	int Road S	Surface					
		3C03	004-08 (Soi	il)					
		Reporting					•		
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environn	nental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene	•	119 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		80.9 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by EI</u>	PA / Standard Method	ls .							
Chloride	37.1	1.03	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80)15M							
C6-C12	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		85.0 %	70-1.	30	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		129 %	70-1.	30	EC30603	03/05/13	03/05/13	8015M	
Fotal Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

Permian Basin Environmental Lab

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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Nova Safety & Environment	i -	Proi	ect: SUG Hi	istorical Ca	l "B" Line 1	RP-2698		Fax: (432) 520-7701		
2057 Commerce		Project Num								
Midland TX, 79703		Project Mana								
			-							
			Point Road	-	·					
		3C03	004-09 (Soi	l)						
		Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note	
	P	ermian Basi	n Environn	iental La	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
ſoluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		119 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		89.6 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
<u>General Chemistry Parameters by El</u>	PA / Standard Metho	ds								
% Moisture	1.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
<u>Fotal Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M								
C6-C12	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C12-C28	ND	25.3	mg/kg dry	I	EC30603	03/05/13	03/05/13	8015M		
>C28-C35	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
Surrogate: 1-Chlorooctane		84.5 %	70-1	30	EC30603	03/05/13	03/05/13	8015M		
Surrogate: o-Terphenyl		122 %	70-1	30	EC30603	03/05/13	03/05/13	8015M		
Fotal Hydrocarbon nC6-nC35	ND	25.3	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M		

Permian Basin Environmental Lab

Nova Safety & Environment 2057 Commerce Midland TX, 79703	Fax: (432) 52	20-7701							
			Point Road 004-10 (Soi	0					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environn	nental Lal	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1 1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		76.6 %	75-I	25	EC30503	03/04/13	03/05/13	EPA 8021B	
General Chemistry Parameters by El	PA / Standard Metho	ds							
% Moisture	6.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 8	015M							
C6-C12	ND	26.6	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		102 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		121 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Fotal Hydrocarbon nC6-nC35	ND	26.6	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Numl Project Manaj	Fax: (432) 5	20-7701					
			Point Road 004-11 (Soi	-					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environn	iental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.00228	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		121 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorohenzene		79.0 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ds							
% Moisture	4.0	0.1	%	ſ	EC30601	03/05/13	03/06/13	% calculation	
<u> Total Petrol</u> eum Hydrocarbon <u>s C</u> 6-0	C35 by EPA Method 8	015M							
C6-C12	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: 1-Chlorooctane		83.2 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	_
Surrogate: o-Terphenyl		117 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Fotal Hydrocarbon nC6-nC35	ND	26.0	mg/kg dry	. 1	[CALC]	03/05/13	03/05/13	8015M	•

Nova Safety & Environment 2057 Commerce	ommerce Project Number: 1RP-2698										
Midland TX, 79703		Project Mana	ger: Camille	Bryant							
		Release I	Point Road	l @ 8'							
·····	<u>.</u>	3C03	004-12 (Soi	l)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	P	ermian Basi	n Environn	ental La	b						
Organics by GC											
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Foluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Ethylbenzene	0.00298	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (p/m)	0.00571	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		121 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		75.5 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
General Chemistry Parameters by H	EPA / Standard Metho	ds									
Chloride	423	1.04	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0			
% Moisture	4.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation			
Fotal Petroleum Hydrocarbons C6-	C35 by EPA Method 8	015M									
C6-C12	. ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M			
>C12-C28	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M			
>C28-C35	ND	26.0	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M			
Surrogate: 1-Chlorooctane		119%	70-1.	30	EC30603	03/05/13	03/05/13	8015M			
Surrogate: o-Terphenyl		146 %	70-1.	30	EC30603	03/05/13	03/05/13	8015M	S-GC		
Fotal Hydrocarbon nC6-nC35	ND	26.0	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M			

Nova Safety & Environment		Proi	ect: SUG Hi	istorical Ca	l "B" Line 1	RP-2698		Fax: (432) 520-7701	
2057 Commerce		Project Num							
Midland TX, 79703		Project Mana							
		Release P	oint Road	@ 10'					
		3C03	004-13 (Soi	l)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environn	nental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	ł	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	I	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	0.00191	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.00372	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	_
Surrogate: 1,4-Difluorobenzene		118 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		71.8 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	S-GC
<u>General Chemistry Parameters by F</u>		ds							_
% Moisture	2.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-0	C35 by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	_
Surrogate: 1-Chlorooctane		105 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		144 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	S-GC
Fotal Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project:SUG Historical Cal "B" Line 1RP-2698Fax: (432) 52Project Number:IRP-2698Project Manager:Camille Bryant								
		Release Po 3C03	oint Road 004-14 (Soi	-						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basi	n Environn	iental La)					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (p/m)	0.00315	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		120 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorohenzene		48.6 %	75-I	25	EC30503	03/04/13	03/05/13	EPA 8021B	S-GC	
General Chemistry Parameters by E	PA / Standard Metho	ls								
Chloride	191	1.02	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0		
% Moisture	2.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
Total Petroleum Hydrocarbons C6-0	C35 by EPA_Method 8	015M								
C6-C12	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C12-C28	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C28-C35	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
Surrogate: 1-Chlorooctane		113 %	70-1	30	EC30603	03/05/13	03/05/13	8015M		
Surrogate: o-Terphenyl		143 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	S-GC	
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	i	[CALC]	03/05/13	03/05/13	8015M		

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Nova Safety & EnvironmentProject:SUG Historical Cal "B" Line 1RP-2698H2057 CommerceProject Number:1RP-2698Midland TX, 79703Project Manager:Camille Bryant										
			d-3 Surfac 004-15 (Soi	-						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Po	rmian Basi	n Environn	nental Lal	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (p/m)	0.0140	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorohenzene		119 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		95.2 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
General Chemistry Parameters by E	PA / Standard Method	ls							•	
Chloride	43.8	1.03	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0		
% Moisture	3.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	015M				- <u>.</u> .				
C6-C12	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C12-C28	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
>C28-C35	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M		
Surrogate: 1-Chlorooctane		103 %	70-1	30	EC30603	03/05/13	03/05/13	8015M		
Surrogate: o-Terphenyl		140 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	S-GC	
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/05/13	03/05/13	8015M		

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Fax: (432) 52	20-7701						
			ad-3 @ 2' 004-16 (Soi	1)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environm	iental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	l	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.0336	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		116%	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.2 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
General Chemistry Parameters by E	PA / Standard Metho	ds							
% Moisture	1.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 8	015M							
C6-C12	46.0	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
C12-C28	29.6	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EC30603	03/05/13	03/05/13	8015M	
Surrogate: I-Chlorooctane	·	95.5 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	
Surrogate: o-Terphenyl		131 %	70-1	30	EC30603	03/05/13	03/05/13	8015M	S-GC
Total Hydrocarbon nC6-nC35	75.6	25.3	mg/kg dry	1 ·	[CALC]	03/05/13	03/05/13	8015M	

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Fax: (432) 52	20-7701						
			ad-3 @ 4' 004-17 (Soi	I)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environm	ental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	I	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.111	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	0.00144	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		119 %	75-12	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		127 %	75-12	25	EC30503	03/04/13	03/05/13	EPA 8021B	S-GC
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ds				•			
% Moisture	7.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-0	C35 by EPA Method 8	015M		_					
C6-C12	32.6	26.9	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M	
>C12-C28	55.2	26.9	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M	
Surrogate: 1-Chlorooctane		109 %	70-1.	30	EC30603	03/05/13	03/06/13	8015M	
Surrogate: o-Terphenyl		146 %	70-1.	30	EC30603	03/05/13	03/06/13	8015M	S-G0
Total Hydrocarbon nC6-nC35	87.8	26.9	mg/kg dry	1	[CALC]	03/05/13	03/06/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line IRP-2698 Project Number: IRP-2698 Project Manager: Camille Bryant							
			ad-3 @ 6' 004-18 (So	il)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environn	nental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.0207	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13 .	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		122 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		130 %	75-1	25	EC:30503	03/04/13	03/05/13	EPA 8021B	S-GC
General Chemistry Parameters by El	PA / Standard Metho	ds							
% Moisture	4.0	0.1	· %	1	EC30601	03/05/13	03/06/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	26.0	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C12-C28	32.9	26.0	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	I	EC30703	03/06/13	03/06/13	8015M	
Surrogate: 1-Chlorooctane		115 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	
Surrogate: o-Terphenyl		128 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	
Total Hydrocarbon nC6-nC35	32.9	26.0	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M	

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							Fax: (432) 520-7701		
			ad-3 @ 8' 004-19 (Soi	il)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	P	ermian Basis	n Environn	iental La	b						
Organics by GC											
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Foluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Ethylbenzene	0.00264	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (p/m)	0.00648	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (o)	ND	0.00100.0	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		116 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		90.7 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
General Chemistry Parameters by E	PA / Standard Metho	ds									
Chloride	264	1.03	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0			
% Moisture	3.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation			
<u>Fotal Petroleum Hydrocarbons C6-(</u>	C35 by EPA Method 8	015M									
C6-C12	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M			
>C12-C28	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M			
>C28-C35	ND	25.8	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M			
Surrogate: 1-Chlorooctane		106 %	70-1	30	EC30603	03/05/13	03/06/13	8015M			
Surrogate: o-Terphenyl		135 %	70-1	30	EC30603	03/05/13	03/06/13	8015M	S-G0		
Fotal Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/05/13	03/06/13	8015M			

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Nova Satety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			nd-3 @ 10' 004-20 (Soi						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environn	iental La	b .				
Organics by GC						<u>-</u>			
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	. ND	0.00100	mg/kg dry	ł	EC30503	03/04/13	03/05/13	- EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	t	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		68.5 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B	S-GC
General Chemistry Parameters by EI	A / Standard Metho	ds							
% Moisture	2.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum <u>Hydroca</u> rbons C6-C	35 by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	l	EC30603	03/05/13	03/06/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30603	03/05/13	03/06/13	8015M	
Surrogate: 1-Chlorooctane		86.8 %	70-1	30	EC30603	03/05/13	03/06/13	8015M	
Surrogate: o-Terphenyl		133 %	70-1	30	EC30603	03/05/13	03/06/13	8015M	S-GC
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/05/13	03/06/13	8015M	

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10014 SCR 1213 Midland, TX 79706 432-686-7235

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			nd-3 @ 12'						
		3003	004-21 (Soil)	·					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Ре	ermian Basi	n Environme	ental Lal	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Ethylbenzene	0.00216	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.00622	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		113 %	75-12	5	EC30503	03/04/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		75.6%	75-12.	5	EC30503	03/04/13	03/05/13	EPA 8021B	
General Chemistry Parameters by E	PA / Standard Method	ls							
Chloride	140	1.01	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	1.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 8)15M							
C6-C12	ND	25.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
Surrogate: 1-Chlorooctane		115 %	70-13)	EC30703	03/06/13	03/06/13	8015M	
Surrogate: o-Terphenyl		134 %	70-13	0	EC30703	03/06/13	03/06/13	8015M	S-GC
Total Hydrocarbon nC6-nC35	ND	25.3	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703	nerce				Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant						
			d-4 Surfac 004-22 (Soi	-	·						
		Reporting						<u> </u>			
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	P	ermian Basi	n Environn	nental Lal)						
Organics by GC											
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Ethylbenzene	0.00203	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (p/m)	0.0319	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Xylene (0)	0.0227	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		116%	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		78.0 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B			
General Chemistry Parameters by E	PA / Standard Metho	ls									
Chloride	16.8	1.03	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0			
% Moisture	3.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation			
<u>Total Petroleum Hydrocarbons C6-(</u>	C35 by EPA Method 8	015M									
C6-C12	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M			
>C12-C28	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M			
>C28-C35	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M			
Surrogate: 1-Chlorooctane		119%	70-1	30	EC30703	03/06/13	03/06/13	8015M	~		
Surrogate: o-Terphenyl		140 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	S- GC		
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M			

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Nova Safety & Environment		Project: SUG Historical Cal "B" Line 1RP-2698								
2057 Commerce		Project Num								
Midland TX, 79703		Project Mana	ger: Camille	Bryant						
· · · · · · · · · · · · · · · · · · ·		Ro	ad-4 @ 2'							
		3C03	004-23 (So	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Pe	ermian Basi	n Environn	nental Lal	b .					
Organics by GC								·		
Benzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (p/m)	0.0435	0.00200	mg/kg dry	I	EC30503	03/04/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		119 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		117 %	75-1	25	EC30503	03/04/13	03/05/13	EPA 8021B		
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ds								
% Moisture	3.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
<u> Total Petroleum Hydrocarbons C6-(</u>	C35 by EPA Method 8	015M								
C6-C12	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C12-C28	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C28-C35	ND	25.8	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
Surrogate: 1-Chlorooctane	• • •	119 %	70-1	30	EC30703	03/06/13	03/06/13	8015M		
Surrogate: o-Terphenyl		141 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	S- GC	
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	I	[CALC]	03/06/13	03/06/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant								
			ad-4 @ 4' 004-24 (Soi	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basii	n Environn	vental Lal	D					
Organics by GC										
Benzene	0.00253	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	0.207	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (0)	0.0320	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		254 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
Surrogate: 4-Bromofluorobenzene		117 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
General Chemistry Parameters by E	PA / Standa <u>rd Metho</u>	ds								
% Moisture	7.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
<u>Total Petrol</u> eum Hydrocarbons C6-C	C35 by EPA Method 8	015M								
C6-C12	62.5	26.9	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C12-C28	37.6	26.9	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C28-C35	ND	26.9	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
Surrogate: 1-Chlorooctane		115 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	······	
Surrogate: o-Terphenyl		133 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	S-GC	
Fotal Hydrocarbon nC6-nC35	100	26.9	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			ad-4 @ 6' 004-25 (Soi	l) ·					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environn	iental La	b				
Organics by GC									
Benzene	0.0534	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	0.345	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	0.107	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.520	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	0.160	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		90.6 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		27.0 %	75-1.	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
<u>General Chemistry Parameters by E</u>	PA / Stan <u>dard Metho</u>	ls							
Chloride	89.0	1.05	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0	
% Moisture	5.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
<u> Fotal Petroleum Hydrocarbons C6-C</u>	C35 by EPA Method 80)15M							
C6-C12	4640	26.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C12-C28	549	26.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C28-C35	27.9	26.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	•
Surrogate: 1-Chlorooctane		120 %	70-1.	30	EC30703	03/06/13	03/06/13	8015M	
Surrogate: o-Terphenyl		124 %	70-1.	30	EC30703	03/06/13	03/06/13	8015M	
Fotal Hydrocarbon nC6-nC35	5220	26.3	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant								
	:		ad-4 @ 8' 004-26 (Soi	l)	·					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basi	n Environm	ental La	b					
Organics by GC										
Benzene	0.0178	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	0.0614	0.00200	mg/kg dry	l	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	0.275	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (0)	0.0429	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		388 %	75-12	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
Surrogate: 4-Bromofluorobenzene		93.5 %	75-12	25	EC30602	03/05/13	03/05/13	EPA 8021B		
General Chemistry Parameters by EPA	A / Standard Metho	ds								
% Moisture	2.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation		
<u>Total Petroleum Hydrocarbons C6-C3</u>	5 by EPA Method_8	015M								
C6-C12	532	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C12-C28	83.4	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
>C28-C35	ND	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M		
Surrogate: 1-Chlorooctane		126 %	70-1.	30	EC30703	03/06/13	03/06/13	8015M		
Surrogate: o-Terphenyl		135 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	S-GC	
Total Hydrocarbon nC6-nC35	616	25.5	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M		

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line IRP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			nd-4 @ 10' 004-27 (Soil))					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	ermian Basi	n Environm	ental Lal	b				
Organics by GC				_					
Benzene	0.0103	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	0.0222	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.146	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		1110 %	75-12	5	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
Surrogate: 4-Bromofluorobenzene		113 %	75-12	5	EC30602	03/05/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by El</u>	PA / Standard Metho	ds							
% Moisture	2.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 8	015M							
C6-C12	91.6	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	
Surrogate: 1-Chlorooctane		119 %	70-13	0	EC30703	03/06/13	03/06/13	8015M	
Surrogate: o-Terphenyl		141 %	70-13	0	EC30703	03/06/13	03/06/13	8015M	S-GC
Total Hydrocarbon nC6-nC35	91.6	25.5	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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Nova Safety & Environment		Project: SUG Historical Cal "B" Line 1RP-2698									
2057 Commerce		Project Num									
Midland TX, 79703		Project Mana	ger: Camille	Bryant							
		Roa	ad-4 @ 12'	,							
· · ·		3C03	004-28 (Soi	il)							
		Reporting									
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes		
	P	ermian Basi	n Environn	nental La	b						
Organics by GC									<u>.</u>		
Benzene	0.0127	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B			
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B			
Ethylbenzene	0.0523	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B			
Xylene (p/m)	0.101	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B			
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B			
Surrogate: 1,4-Difluorobenzene		87.9 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B			
Surrogate: 4-Bromofluorobenzene		98.0 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B			
General Chemistry Parameters by El	PA / Standard Metho	ds									
Chloride	313	1.05	mg/kg dry	1	EC30506	03/05/13	03/06/13	EPA 300.0			
% Moisture	5.0	0.1	%	1	EC30601	03/05/13	03/06/13	% calculation			
Fotal Petroleum Hydrocarbons C6-C	35 by EPA Method 8	015M									
C6-C12	45.7	26.3	mg/kg dry	I	EC30703	03/06/13	03/06/13	8015M			
>C12-C28	ND	26.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M			
>C28-C35	ND	26.3	mg/kg dry	1	EC30703	03/06/13	03/06/13	8015M	•		
Surrogate: 1-Chlorooctane		115 %	70-1	30	EC30703	03/06/13	03/06/13	8015M			
Surrogate: o-Terphenyl		135 %	70-1	30	EC30703	03/06/13	03/06/13	8015M	S-GC		
Fotal Hydrocarbon nC6-nC35	45.7	26.3	mg/kg dry	1	[CALC]	03/06/13	03/06/13	8015M			

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Organics by GC - Quality Control

Permian Basin Environ	mental Lab
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	Ре	rmian Ba	sin Envi	ronment	al Lab					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC30502 - General Preparation	n (GC)									
Blank (EC30502-BLK1)				Prepared &	Analyzed:	03/04/13				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	Ħ							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (0)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	71.5		ug/kg	60.0		119	75-125			
Surrogate: 4-Bromofluorohenzene	43.1		"	60.0		71.9	75-125			S-GC
LCS (EC30502-BS1)				Prepared &	Analyzed:	03/04/13				
Benzene	0.0838	0.00100	mg/kg wet	0.100		83.8	80-120			
Toluene	0.116	,0.00200	"	0.100		116	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.234	0,00200	"	0.200		117	80-120			
Xylene (o)	0.109	0.00100	n	0.100		109	80-120			
Surrogate: 1,4-Difluorohenzene	58.7		ug/kg	60.0		97.9	75-125			
Surrogate: 4-Bromofluorohenzene	48.4	•	"	60.0		80.7	75-125			
LCS Dup (EC30502-BSD1)				Prepared 8	z Analyzed:	03/04/13				
Benzene	0.0808	0.00100	mg/kg wet	0.100		80.8	80-120	3.60	20	
Toluene	0.119	0.00200	17	0.100		119	80-120	3.19	20	
Ethylbenzene	0.120	0.00100	"	0,100		120	80-120	1.34	20	
Xylene (p/m)	0.233	0.00200	n	0.200		117	80-120	0.612	20	
Xylene (0)	0.113	0.00100	"	0.100		113	80-120	3.67	20	
Surrogate: 1,4-Difluorohenzene	0.00		ug/kg	60.0			75-125			S-GC
Surrogate: 4-Bromofluorobenzene	53.7		"	60.0		89.6	75-125			
Matrix Spike (EC30502-MS1)	Sou	irce: 3C01005	5-01	Prepared 8	2 Analyzed:	03/04/13				
Benzene	0.0501	0.00100	mg/kg dry	0.103	ND	48.5	80-120			QM-05
Toluene	0.0703	0.00200	n	0.103	ND	68.2	80-120			QM-05
Ethylbenzene	0.0712	0.00100	"	0.103	ND	69.0	80-120			QM-05
Xylene (p/m)	0.143	0.00200	"	0.206	ND	69.5	80-120			QM-05
Xylene (o)	0.0677	0.00100	"	0.103	ND	65.7	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	61.5		ug/kg	60.0		102	75-125			
Surrogate: 4-Bromofluorohenzene	51.0		"	60.0		85.0	75-125			

Permian Basin Environmental Lab

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

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Batch EC30502 - General Preparation (GC)

Matrix Spike Dup (EC30502-MSD1)	Source: 3C01005-01			Prepared &	Analyzed	03/04/13				
Benzene	0.0530	0.00100	mg/kg dry	0.103	ND	51.4	80-120	5.78	20	QM-05
Toluene	0.0747	0.00200	"	0,103	ND	72.4	80-120	6.00	20	QM-05
Ethylbenzene	0.0758	0.00100	"	0.103	ND	73.5	80-120	6.30	20	QM-05
Xylene (p/m)	0.154	0.00200	"	0.206	ND	74.6	80-120	7.04	20 ·	QM-05
Xylene (o)	0.0730	0.00100	11	0.103	ND	70.8	80-120	7.44	20	QM-05
Surrogate: 1,4-Difluorobenzene	64.2		ug/kg	60.0		107	75-125		····	
Surrogaie: 4-Bromofluorohenzene	55.0		"	60.0		91.6	75-125			

Batch EC30503 - General Preparation (GC)

Blank (EC30503-BLK1)				Prepared & Ana	lyzed: 03/04/13		
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	73.3		ug/kg	60.0	122	75-125	 ·····
Surrogate: 4-Bromofluorobenzene	40.6		"	60.0	67.6	75-125	S-GC
LCS (EC30503-BS1)				Prepared & Ana	lyzed: 03/04/13		
Benzene	0.0831	0.00100	mg/kg wet	0.100	83.1	80-120	
Toluene	0.112	0.00200	n	0.100	112	80-120	
Ethylbenzene	0.110	0.00100	"	0.100	110	80-120	
Xylene (p/m)	0.227	0.00200	"	0.200	113	80-120	
Xylene (o)	0.108	0.00100	"	0.100	108	80-120	
Surrogate: 1,4-Difluorobenzene	71.7		ug/kg	60.0	120	75-125	 · ····
Surrogate: 4-Bromofluorobenzene	61.9		"	60.0	103	75-125	

Permian Basin Environmental Lab

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30503 - General Preparation (GC)

LCS Dup (EC30503-BSD1)	Prepared & Analyzed: 03/04/13									
Benzene	0.0822	0.00100	mg/kg wet	0.100	82.2	80-120	1.08	20		
Toluene	0.108	0.00200	"	0.100	108	80-120	3.27	20		
Ethylbenzene	0.107	0.00100	"	0.100	107	80-120	3.37	20		
Xylene (p/m)	0.219	0.00200		0.200	110	80-120	3.19	20		
Xylene (o)	0.105	0.00100		0.100	105	80-120	3.12	20		
Surrogate: 1,4-Difluorobenzene	71.3		ug/kg	60.0	119	75-125				
Surrogate: 4-Bromofluorohenzene	61.9		"	60.0	103	75-125				

Matrix Spike (EC30503-MS1)	Sou	Source: 3C03004-04			3/04/13 A	3/05/13		
Benzene	0.0610	0.00100	mg/kg dry	0.102	ND	59.8	80-120	QM-05
Toluene	0.0882	0.00200	"	0.102	ND	86.4	80-120	
Ethylbenzene	0.0873	0.00100	u	0.102	ND	85.6	80-120	
Xylene (p/m)	0.180	0.00200		0.204	ND	88.1	80-120	
Xylene (0)	0.0860	0.00100	"	0.102	ND	84.3	80-120	
Surrogate: 1,4-Difluorobenzene	71.5		ug/kg	60.0		119	75-125	
Surrogate: 4-Bromofluorobenzene	60.2		"	60.0		100	75-125	

Matrix Spike Dup (EC30503-MSD1)	Sour	Source: 3C03004-04			Prepared: 03/04/13 Analyzed: 03/05/13					
Benzene	0.0617	0.00100	mg/kg dry	0.102	ND	60.5	80-120	1.13	20	QM-05
Toluene	0.0888	0.00200	"	0,102	ND	87.1	80-120	0.738	20	
Ethylbenzene	0.0871	0.00100	n	0.102	ND	85.4	80-120	0.199	20	
Xylene (p/m)	0.178	0.00200	"	0.204	ND	87.2	80-120	0.964	20	-
Xylene (0)	0.0854	0.00100	"	0.102	ND	83.7	80-120	0.679	20	
Surrogate: 1,4-Difluorobenzene	70.9		ug/kg	60.0		118	75-125			
Surrogate: 4-Bromofluorobenzene	59.5		"	60.0		99.1	75-125			

Batch EC30602 - General Preparation (GC)

Blank (EC30602-BLK1)				Prepared & Analyzed: 03/05/13						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200								
Xylene (0)	ND	0.00100								
Surrogate: 1,4-Difluorobenzene	70.8		ug/kg	60.0	118	75-125				
Surrogate: 4-Bromofluorobenzene	41.1		"	60.0	68.5	75-125		S-GC		

Permian Basin Environmental Lab

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30602 - General Preparation (GC)

LCS (EC30602-BS1)				Prepared & Ana	lyzed: 03/05/13				
Benzene	0.0831	0.00100	mg/kg wet	0.100	83.1	80-120			
Toluene	0.117	0.00200	"	0.100	117	80-120			
Ethylbenzene	0.120	0.00100	"	0.100	120	80-120			
Xylene (p/m)	0.219	0.00200	"	0.200	109	80-120			
Xylene (0)	0.115	0.00100	**	0.100	115	80-120			
Surrogate: 1,4-Difluorobenzene	64.4		ug/kg	60.0	107	75-125			
Surrogate: 4-Bromofluorobenzene	55.7		"	60.0	92.8	75-125			
LCS Dup (EC30602-BSD1)				Prepared & Ana	lyzed: 03/05/13				
Benzene	0.0815	0.00100	mg/kg wet	0.100	81.5	80-120	1.98	20	
Toluene	0.115	0.00200	"	0.100	115	80-120	1.70	20	
Ethylbenzene	0.118	0.00100	"	0.100	118	80-120	1.68	20	
Xylene (p/m)	0.233	0.00200	"	0.200	116	80-120	6.17	20	
Xylene (o)	0.112	0.00100	11	0.100	112	80-120	2.02	20	
Surrogate: 1,4-Difluorobenzene	63.6		ug/kg	60.0	106	75-125			
Surrogate: 4-Bromofluorobenzene	54.0		"	60.0	90.0	75-125			

Matrix Spike (EC30602-MS1)	Sou	Source: 3C03004-24			& Analyzed:	03/05/13		
Benzene	0.0422	0.00100	mg/kg dry	0.108	0.00253	36.9	80-120	QM-05
Toluene	0.0643	0.00200		0.108	ND	59.8	80-120	QM-05
Ethylbenzene	0.0716	0.00100	"	0.108	ND	66.5	80-120	QM-05
Xylene (p/m)	0.421	0.00200	"	0.215	0.207	99.4	80-120	
Xylene (o)	0.113	0.00100	'n	0.108	0.0320	75.8	80-120	QM-05
Surrogate: 1,4-Difluorobenzene	57.0		ug/kg	60.0		94.9	75-125	
Surrogate: 4-Bromofluorobenzene	65.9		"	60.0		110	75-125	
Matuin Sailly Days (EC20(02 MSD1)	S	3002004		Deserved (Analyzad	02/05/12		

Matrix Spike Dup (EC30602-MSD1)	Source: 3C03004-24			Prepared &	& Analyzed:	03/05/13				
Benzene	0.0458	0.00100	mg/kg dry	0.108	0.00253	40.3	80-120	8.66	20	QM-05
Toluene	0.0726	0.00200		0.108	ND	67.5	80-120	12.2	20	QM-05
Ethylbenzene	0.0650	0.00100	"	0.108	ND	60.5	80-120	9.59	20	QM-05
Xylene (p/m)	0.367	0.00200	"	0.215	0.207	74.1	80-120	29.1	20	QM-05
Xylene (o)	0.114	0.00100	и	0.108	0.0320	75.9	80-120	0.145	20	QM-05
Surrogate: 1,4-Difluorobenzene	55.3		ug/kg	60.0		92.1	75-125			
Surrogate: 4-Bromofluorobenzene	64.0		"	60.0		107	75-125			

Permian Basin Environmental Lab

Nova Safety & Environment	A & Environment Project: SUG Historical Cal "B" Line 1RP-2698									Fax: (432) 520-7701			
2057 Commerce		Project Nu	umber: IRI	P-2698									
Midland TX, 79703		Project Ma	nager: Car	nille Bryant									
General	Chemistry Para	-				ls - Qua	lity Con	trol					
	Pe	rmian Bas	sin Envi	ronment	al Lab								
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes			
Batch EC30501 - *** DEFAULT PRE	p ***					-							
Blank (EC30501-BLK1)				Prepared: (03/04/13 A	nalvzed: 03	/05/13						
% Moisture	ND	0.1	%	····· •									
Duplicate (EC30501-DUP1)	Sou	rce: 3C01005	-01	Prepared: ()3/04/13 A	nalyzed: 03	/05/13						
% Moisture	2.0	0.1	%		3.0			40.0	20	R			
Batch EC30506 - *** DEFAULT PRE	P ***												
Blank (EC30506-BLK1)				Prepared &	z Analyzed:	03/05/13							
Chloride	ND	1.00	mg/kg wet										
LCS (EC30506-BS1)				Prepared &	k Analyzed:	03/05/13							
Chloride	9.42		mg/kg Wet	10.0		94.2	80-120						
LCS Dup (EC30506-BSD1)	-			Prepared &	2 Analyzed	03/05/13							
Chloride	9.31		mg/kg Wet	10.0		93.1	80-120	1.21	20				
Duplicate (EC30506-DUP1)	Sou	rce: 3C04001	-02	Prepared &	k Analyzed:	03/05/13			•				
Chloride	5.21	1.01	mg/kg dry		5.18			0.583	20				
Matrix Spike (EC30506-MS1)	Sou	rce: 3C04001	-02	Prepared &	2 Analyzed	03/05/13							
Chloride	140	1.01	mg/kg dry	126	5.18	107	80-120						
Matrix Spike (EC30506-MS2)	Sou	rce: 3C03004	-06	Prepared: (03/05/13 A	nalyzed: 03	8/06/13						
Chloride	610	1.05	mg/kg dry	132	499	84.5	80-120						
Batch EC30601 - *** DEFAULT PRE	<u>P ***</u>												
Blank (EC30601-BLK1)				Prepared: (03/05/13 A	nalyzed: 03	8/06/13						
% Moisture	ND	0.1	%	· · · ·					· · · ·				

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ſ	Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
	2057 Commerce	Project Number:	1RP-2698	
	Midland TX, 79703	Project Manager:	Camille Bryant	
L				

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

		Reporting	-	Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30601 - *** DEFAULT PREP ***

Duplicate (EC30601-DUP1)	Source: 3C	03004-02	2	Prepared: 03/05/13 Analyzed: 03/06/13		
% Moisture	4.0	0.1	%	4.0	0.00	20

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

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

Permian	Basin	Environmental	Lab
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Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
									·····
			Deemograd P	Anolymadi	02/05/12				
ND	. 25.0	ma/ka wat	Prepared &	a Analyzeu.	03/03/13				
			100		122	70 130			
									S-G0
/4.3			50.0		149	/0-130			3-00
			Prepared &	Analyzed:	03/05/13				
1130	25.0	mg/kg wet	1000		113	75-125			
1220	25.0	н	1000		122	75-125			
ND	25.0	"	0.00			75-125			
127		"	100		127	70-130			
64.8		"	50.0		130	70-130			
			Prepared &	z Analyzed:	03/05/13				
1130	25.0	mg/kg wet	1000		113	75-125	0.182	20	
1110	25.0	11	1000		111	75-125	8.90	20	
ND	25.0	**	0.00			75-125		20	
112		"	100		112	70-130			
59.2		"	50.0		118	70-130			
Soi	arce: 3C03004	1-02	Prepared: (03/05/13 A	nalyzed: 03	/06/13			
1150	26.0	mg/kg dry	1040	ND	111	.75-125			
1280	26.0	"	1040	ND	123	75-125			
ND	26.0	"	0.00	ND		75-125	,		
134		"	104		128	70-130			
68.0		"	52.1		131	70-130			S-G0
Soi	arce: 3C03004	1-02	Prepared: (03/05/13 A	nalyzed: 03	/06/13			
1230	26.0	mg/kg dry	1040	ND	118	75-125	6.55	20	
1290	26.0	**	1040	ND	124	75-125	0.553	20	
ND	26.0	"	0.00	ND		75-125		20	
134		"	104		128	70-130			
69.3		"	52.1		133	70-130			S-G0
	ND ND ND 123 74.3 1130 1220 ND 1220 ND 1220 ND 1220 ND 1130 1110 ND 1112 59.2 Sot 1150 1280 ND 134 68.0 Sot 1230 1290 ND 1234	Result Limit ND 25.0 ND 25.0 ND 25.0 ND 25.0 ND 25.0 123 74.3 1130 25.0 120 25.0 ND 25.0 ND 25.0 1120 25.0 112 50.0 1110 25.0 1110 25.0 1110 25.0 1110 25.0 1110 25.0 1110 25.0 1110 25.0 112 59.2 Source: 3C03004 26.0 1280 26.0 ND 26.0 134 68.0 Source: 3C03004 1230 1230 26.0 ND 26.0 ND 26.0 ND 26.0 ND 26.0 1290 26.0 134	Result Limit Units ND 25.0 mg/kg wet ND 25.0 " ND 25.0 " ND 25.0 " 123 " " 74.3 " " 1130 25.0 " 1220 25.0 " ND 25.0 " ND 25.0 " 1130 25.0 " 127 " " 64.8 " " 1110 25.0 " ND 25.0 " 112 " " 59.2 " " 112 " " 59.2 " " 1130 26.0 mg/kg dry 1280 26.0 " ND 26.0 " 134 " 68.0 " 1230 26.0 "	Result Limit Units Level ND 25.0 mg/kg wet Prepared & ND 25.0 " Prepared & ND 25.0 " 100 74.3 " 100 123 " 100 74.3 " 50.0 Prepared & 1130 25.0 mg/kg wet 1130 25.0 " 1000 1220 25.0 " 0.00 127 " 100 64.8 " 50.0 Prepared & 1130 25.0 rmg/kg wet 1000 1110 25.0 " 0.00 1110 25.0 " 0.00 1110 25.0 " 0.00 1110 25.0 " 0.00 1110 25.0 " 0.00 1112 " 100 59.2 " 1150 26.0 <td>Result Limit Units Level Result ND 25.0 mg/kg wet Prepared & Analyzed: ND 25.0 " 100 ND 25.0 " 100 123 " 100 100 74.3 " 50.0 Prepared & Analyzed: 1130 25.0 mg/kg wet 1000 100 1220 25.0 " 1000 100 ND 25.0 " 0.00 100 1220 25.0 " 0.00 100 1210 25.0 " 0.00 100 127 " 100 100 100 1130 25.0 mg/kg wet 1000 100 1110 25.0 " 0.00 100 1110 25.0 " 0.00 100 112 " 100 100 100 100 1280 26.0 mg/kg dry</td> <td>Result Limit Units Level Result %REC Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet %/05/13 <</td> <td>Result Limit Units Level Result %REC Limits Prepared & Analyzed: 03/05/13 ND 25.0 " " </td> <td>Result Limit Units Level Result %REC Limits RPD Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet ND 25.0 " ND 25.0 " 100 123 70-130 123 " 100 123 70-130 74.3 " 50.0 149 70-130 Prepared & Analyzed: 03/05/13 1130 25.0 " 1000 122 75-125 120 25.0 " 1000 122 75-125 120 25.0 " 0.00 75-125 5 121 25.0 " 0.00 130 70-130 64.8 " 50.0 130 70-130 5 1130 25.0 mg/kg wet 1000 111 75-125 8.90 ND 25.0 " 1000 111 75-125 8.90 ND 25.0</td> <td>Result Limit Units Level Result %REC Limits RPD Limit Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet</td>	Result Limit Units Level Result ND 25.0 mg/kg wet Prepared & Analyzed: ND 25.0 " 100 ND 25.0 " 100 123 " 100 100 74.3 " 50.0 Prepared & Analyzed: 1130 25.0 mg/kg wet 1000 100 1220 25.0 " 1000 100 ND 25.0 " 0.00 100 1220 25.0 " 0.00 100 1210 25.0 " 0.00 100 127 " 100 100 100 1130 25.0 mg/kg wet 1000 100 1110 25.0 " 0.00 100 1110 25.0 " 0.00 100 112 " 100 100 100 100 1280 26.0 mg/kg dry	Result Limit Units Level Result %REC Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet %/05/13 <	Result Limit Units Level Result %REC Limits Prepared & Analyzed: 03/05/13 ND 25.0 " "	Result Limit Units Level Result %REC Limits RPD Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet ND 25.0 " ND 25.0 " 100 123 70-130 123 " 100 123 70-130 74.3 " 50.0 149 70-130 Prepared & Analyzed: 03/05/13 1130 25.0 " 1000 122 75-125 120 25.0 " 1000 122 75-125 120 25.0 " 0.00 75-125 5 121 25.0 " 0.00 130 70-130 64.8 " 50.0 130 70-130 5 1130 25.0 mg/kg wet 1000 111 75-125 8.90 ND 25.0 " 1000 111 75-125 8.90 ND 25.0	Result Limit Units Level Result %REC Limits RPD Limit Prepared & Analyzed: 03/05/13 ND 25.0 mg/kg wet

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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Nova Safety & Environment	Project: SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-2698	
Midland TX, 79703	Project Manager: Camille Bryant	

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

	Рен	mian Ba	sin Envi	ronment	al Lab					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC30703 - TX 1005										
Blank (EC30703-BLK1)				Prepared &	z Analyzed:	03/06/13				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	112		n	100		112	70-130			
Surrogate: o-Terphenyl	68.5		"	50.0		137	70-130			S- GC
LCS (EC30703-BS1)				Prepared &	2 Analyzed:	03/06/13				
 C6-C12	1180	25.0	mg/kg wet	1000		118	75-125			
>C12-C28	1180	25.0	"	1000		118	75-125			
>C28-C35	ND	25.0		0.00			75-125			
Surrogate: 1-Chlorooctane	115		"	100		115	70-130			
Surrogate: o-Terphenyl	62.5		"	50.0		125	70-130			
LCS Dup (EC30703-BSD1)				Prepared &	k Analyzed:	03/06/13				
C6-C12	1170	25.0	mg/kg wet	1000		117	75-125	1.12	20	
>C12-C28	1200	25.0	"	1000		120	75-125	1.88	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	124		"	100		124	70-130			
Surrogate: o-Terphenyl	63.3		"	50.0		127	70-130			
Matrix Spike (EC30703-MS1)	Sour	·ce: 3C03004	-18	Prepared &	z Analyzed:	03/06/13				
C6-C12	1050	26.0	mg/kg dry	1040	ND	100	75-125			
>C12-C28	977	26.0	"	1040	32.9	90.7	75-125			
>C28-C35	ND	26.0	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	123		"	104		118	70-130			
Surrogate: o-Terphenyl	59.9		"	52.1		115	70-130		·	
Matrix Spike Dup (EC30703-MSD1)	Sour	·ce: 3C03004	-18	Prepared &	z Analyzed:	03/06/13				
C6-C12	1190	26.0	mg/kg dry	1040	ND	114	75-125	12.6	20	
>C12-C28	1190	26.0	"	1040	32.9	111	75-125	19.8	20	
>C28-C35	ND	26.0	Ħ	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	133		"	104		128	70-130			
Surrogate: o-Terphenyl	73.6		"	52.1		141	70-130			S-GC

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10014 SCR 1213 Midland, TX 79706 432-686-7235

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Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

R3 The RPD exceeded the acceptance limit due to sample matrix effects.

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:

Barron

3/7/2013

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Date:

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	Company Address:	2057	7 Comme	rce													Pi	rojec	:t Lo	oc:_		-	1	Lea	Coi	inty I	New	Vexic	<u> </u>		
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-04		est S/W @ 11'			2/27/2013	1600		1	x	╈		╀				So		x						╈	+	x	1-	x	+		x
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	City/State/Zip:	Midland,	Texas 7	79703		··· ·	,								-			PO)#:											
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LAB # (lab use only)	453/3(13	D CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered Total # of Containers		HNO3						SL=Sludge	er S=Soll/Solid Specify Other	418.1 (8015M) 801	TPH: TX 1005 TX 1008	Catlons (Ca, Mg, Na, K)	Anions (CI, SO4, Alkelinity) SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Somivolatiles	BTEX 802189030 or BTEX 8260	(c	N.O.R.M.	Chlorides E 300		e-Schedule) 24,	Standard TAT
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	City/State/Zip:	Midland	i, Texas 7	79703				_										PC)#:											
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LAB # (lab use only)	FIELD CC	DDE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered Total # of Containers		HNO3	HCI	H ₂ SO4	NaOH	Na ₂ S ₂ O ₃	None Other (Specify)	DW≂Drinking Wator SL≂Sludge	GW = Groundwator S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 801	TPH: TX 1005 TX 1008	Cations (Ca, Mg, Na, K)	Anions (CI, SO4, Aikalinity)	SAR / ESP / CEC		Semivolatiles	BTEX 80218/5030 or RTEX 8280	RCI	N.O.R.M.	Chlorides E 300		RUSH TAT (Pre-Schedule) 2	Standard TAT
-21	Road-3 @) 12'			2/27/2013	1750		i x		1	†-					<u></u> Soil	x	F					- 100				x		Ť	X
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<u>-27</u>	Road-4 @	<u>)</u> 10'		ļ	2/28/2013	925		<u>I</u> X	<u><</u>	_					5	Soil	x						_	×	4	1_				×
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



Analytical Report

Prepared for:

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

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Location: Lea County, New Mexico

Lab Order Number: 3C04002



NELAP/TCEQ # T104704156-12-1

Report Date: 03/08/13

Nova Safety & Environment 2057 Commerce Midland TX, 79703

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release Point Surface	3C04002-01	Soil	03/01/13 09:00	03-04-2013 11:12
Release Point @ 8'	3C04002-02	Soil	03/01/13 09:30	03-04-2013 11:12
Release Point @ 12'	3C04002-03	Soil	03/01/13 09:40	03-04-2013 11:12
Release Point S-W @ 11'	3C04002-04	Soil	03/01/13 09:50	03-04-2013 11:12

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant

Release Point Surface 3C04002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basii	n Environn	ental Lal)				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	I	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	0.00462	0.00100	mg/kg dry	ł	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.0129	0.00200	mg/kg dry	l	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (0)	0.00694	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		118 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		89.7 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by E</u>	EPA / Standard Metho	ds							
Chloride	16.1	1.01	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	1.0	0.1	%	l	EC30604	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-0	C35 by EPA Method 8	015M							
Total Ferrorean Hydrocarbons Co-					EC30704	03/06/13	03/07/13	8015M	
C6-C12	· ND	25.3	mg/kg dry	1	EC 30704	05/00/15	05/07/15		
	ND ND	25.3 25.3	mg/kg dry mg/kg dry	1	EC30704	03/06/13	03/07/13	8015M	
C6-C12 >C12-C28									
C6-C12 >C12-C28 >C28-C35	ND	25.3	mg/kg dry	1	EC30704	03/06/13	03/07/13	8015M	
C6-C12	ND	25.3 25.3	mg/kg dry mg/kg dry	1 1 30	EC30704 EC30704	03/06/13 03/06/13	03/07/13 03/07/13	8015M 8015M	S-GC

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Mana		98	I "B" Line I	RP-2698		Fax: (432) 52	20-7701
			se Point @ 002-02 (Soi						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environn	iental La	b				
Organics by GC									
Benzene	0.00107	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	0.00569	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.0327	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (0)	0.00116	0.00100	mg/kg dry	i	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		113 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorohenzene		110 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by F</u>	CPA / Standard Metho	ds							
Chloride	290	1.03	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
Fotal Petroleum Hydrocarbons C6-	C35 by EPA Method 8	015M							
C6-C12	ND	25.8	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
>C12-C28	29.7	25.8	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
Surrogate: 1-Chlorooctane	· · · · · · · · ·	70.8 %	70-1	30	EC30802	03/07/13	03/07/13	8015M	
Surrogate: o-Terphenyl		89.0 %	70-1.	30	EC30802	03/07/13	03/07/13	8015M	
Fotal Hydrocarbon nC6-nC35	29.7	25.8	mg/kg dry	1	[CALC]	03/07/13	03/07/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Manaj		98	1 "B" Line 1	RP-2698		Fax: (432) 52	20-7701
			e Point @ 002-03 (Soi						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environn	iental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	0.00542	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.0197	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (0)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		121 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B -	
Surrogate: 4-Bromofluorobenzene		87.6%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
General Chemistry Parameters by E	PA / Standard Metho	ds							
Chloride	70.8	1.02	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	2.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	C35 by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
Surrogate: 1-Chlorooctane		68.9 %	70-1	30	EC30802	03/07/13	03/07/13	8015M	S-GC
Surrogate: o-Terphenyl		84.9 %	70-1	30	EC30802	03/07/13	03/07/13	8015M	
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/07/13	03/07/13	8015M	

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Mana		98	ıl "B" Line 1	RP-2698		Fax: (432) 5	20-7701
			Point S-W 1002-04 (Soi	0					
									<u> </u>
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environn	nental La	b				
One starter CO		Dust.		, ,	~				
<u>Organics by GC</u> Benzene	0.00319	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	<u> </u>
Tolnene	0.0158	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	0.0248	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	0.152	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	0.0203	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		97.8 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
General Chemistry Parameters by E	PA / Standard Method	ls							
Chloride	193	1.05	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	5.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u>Fotal Petroleum Hydrocarbons C6-C</u>	C35 by EPA Method 80)15M							
C6-C12	ND	26.3	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	· · · · ·
>C12-C28	ND	26.3	mg/kg dry	1	EC30802	03/07/13	03/07/13	8015M	
>C28-C35	ND	26.3	mg/kg dry	I	EC30802	03/07/13	03/07/13	8015M	
Surrogate: 1-Chlorooctane		129 %	70-1.	30	EC30802	03/07/13	03/07/13	8015M	
Surrogate: o-Terphenyl		158 %	70-1.	30	EC30802	03/07/13	03/07/13	8015M	S-GC
Total Hydrocarbon nC6-nC35	ND	26.3	mg/kg dry	1	[CALC]	03/07/13	03/07/13	8015M	

Nova Safety & Environment	Project: SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-2698	
Midland TX, 79703	Project Manager: Camille Bryant	

Organics by GC - Quality Control

	·····	rmian Ba								
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC30602 - General Preparatio	on (GC)									
Blank (EC30602-BLK1)				Prepared &	z Analyzed:	03/05/13				
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00200	**							
Xylene (0)	ND	0.00100	. "							
Surrogate: 1,4-Difluorobenzene	70.8		ug/kg	60.0		118	75-125			
Surrogate: 4-Bromofluorobenzene	41.1		· n	60.0		68.5	75-125			S-G0
LCS (EC30602-BS1)				Prepared &	2 Analyzed:	03/05/13		_		
Benzene	0.0831	0.00100	mg/kg wet	0.100		83.1	80-120			
Toluene	0.117	0.00200	н	0.100		117	80-120			
Ethylbenzene	0.120	0.00100	н	0.100		120	80-120			
Xylene (p/m)	0.219	.0.00200	**	0.200		109	80-120			
Xylene (o)	0.115	0.00100	н.	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	64.4		ug/kg	60.0		107	75-125			· · · <u>·</u> · · ·
Surrogate: 4-Bromofluorobenzene	55.7		"	60.0		92.8	75-125			
LCS Dup (EC30602-BSD1)				Prepared &	k Analyzed:	03/05/13				
Benzene	0.0815	0.00100	mg/kg wet	0.100		81.5	80-120	1.98	20	
Toluene	0.115	0.00200	"	0.100		115	80-120	1.70	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120	1.68	20	
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120	6.17	20	
Xylene (o)	0.112	0.00100	ц	0.100		112	80-120	2.02	20	
Surrogate: 1,4-Difluorobenzene	63.6		ug/kg	60.0		106	75-125			
Surrogate: 4-Bromofluorobenzene	54.0		"	60.0		90.0	75-125			
Matrix Spike (EC30602-MS1)	Soi	irce: 3C03004	-24	Prepared &	ż Analyzed:	03/05/13	-			
Benzene	0.0422	0.00100	mg/kg dry	0.108	0.00253	36.9	80-120			QM-0:
Toluene	0.0643	0.00200	η.	0.108	ND	59.8	80-120			QM-0:
Ethylbenzene	0.0716	0.00100	"	0.108	ND	66.5	80-120			QM-0:
Xylene (p/m)	0.421	0.00200		0.215	0.207	99.4	80-120			
Xylene (o)	0.113	0.00100	17	0.108	0.0320	75.8	80-120			QM-0:
Surrogate: 1,4-Difluorobenzene	57.0		ug/kg	60.0		94.9	75-125		_	
Surrogate: 4-Bromofluorobenzene	65.9		"	60.0		110	75-125			

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10014 SCR 1213 Midland, TX 79706 432-686-7235

Nova Safety & Environment 2057 Commerce Midland TX, 79703

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30602 - General Preparation (GC)

Matrix Spike Dup (EC30602-MSD1)	Sou	Source: 3C03004-24			& Analyzed:	03/05/13				
Benzene	0.0458	0.00100	mg/kg dry	0.108	0.00253	40.3	80-120	8,66	20	QM-05
Toluene	0.0726	0.00200	"	0.108	ND	67.5	80-120	12.2	20	QM-05
Ethylbenzene	0.0650	0.00100	н	0.108	ND	60.5	80-120	9.59	20	QM-05
Xylene (p/m)	0.367	0.00200	м	0.215	0.207	74.l	80-120	29.1	20	QM-05
Xylene (o)	0.114	0.00100	"	0.108	0.0320	75.9	80-120	0.145	20	QM-05
Surrogate: 1,4-Difluorobenzene	55.3		ug/kg	60.0		92.1	75-125			
Surrogate: 4-Bromofluorobenzene	64.0		"	60.0		107	75-125			

Permian Basin Environmental Lab

Nova Safety & Environment 2057 Commerce	Project: SUG Historical Cal "B" Line 1RP-2698							Fax: (432) 520-7701			
2057 Commerce Midland TX, 79703	Project Number: 1RP-2698 Project Manager: Camille Bryant										
		Project Ma	anager. Car			·					
General Chemistry Parameters by EPA / Standard Methods - Quality Control											
	Per	mian Ba	sin Envi	ronmenta	al Lab						
		Reporting		Spike	Source		%REC		RPD		
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch EC30604 - *** DEFAULT PRI	CP ***										
Blank (EC30604-BLK1)				Prepared: 0	3/05/13 A	nalyzed: 03	/06/13				
% Moisture	ND	0.1	%		_						
Duplicate (EC30604-DUP1)	Sour	ce: 3C03005	5-01	Prepared: 0)3/05/13 A	nalyzed: 03	3/06/13				
% Moisture	7.0	0.1	%		8.0			13.3	20		
Batch EC30804 - *** DEFAULT PRI	EP ***							_			
Blank (EC30804-BLK1)				Prepared &	: Analyzed:	03/08/13					
Chloride	ND	1.00	mg/kg wet								
LCS (EC30804-BS1)				Prepared &	: Analyzed:	03/08/13					
Chloride	9.68		mg/kg Wet	10.0		96.8	80-120		_		
LCS Dup (EC30804-BSD1)				Prepared &	: Analyzed:	03/08/13					
Chloride	9.70	· · · ·	mg/kg Wet	10.0		97.0	80-120	0.206	20		
Duplicate (EC30804-DUP1)	Sour	ce: 3C04002	2-01	Prepared &	Analyzed:	03/08/13					
Chloride	16.5	1.01	mg/kg dry		16.1			2.11	20		
Matrix Spike (EC30804-MS1)	Sour	ce: 3C04002	2-01	Prepared &	Analyzed:	03/08/13					
Chloride	134	1.01	mg/kg dry	126	16.1	93.7	80-120				

 Chloride
 134
 1.01
 mg/kg dry
 126
 16.1
 93.7
 80-120

 Matrix Spike (EC30804-MS2)
 Source: 3C04003-07
 Prepared & Analyzed: 03/08/13

 Chloride
 137
 1.02 mg/kg dry
 128
 3.74
 105
 80-120

Permian Basin Environmental Lab

Nova Safety & Environment	Project: SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-2698	
Midland TX, 79703	Project Manager: Camille Bryant	

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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC30704 - 8015M										
Blank (EC30704-BLK1)				Prepared: (03/06/13 A	nalyzed: 03	/07/13			
C6-C12	ND	25.0	mg/kg wet						•	
>C12-C28	ND	25.0	n							
>C28-C35	ND	25.0	"							
Surrogate: 1-C.hlorooctane	138		"	200		69.0	70-130			S-GC
Surrogate: o-Terphenyl	84.0		"	100		84.0	70-130			
LCS (EC30704-B\$1)				Prepared &	k Analyzed:	03/06/13				
C6-C12	1230	25.0	mg/kg wet	1500		81.9	75-125			
>C12-C28	1350	25.0	*	1500		89.9	75-125			
>C28-C35	ND	25.0	n	0.00			75-125		•	
Surrogate: 1-Chlorooctane	156		n	200		77.9	70-130			
Surrogate: o-Terphenyl	73.0		"	100		73.0	70-130			
LCS Dup (EC30704-BSD1)				Prepared: (03/06/13 A	nalyzed: 03	/07/13			
C6-C12	1400	25.0	mg/kg wet	1500		93.2	75-125	12.9	20	
>C12-C28	1570	25.0	"	1500		105	75-125	15.1	20	
>C28-C35	ND	25.0	n	0.00			75-125		20	
Surrogate: 1-Chlorooctane	183		"	200		91.3	70-130			
Surrogate: o-Terphenyl	83.0		"	100		83.0	70-130			
Matrix Spike (EC30704-MS1)	Sou	irce: 3C04002	2-01	Prepared: (03/06/13 A	nalyzed: 03	/07/13			
C6-C12	1650	25,3	mg/kg dry	1520	ND	109	75-125			
>C12-C28	1920	25.3	н	1520	ND	127	75-125			QM-05
>C28-C35	ND	25.3	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane			"	202		86.7	70-130			
Surrogate: o-Terphenyl	113		"	101		112	70-130			
Matrix Spike Dup (EC30704-MSD1)	Sou	irce: 3C04002	2-01	Prepared: (03/06/13 A	nalyzed: 03	8/07/13			
C6-C12	1360	25.3	mg/kg dry	1520	ND	90.0	75-125	19.0	20	
>C12-C28	1390	25.3		1520	ND	91.6	75-125	32.3	20	QM-05
>C28-C35	ND	25.3	"	0.00	ND		75-125		20	
Surrogate: I-Chlorooctane	171		"	202		84.8	70-130			

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Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

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

Analyte	Result		Units	-		%REC		RPD	RPD Limit	Notes
Batch EC30802 - TX 1005										
Blank (EC30802-BLK1)				Prepared &	z Analyzed:	03/07/13				
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	H							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	116		"	100	· ····	116	70-130			
Surrogate: o-Terphenyl	62.6		"	50.0		125	70-130			
LCS (EC30802-BS1)				Prepared &	z Analyzed:	03/07/13				
C6-C12	1240	25.0	mg/kg wet	1500		82.6	75-125			
>C12-C28	1270	25.0	н	1500		84.4	75-125			
>C28-C35	ND	25.0	п	0.00			75-125			
Surrogate: 1-Chlorooctane	109		"	100		109	70-130			
Surrogate: o-Terphenyl	60.9		"	50.0		122	70-130			
LCS Dup (EC30802-BSD1)				Prepared &	Analyzed:	03/07/13				
C6-C12	1290	25.0	mg/kg wet	1500		86.0	75-125	4.03	20	
>C12-C28	1370	25.0	"	1500		91.6	75-125	8.18	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	128		"	- 100		128	70-130			
Surrogate: o-Terphenyl	65.0		"	50.0		130	70-130			
Matrix Spike (EC30802-MS1)	Sou	rce: 3C05001	-04	Prepared &	z Analyzed:	03/07/13				
C6-C12	1360	25.3	mg/kg dry	1520	ND	89.8	75-125			
>C12-C28	1290	25.3	*	1520	ND	85.2	75-125			
>C28-C35	195	25.3	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	156		"	202		77.2	70-130			
Surrogate: o-Terphenyl	. 77.1		"	101 ·		76.3	70-130			
Matrix Spike Dup (EC30802-MSD1)	Sou	rce: 3C05001	-04	Prepared &	Analyzed:	03/07/13				
C6-C12	1430	25.3	mg/kg dry	1520	ND	94.1	75-125	4.70	20	
>C12-C28	1310	25.3	"	1520	ND	86.6	75-125	1.54	20	
>C28-C35	ND	25.3	H	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	165		"	202		81.8	70-130			
Surrogate: o-Terphenyl	78.1		"	101		77.3	70-130			

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	Nova Safety & Environment		Project:	SUG Historical Cal "B" Line IRP-2698	Fax: (432) 520-7701
ł	2057 Commerce	I	Project Number:	1RP-2698	
	Midland TX, 79703	P	roject Manager:	Camille Bryant	

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

- Sample results reported on a dry weight basis dгу
- RPD **Relative Percent Difference**
- LCS Laboratory Control Spike

Duplicate

MS Matrix Spike

Dup

Sunor Report Approved By: Date: 3/8/2013

Brent Barron, Laboratory Director/Technical Director

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Permian Basin Environmental Lab

Project Manager: Camille Bryant Project Mame: Company Name NOVA Safety and Environmental Project A: Company Name NOVA Safety and Environmental Project A: Company Address: 2057 Commerce Project Loc: City/State/Zip: Midland, Texas 79703 PO #: Telephone No: 432.520.7701 Report Format: S Sampler Signature Container Midland, Texas 79703 roza slade@suct.com roza Company Address: 0 Company Address: 0 Company Address: 0 Sampler Signature Company Address: 0 Fax No: 432.520.7701 Report Format: S Company Address: Company Address: Company Address: 0 Company Address: 0 0 Company Address: Company Address: Company Address: 0	Li Standard Analy CLP:	Lea County N		
Company Address: 2057 Commerce Project Loc: City/State/Zip: Midland, Texas 79703 PO #:	Standard Analy CLP:			
City/State/Zip: Midland, Texas 79703 P0 #: Telephone No: 432.520.7720 Fax No: 432.520.7701 Report Format: State Sampler Signature Cotyant@novatraining.cc cotyant@novatraining.cc Total Total ab use only Cotyant@novatraining.cc roce State Total State cotyant@novatraining.cc roce State State State State State State cotyant@novatraining.cc roce State State State State State State cotyant@novatraining.cc roce <td>Standard Analy CLP:</td> <td></td> <td></td> <td></td>	Standard Analy CLP:			
Telephone No: 432.520.7720 Fax No: 432.520.7701 Report Format: State Sampler Signature Corrent@novatraining.cc e-mail: cbrvant@novatraining.cc TotA ab use only: Corrent@novatraining.cc rose_slade@sug.com TotA DRDER.#: State 0001 XL 001	Analy CLP:			
Sampler Signature Sompler Signature Corvant@novatraining.cc (ab use only) Index Signature Index Signatur	Analy CLP:		_	
Interview of the second	CLP:			DES
Interviewer TOTA TOTA ORDER #: 3 COS OOZ TOTA Interviewer TOTA TOTA <t< td=""><td>CLP:</td><td>· · · ·</td><td></td><td></td></t<>	CLP:	· · · ·		
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Mail Mail <th< td=""><td>1 1 1</td><td></td><td></td><td>48, 72 h</td></th<>	1 1 1			48, 72 h
Image: Constraint of the second sec	SAR / ESP / CEC Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles	Semivolatlies Butex 8021B/50300r BTEX 8260 RCI		54
Image: Constraint of the second se	2 5	r BTE		RUSH TAT (Pre-Schedule)
Image: Constraint of the second se	Ba U		300	Pre-Sc
Image: Constraint of the second se	SP/C	021B/(A. tes	TAT (
Image: Constraint of the second se	SAR / E Metals: Volatile:	Semivolati RTEX 802 RCI	N.O.R.M. Chlorides	RUSH TAT (P
Release Point @ 8' 3/1/2013 930 1 X Soil x A @ 2 Release Point @ 12' 3/1/2013 940 1 X Soil x A @ 3/1/2013 940 1 X Soil x A @ 4 Release Point @ 12' 3/1/2013 940 1 X Soil x @ 4 Release Point S-W @ 11' 3/1/2013 950 1 X Soil x A	<u>∞ ≥ ></u>		2 U X	Ц <u>с</u>
OC Release Point @ 12' 3/1/2013 940 1 X Soil x OC Release Point S-W @ 11' 3/1/2013 950 1 X Soil x		x	x	
		x	x	r^{λ}
Release Point S-W-1 @ 11' 3/1/2013 1030 1 X Soil x		x	x	Ľ.
		x	x	÷
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Special Instructions: Hold Release Point S-W-1 @ 11'	atory Comm	ments: rstintact?		
	Free of Hea	adspace?		N
	ion containe y seals on c	container(s)		
Received by: Date Time Received by: Date Time Sample H	v seals on c Hand Deliv	ivered	Ø	N N N
North and Stulia in Nikler Green 3/11/13 him	Completio	ent Rep. ? UPS DHI n Receipt. C S C Fact	Long Events	N e St

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



Analytical Report

Prepared for:

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

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Location: Lea County New Mexico

Lab Order Number: 3C04003



NELAP/TCEQ # T104704156-12-1

Report Date: 03/08/13

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Road-5 Surface	3C04003-01	Soil	02/28/13 10:00	03-04-2013 11:12
Road-5 @ 6'	3C04003-02	Soil	02/28/13 10:15	03-04-2013 11:12
Road-5 @ 12'	3C04003-03	Soil	02/28/13 10:25	03-04-2013 11:12
Road-5 East S/W @ 11'	3C04003-04	Soil	02/28/13 10:30	03-04-2013 11:12
North-1 Surface	3C04003-05	Soil	02/28/13 10:50	03-04-2013 11:12
North-1 @ 6'	3C04003-06	Soil	02/28/13 11:00	. 03-04-2013 11:12
North S-W @ 5'	3C04003-07	Soil	02/28/13 11:30	03-04-2013 11:12

Road-5 Surface 3C04003-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
	Pe	ermian Basi	n Environn	ental Lal	0				
Organics by GC									
Benzene	ND	0.00100	mg/kgˈdry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	I	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		118%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		79.9 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by El</u>	PA / Standard Metho	ds							
Chloride	359	1.11	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	10.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u> Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015 <u>M</u>							
C6-C12	ND	27.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
	ND	27.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND			1	EC30805	03/08/13	03/08/13	8015M	
	ND	27.8	mg/kg dry	1	LC 50805	05/08/15	05/00/15	0010101	
>C28-C35		27.8 105 %	mg/kg dry 70-1		EC30805	03/08/13	03/08/13	801 <u>5</u> M	
>C12-C28 >C28-C35 Surrogate: 1-Chlorooctane Surrogate: o-Terphenyl				30					

Permian Basin Environmental Lab

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant								
			ad-5 @ 6' 003-02 (Soi	I)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Pe	ermian Basi	n Environm	iental Lai	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1 ·	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (0)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		77.3 %	75-1.	25	EC30602	03/05/13	03/05/13	EPA 8021B		
<u>General Chemistry Parameters by El</u>	PA / Standard Method	ts								
Chloride	95.9	1.04	mg/kg dry	i	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	4.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation		
<u> Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 80	015M					-			
C6-C12	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
Surrogate: 1-Chlorooctane		71.9 %	70-1.	30	EC30805	03/08/13	03/08/13	8015M		
Surrogate: o-Terphenyl		84.1 %	70-1.	30	EC30805	03/08/13	03/08/13	8015M		
Total Hydrocarbon nC6-nC35	ND	26.0	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			ıd-5 @ 12 003-03 (Soi						
Analyte .	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	rmian Basi	n Environn	nental La)				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		48.4 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
General Chemistry Parameters by EF	A / Standard Method	ls							
Chloride	32.1	1.03	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 80	015M							
C6-C12	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		73.1 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	
Surrogate: o-Terphenyl		88.2 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

Permian Basin Environmental Lab

Nova Safety & Environment		Proj	ect: SUG His	torical Ca	l "B" Line 1	RP-2698		Fax: (432) 52	20-7701
2057 Commerce		-	ber: 1RP-269						
Midland TX, 79703		Project Mana	ger: Camille I	Bryant					
		Road-5	East S/W @) 11'					
			003-04 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	n Environme	ental Lal	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1.	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	I	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	· I	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		116 %	75-12	5	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		68.1 %	75-12:	5	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
<u>General Chemistry Parameters by El</u>	PA / Standard Metho	ds							
Chloride	. 32.8	1.02	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	2.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u> Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	25.5	mg/kg đry	I	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	25.5	mg/kg dry 🕠	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		60.7 %	70-130)	EC30805	03/08/13	03/08/13	8015M	S-GC
Surrogate: o-Terphenyl		72.5 %	70-130)	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		5	ect: SUG His ber: IRP-269 ger: Camille	8	1 "B" Line 1	RP-2698		Fax: (432) 52	20-7701
			h-1 Surfac 003-05 (Soil	_					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environm	ental La	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	i	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		118 %	75-12	5	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Broinofluorobenzene		65.7 %	75-12	5	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
General Chemistry Parameters by El	PA / Standard Method	ls							
Chloride	2.41	1.03	mg/kg dry	l	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	3.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	25.8	mg/kg dry	1.	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane	···· · ·	71.2 %	70-13	0	EC30805	03/08/13	03/08/13	8015M	
Surrogate: o-Terphenyl		82.8 %	70-13	0	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							
			rth-1 @ 6' 003-06 (So						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environn	nental Lal	b				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	•
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (0)	ND	0.00100	mg/kg dry	l	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		116%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		67.8 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S- GC
<u>General Chemistry Parameters by El</u>	PA / Standard Method	ls							
Chloride	18.6	1.08	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	7.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	26.9	mg/kg dry	1	EC30805	03/08/13	. 03/08/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		68.5 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	S-GC
Surrogate: o-Terphenyl		82.4 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	26.9	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

Nova Satety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							Fax: (432) 520-7701	
			h S-W @ 5 003-07 (Soi							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basi	n Environm	ental Lal	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30602 ·	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	· 1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	-	
Surrogate: 1,4-Difluorobenzene		116%	75-12	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		66.3 %	75-12	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
<u>General Chemistry Parameters by EF</u>	A / Standard Metho	ds								
Chloride	3.74	1.02	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	2.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation		
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M			. =					
C6-C12	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	. 8015M		
Surrogate: 1-Chlorooctane		65.8 %	70-1.	30	EC30805	03/08/13	03/08/13	8015M	S-GC	
Surrogate: o-Terphenyl		81.4 %	70-13	30	EC30805	03/08/13	03/08/13	8015M		
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							Fax: (432) 520-7701		
		rganics by rmian Ba		-							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EC30602 - General Preparatio	n (GC)										
Blank (EC30602-BLK1)				Prepared &	Analyzed:	03/05/13		_			
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	70.8	· · · <u>· · ·</u> · · · · · · · · · · · · ·	ug/kg	60.0		118	75-125	· · ·			
Surrogate: 4-Bromofluorobenzene	41.1		n	60.0		68.5	75-125			S- G	
LCS (EC30602-BS1)				Prepared &	z Analyzed:	03/05/13					
Benzene	0.0831	0.00100	mg/kg wet	0.100		83.1	80-120				
Toluene	0.117	0.00200	"	0.100		117	80-120				
Ethylbenzene	0.120	0.00100	"	0.100		120	80-120				
Xylene (p/m)	0.219	0.00200	"	0.200		109	80-120				
Xylene (0)	0.115	0.00100	"	0.100		115	80-120				
Surrogate: 1,4-Difluorobenzene	64.4		ug/kg	60.0		107	75-125				

LCS Dup (EC30602-BSD1)				Prepared &	& Analyzed:	03/05/13				
Benzene	0.0815	0.00100	mg/kg wet	0.100		81.5	80-120	1.98	20	
Toluene	0.115	0.00200	"	0,100		115	80-120	1.70	20	
Ethylbenzene	0.118	0,00100	"	0.100		118	80-120	1.68	20	
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120	6.17	20	
Xylene (o)	0.112	0.00100	"	0.100		112	80-120	2.02	20	
Surrogate: 1,4-Difluorobenzene	63.6		ug/kg	60.0	· •	106	75-125			
Surrogate: 4-Bromofluorobenzene	54.0		"	60.0		90.0	75-125			
Matrix Spike (EC30602-MS1)	Sour	rce: 3C03004	1-24	Prepared &	& Analyzed:	03/05/13				
Benzene	0.0422	0.00100	mg/kg dry	0.108	0.00253	36.9	80-120			QM-05
Toluene	0.0643	0.00200	"	0.108	ND	59.8	80-120			QM-05
Ethylbenzene	0.0716	0.00100	"	0,108	ND	66.5	80-120			QM-05
Xylene (p/m)	0.421	0.00200	"	0.215	0.207	99.4	80-120			
Xylene (o)	0.113	0.00100	"	0.108	0.0320	75.8	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	57.0		ug/kg	60.0		94.9	75-125			<u>.</u>
Surrogate: 4-Bromofluorohenzene	65.9		"	60.0		110	75-125			

60.0

92.8

75-125

55.7

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Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte .	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30602 - General Preparation (GC)

Matrix Spike Dup (EC30602-MSD1)	Sou	rce: 3C03004	Prepared &	& Analyzed:	03/05/13				·	
Benzene	0.0458	0.00100	mg/kg dry	0.108	0.00253	40.3	80-120	8.66	20	QM-05
Toluene	0.0726	0.00200	"	0.108	ND	67.5	80-120	12.2	20	QM-05
Ethylbenzene	0.0650	0.00100	"	0.108	ND	60.5	80-120	9.59	20	QM-05
Xylene (p/m)	0.367	0.00200	"	0.215	0.207	74.1	80-120	29.1	20	QM-05
Xylene (0)	0.114	0.00100		0.108	0.0320	75.9	80-120	0.145	20	QM-05
Surrogate: 1,4-Difluorobenzene	55.3		ug/kg	60.0		92.1	75-125			
Surrogate: 4-Bromofluorobenzene	64.0		"	60.0		107	75-125			

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10014 SCR 1213 Midland, TX 79706 432-686-7235

Nova Safety & Environment		Р	roject: SU	G Historical	Cal "B" Lir	ie 1RP-269	8		Fax: (432)	520-7701
2057 Commerce		Project Ni	umber: iRl	P-2698						
Midland TX, 79703		Project Ma	nager: Car	nille Bryant						
General C	hemistry Para	•				ls - Qua	lity Con	trol		
	Per	mian Ba	sin Envi	ronmenta	nl Lab					
		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EC30604 - *** DEFAULT PREP	***	· · · · · ·								
Blank (EC30604-BLK1)				Prepared: 0	3/05/13 A	nalyzed: 03	/06/13			
% Moisture	ND	0.1	%							
Duplicate (EC30604-DUP1)	Sour	ce: 3C03005	-01	Prepared: 0	03/05/13 A	nalyzed: 03	/06/13			
% Moisture	7.0	0.1	%		8.0			13.3	20	
Batch EC30804 - *** DEFAULT PREP	***									
Blank (EC30804-BLK1)				Prepared &	: Analyzed:	03/08/13				
Chloride	ND	1.00	mg/kg wet							
LCS (EC30804-BS1)				Prepared &	: Analyzed:	03/08/13				
Chloride	9.68		mg/kg Wet	10.0		96.8	80-120			
LCS Dup (EC30804-BSD1)				Prepared &	: Analyzed:	03/08/13				
Chloride	9.70		mg/kg Wet	10.0	, .e.	97.0	80-120	0.206	20	
Duplicate (EC30804-DUP1)	Sour	ce: 3C04002	-01	Prepared &	: Analvzed:	03/08/13				
JUDIICALE (EC. 30004-170/F1)			mg/kg dry		16.1			2.11	20	
Chloride	16.5	1.01								
Chloride			-01	Prepared &	Analyzed	03/08/13				
		ce: 3C04002	-01 mg/kg dry	Prepared &	Analyzed: 16.1	03/08/13 93.7	80-120			
Chloride Matrix Spike (EC30804-MS1)	Sour 134	ce: 3C04002	mg/kg dry		16.1	93.7	80-120			

Permian Basin Environmental Lab

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

Permian	Basin	Environmental	Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30805 - 8015M

Blank (EC30805-BLK1)				Prepared & Anal	lyzed: 03/08/13				
C6-C12	ND	25.0	mg/kg wet						
>C12-C28	ND	25.0	11						
>C28-C35	ND	25.0	"						
Surrogate: 1-Chlorooctane	144		"	200	72.2	70-130			
Surrogate: o-Terphenyl	83.6		"	100	83.6	70-130			
LCS (EC30805-BS1)				Prepared & Anal	lyzed: 03/08/13				
C6-C12	1440	25.0	mg/kg wet	1500	95.9	75-125			
>C12-C28	1570	25.0	"	1500	104	75-125			
>C28-C35	ND	25.0		0.00		. 75-125			
Surrogate: 1-Chlorooctane	165		"	200	82.4	70-130			
Surrogate: o-Terphenyl	85.8		"	100	85.8	70-130			
LCS Dup (EC30805-BSD1)				Prepared & Anal	lyzed: 03/08/13				
C6-C12	1520	25.0	mg/kg wet	1500	101	75-125	5.34	20	
>C12-C28	1650	25.0	"	1500	110	75-125	5.21	20	
>C28-C35	ND	25.0	n	0.00		75-125		20	
Surrogate: 1-Chlorooctane	178		"	200	88.8	70-130			
Surrogate: o-Terphenyl	90.8		"	100	90.8	70-130			

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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:

Date:

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab

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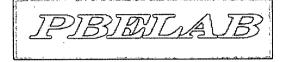
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10014 SCR 1213 Midland, TX 79706 432-686-7235

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use only)		Depth	pth	bled	pled	ed Containers							SL=Studge S=Soil/Solid	80151 801	05 TX 1006 Ma Na Ki	Anions (Cl, SO4, Alkalinity)	CEC	Metals: As Ag Ba Cd Cr Pb Hg Se		BTEX 80218/5030 or BTEX 8260		300		RUSH TAT (Pre-Schedule) 24, 4	AT I
LAB# (labı	FJELD CODE	Beginning	Ending Depth	Date Sampled	Time Sampled	Field Filtered Total #. of Co	lce	HNO3	E HC	NaOH	Na ₂ S ₂ O ₃	None Other / Specifier	DW=Drinking Water GW = Groundwater ND=Nn=Dotoble	TPH: 418.1	TPH: TX 1005 TX Cations (Ca. Mo. Na. K)	Anions (CI, St	SAR / ESP / CEC	Metals: As Ag	Volaujes Semivolatijes	6TEX 8021B/	RCI N.O.R.M.	Chlorides E		RUSH TAT	Standard T
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PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



Analytical Report

Prepared for:

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

Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Location: Lea County New Mexico

Lab Order Number: 3C04003



NELAP/TCEQ # T104704156-12-1

Report Date: 03/08/13

Nova Safety & EnvironmentProject:SUG Historical Cal "B" Line 1RP-2698Fax: (432) 520-77012057 CommerceProject Number:1RP-2698Midland TX, 79703Project Manager:Camille Bryant

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Road-5 Surface	3C04003-01	Soil	02/28/13 10:00	03-04-2013 11:12
Road-5 @ 6'	3C04003-02	Soil	02/28/13 10:15	03-04-2013 11:12
Road-5 @ 12'	3C04003-03	Soil	02/28/13 10:25	03-04-2013 11:12
Road-5 East S/W @ 11'	3C04003-04	Soil	02/28/13 10:30	03-04-2013 11:12
North-1 Surface	3C04003-05	Soil	02/28/13 10:50	03-04-2013 11:12
North-1 @ 6'	3C04003-06	Soil	02/28/13 11:00	03-04-2013 11:12
North S-W @ 5'	3C04003-07	Soil	02/28/13 11:30	03-04-2013 11:12

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-770
2057 Commerce	Project Number:	IRP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Road-5 Surface	
3C04003-01 (Soil)	

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Po	ermian Basi	n Environn	nental Lal)				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	· 1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		118 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		79.9 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ts							
Chloride	359	1.11	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	10.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M							
C6-C12	ND	27.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	27.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	27.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		105 %	70-1	30	EC30805	· 03/08/13	03/08/13	8015M	
Surrogate: o-Terphenyl		126 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	
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Nova Safety & Environment		Proj	ect: SUG Hi	istorical Ca	"B" ine 1	RP-2698		Fax: (432) 52	20-7701
2057 Commerce		Project Num			I D LINE I	KF-2096		(,	
Midland TX, 79703		Project Mana							
initialia 1X, 79705		i ioject Mana	ser. Camine	Bryan				• <u>•</u> •••	
		Ro	ad-5 @ 6'						
		3C04	003-02 (Soi	1)					
		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	P	ermian Basi	1 Environa	iental La	h				
Organica by CC	-				-				
Organics by GC Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Foluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		77.3 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	
General Chemistry Parameters by EP	A / Standard Metho	ls							
Chloride	95.9	1.04	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	4.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C3	5 by EPA Method 8	015M							
C6-C12	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		71.9%	70-1.	30	EC30805	03/08/13	03/08/13	8015M	
Surrogate: o-Terphenyl		84.1 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	26.0	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

10014 SCR 1213 Midland, TX 79706 432-686-7235

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Proj Project Num Project Mana		98	l "B" Line 1	RP-2698		Fax: (432) 520-7701		
		Roa	nd-5 @ 12	,			·			
		3C04	003-03 (Soi	il)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
· · ·	Ро	ermian Basi	n Environn	nental La	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Foluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Kylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		117 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		48.4 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
General Chemistry Parameters by EP	A / Standard Method	ls								
Chloride	32.1	1.03	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	3.0	0.1	%	+ 1	EC30604	03/05/13	03/06/13	% calculation		
<u> Fotal Petroleum Hydrocarbons C6-C.</u>	35 by EPA Method 8)15M								
C6-C12	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
Surrogate: 1-Chlorooctane		73.1 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Surrogate: o-Terphenyl		88.2 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Fotal Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Fax: (432 Project Number: 1RP-2698 Project Manager: Camille Bryant								
			East S/W () 003-04 (Soi	<u> </u>						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basi	n Environn	iental La	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		116%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		68.1 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
General Chemistry Parameters by E	PA / Standard Metho	ds								
Chloride	32.8	1.02	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	2.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation		
Total Petroleum Hydrocarbons C6-C	35 by EPA Method 8	015M								
C6-C12	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
Surrogate: 1-Chlorooctane		60.7 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	 S-GC	
Surrogate: o-Terphenyl		72.5 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

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Nova Safety & Environment		Proj	ect: SUG H	istorical Ca	l "B" Line 1	RP-2698		Fax: (432) 520-7701		
2057 Commerce		Project Num	ber: 1RP-26	98						
Midland TX, 79703		Project Mana	ger: <u>C</u> amille	Bryant						
		Nort	h-1 Surfa	e				······		
		3C04	003-05 (Soi	il)						
		Reporting								
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	P	ermian Basi	n Environn	nental La	b					
Organics by GC			=							
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		118 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		65.7 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
<u>General Chemistry Parameters by E</u>	PA / Standard Metho	ds								
Chloride	2.41	1.03	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	3.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation		
<u> Total Petroleum Hydrocarbons C6-C</u>	C35 by EPA Method 8	015M	-						•	
C6-C12	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	25.8	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
Surrogate: 1-Chlorooctane		71.2 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Surrogate: o-Terphenyl		82.8 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Total Hydrocarbon nC6-nC35	ND	25.8	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

Permian Basin Environmental Lab

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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Nova Safety & Environment 2057 Commerce Midland TX, 79703		Project: SUG Historical Cal "B" Line 1RP-2698 Project Number: 1RP-2698 Project Manager: Camille Bryant							20-7701
· · · ·			rth-1 @ 6' 003-06 (Soil)						
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Pe	rmian Basi	n Environme	ntal La	b .				
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	I	EC30602	03/05/13	03/05/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		116 %	75-125	5	EC30602 .	03/05/13	03/05/13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		67.8 %	75-125	5	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC
General Chemistry Parameters by E	PA / Standard Method	ls							
Chloride	18.6	1.08	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0	
% Moisture	7.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation	
Total Petroleum Hydrocarbons C6-C	C35 by EPA Method 80)15M							
C6-C12	ND	26.9	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M	
Surrogate: 1-Chlorooctane		68.5 %	70-130)	EC30805	03/08/13	03/08/13	8015M	S-GC
Surrogate: o-Terphenyl		82.4 %	70-130)	EC30805	03/08/13	03/08/13	8015M	
Total Hydrocarbon nC6-nC35	ND	26.9	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M	

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Nova Safety & EnvironmentProject:SUG Historical Cal "B" Line 1RP-26982057 CommerceProject Number:1RP-2698Midland TX, 79703Project Manager:Camille Bryant										
			h S-W @ : 003-07 (Soi							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
	Po	ermian Basi	n Environn	nental Lal	b					
Organics by GC										
Benzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Toluene	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Ethylbenzene	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Xylene (o)	ND	0.00100	mg/kg dry	1	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 1,4-Difluorobenzene		116%	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B		
Surrogate: 4-Bromofluorobenzene		66.3 %	75-1	25	EC30602	03/05/13	03/05/13	EPA 8021B	S-GC	
<u>General Chemistry Parameters by E</u>	PA / Standard Method	ls					•			
Chloride	3.74	1.02	mg/kg dry	1	EC30804	03/08/13	03/08/13	EPA 300.0		
% Moisture	2.0	0.1	%	1	EC30604	03/05/13	03/06/13	% calculation		
<u>Total Petroleum Hydrocarbons C6-C</u>	35 by EPA Method 8	015M				_				
C6-C12	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C12-C28	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
>C28-C35	ND	25.5	mg/kg dry	1	EC30805	03/08/13	03/08/13	8015M		
Surrogate: 1-Chlorooctane		65.8 %	70-1	30	EC30805	03/08/13	03/08/13	8015M	S-GC	
Surrogate: o-Terphenyl		81.4 %	70-1	30	EC30805	03/08/13	03/08/13	8015M		
Total Hydrocarbon nC6-nC35	ND	25.5	mg/kg dry	1	[CALC]	03/08/13	03/08/13	8015M		

Nova Safety & Environment 2057 Commerce Midland TX, 79703	Project Number: 1RP-2698									520-7701
	0	rganics by	GC - Q	uality Co	ontrol					
	Pe	rmian Ba	sin Envi	ronment	al Lab		•			·
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC30602 - General Preparation	(GC)									
Blank (EC30602-BLK1)				Prepared &	& Analyzed:	03/05/13				
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	70.8		ug/kg	60.0		118	75-125			
Surrogate: 4-Bromofluorobenzene	41.1		"	60.0		68.5	75-125			S- G
LCS (EC30602-BS1)				Prepared &	& Analyzed:	03/05/13				
Benzene	0.0831	0.00100	mg/kg wet	0.100		83.1	80-120			
Toluene	0.117	0.00200	"	0.100		117	80-120			
Ethylbenzene	0.120	0.00100	"	0.100		120	80-120			
Xylene (p/m)	0.219	0.00200	"	0.200		109	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	64.4		ug/kg	60.0		107	75-125			
Surrogate: 4-Bromofluorobenzene	55.7		"	60.0		92.8	75-125			
LCS Dup (EC30602-BSD1)				Prepared &	& Analyzed:	03/05/13				
Benzene	0.0815	0.00100	mg/kg wet	0.100		81.5	80-120	1.98	20	
Toluene	0.115	0.00200	11	0.100		115	80-120	1.70	20	
Ethylbenzene	0.118	0.00100	11	0.100		118	80-120	1.68	20	
Xylene (p/m)	0.233	0.00200	11	0.200		116	80-120	6.17	20	
Xylene (o)	0.112	0.00100	11	0.100		112	80-120	2.02	20	
Surrogate: 1,4-Difluorobenzene	63.6		ug/kg	60.0		106	75-125			
Surrogate: 4-Bromofluorobenzene	54.0		"	60.0		. 90.0	75-125			
Matrix Spike (EC30602-MS1)	Sou	Irce: 3C03004	-24	Prepared &	& Analyzed:	03/05/13				
Benzene	0.0422	0.00100	mg/kg dry	0.108	0.00253	36.9	80-120			QM-0
Toluene	0.0643	0.00200	"	0.108	ND	59.8	80-120			QM-0
Ethylbenzene	0.0716	. 0.00100	"	0.108	ND	66.5	80-120			QM-0
Xylene (p/m)	0.421	0.00200	"	0.215	0.207	99.4	80-120			

0.113

57.0

65.9

0.00100

,,

ug/kg " 0.108

60.0

60.0

0.0320

75.8

94.9

110

80-120

75-125

75-125

Xylene (o)

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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QM-05

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Organics by GC - Quality Control

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30602 - General Preparation (GC)

Matrix Spike Dup (EC30602-MSD1)	Sou	rce: 3C03004	l-24 ·	Prepared &	& Analyzed:	03/05/13				
Benzene	0.0458	0.00100	mg/kg dry	0.108	0.00253	40.3	80-120	8.66	20	QM-05
Toluene	0.0726	0.00200	"	0.108	ND	67.5	80-120	12.2	20	QM-05
Ethylbenzene	0.0650	0.00100	"	0.108	ND	60.5	80-120	9.59	20	QM-05
Xylene (p/m)	0.367	0.00200	. "	0.215	0.207	74.1	80-120	29.1	20	QM-05
Xylene (o)	0.114	0.00100	"	0.108	0.0320	75.9	80-120	0.145	20	QM-05
Surrogate: 1,4-Difluorobenzene	55.3		ug/kg	60.0		92.1	75-125			
Surrogate: 4-Bromofluorobenzene *	64.0		"	60.0		107	75-125			

Permian Basin Environmental Lab

The results in this report apply to the sample's analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

10014 SCR 1213 Midland, TX 79706 432-686-7235

Nova Safety & Environment		P	roject: SU	G Historical	Cal "B" Lir	ne 1RP-269	8	Fax: (432) 520-770				
2057 Commerce		Project Nu	umber: 1RI	P-2698								
Midland TX, 79703		Project Ma	nager: Car	nille Bryant								
General Ch	emistry Para	meters by	7 EPA / S	Standard	Method	ls - Qua	lity Con	trol				
	Pe	rmian Bas	sin Envi	ronmenta	al Lab							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch EC30604 - *** DEFAULT PREP *	**											
Blank (EC30604-BLK1)				Prepared: 0	3/05/13 A	nalyzed: 03	/06/13					
% Moisture	ND	0.1	%									
Duplicate (EC30604-DUP1)	Sou	rce: 3C03005	-01	Prepared: 0	3/05/13 A	nalyzed: 03	/06/13					
Dupicate (BC30004-DOI I)		ICE. 3C03003	-01	Tropatou. 0	5105115 10	nury 200. 05	100110					
% Moisture	7.0	0.1	%		8.0	nuryzou. 05		13.3	20			
······································	7.0			Trepared. 6		intry 200. 05		13.3	20			
% Moisture	7.0			Prepared &	8.0			13.3	20			
% Moisture Batch EC30804 - *** DEFAULT PREP *	7.0	0.1			8.0			13.3	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride	7.0	0.1	%	Prepared &	8.0 2 Analyzed:	03/08/13		13.3	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1)	7.0	0.1	%		8.0 2 Analyzed:	03/08/13	80-120	13.3	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride	7.0 *** ND	0.1	% mg/kg wet	Prepared & Prepared & 10.0	8.0 2 Analyzed: 2 Analyzed:	03/08/13 03/08/13 96.8		13.3	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1)	7.0 *** ND	0.1	% mg/kg wet	Prepared & Prepared &	8.0 2 Analyzed: 2 Analyzed:	03/08/13 03/08/13 96.8		0.206	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride LCS Dup (EC30804-BSD1) Chloride	7.0 *** ND 9.68 9.70	0.1	% mg/kg wet mg/kg Wet	Prepared & Prepared & 10.0 Prepared & 10.0	8.0 : Analyzed: : Analyzed: : Analyzed:	03/08/13 03/08/13 96.8 03/08/13 97.0	80-120					
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride LCS Dup (EC30804-BSD1)	7.0 *** ND 9.68 9.70	0.1 1.00 rce: 3C04002	% mg/kg wet mg/kg Wet	Prepared & Prepared & 10.0 Prepared &	8.0 : Analyzed: : Analyzed: : Analyzed:	03/08/13 03/08/13 96.8 03/08/13 97.0	80-120					
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride LCS Dup (EC30804-BSD1) Chloride Duplicate (EC30804-DUP1) Chloride	7.0 *** ND 9.68 9.70 Sou 16.5	0.1 1.00 rce: 3C04002 1.01	% mg/kg wet mg/kg Wet -01 mg/kg dry	Prepared & Prepared & 10.0 Prepared & 10.0 Prepared &	8.0 Analyzed: Analyzed: Analyzed: Analyzed: 16.1	03/08/13 03/08/13 96.8 03/08/13 97.0 03/08/13	80-120	0.206	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride LCS Dup (EC30804-BSD1) Chloride Duplicate (EC30804-DUP1) Chloride Matrix Spike (EC30804-MS1)	7.0 *** ND 9.68 9.70 <u>Sou</u> 16.5 <u>Sou</u>	0.1 1.00 rce: 3C04002 1.01 rce: 3C04002	% mg/kg wet mg/kg Wet -01 mg/kg dry -01	Prepared & Prepared & 10.0 Prepared & 10.0 Prepared & Prepared &	8.0 Analyzed: Analyzed: Analyzed: Analyzed: 16.1 Analyzed:	03/08/13 03/08/13 96.8 03/08/13 97.0 03/08/13 03/08/13	80-120 80-120	0.206	20			
% Moisture Batch EC30804 - *** DEFAULT PREP * Blank (EC30804-BLK1) Chloride LCS (EC30804-BS1) Chloride LCS Dup (EC30804-BSD1) Chloride Duplicate (EC30804-DUP1)	7.0 *** ND 9.68 9.70 Sou 16.5 Sou 134	0.1 1.00 rce: 3C04002 1.01 rce: 3C04002	% mg/kg wet mg/kg Wet -01 mg/kg dry -01 mg/kg dry	Prepared & Prepared & 10.0 Prepared & 10.0 Prepared &	8.0 2 Analyzed: 2 Analyzed: 2 Analyzed: 2 Analyzed: 16.1 2 Analyzed: 16.1	03/08/13 03/08/13 96.8 03/08/13 97.0 03/08/13 93.7	80-120	0.206	20			

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

Permian Basin Environmental Lab

		Reporting		Spike	Source		%REC		RPD	
Analyte R	tesult	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EC30805 - 8015M

Blank (EC30805-BLK1)				Prepared & Ana	lyzed: 03/08/13				
C6-C12	ND	25.0	mg/kg wet						
>C12-C28	ND	25.0	"						
>C28-C35	ND	25.0	"						
Surrogate: 1-Chlorooctane	144		"	200	72.2	70-130			
Surrogate: o-Terphenyl	83.6		"	100	83.6	70-130			
LCS (EC30805-BS1)				Prepared & Anal	lyzed: 03/08/13				
C6-C12	1440	25:0	mg/kg wet	1500	95.9	75-125			
>C12-C28	1570	25.0	"	1500	104	75-125			
>C28-C35	ND	25.0	"	0.00		75-125			
Surrogate: 1-Chlorooctane	165		"	200	82.4	70-130			
Surrogate: o-Terphenyl	85.8		"	100	85.8	70-130			
LCS Dup (EC30805-BSD1)				Prepared & Anal	lyzed: 03/08/13				
C6-C12	1520	25.0	mg/kg wet	1500	101	75-125	5.34	20	
>C12-C28	1650	25.0	"	1500	110	75-125	5.21	20	
>C28-C35	ND	25.0	"	0.00		75-125		20	
Surrogate: 1-Chlorooctane	178		"	200	88.8	70-130			
Surrogate: o-Terphenyl	90.8		"	100	90.8	70-130			

Permian Basin Environmental Lab

Nova Safety & Environment	Project:	SUG Historical Cal "B" Line 1RP-2698	Fax: (432) 520-7701
2057 Commerce	Project Number:	1RP-2698	
Midland TX, 79703	Project Manager:	Camille Bryant	

Notes and Definitions

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

Date: 3/8/2013

Report Approved By:

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab

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Compa	any Name <u>NO</u>	VA Safety a	nd En	vironme	ental	· · · · · · · · · · · · · · · · · · ·		<u> </u>			<u> </u>	· . ·		· .:		Pr	ojec	t #:_	·	. ·	· :	<u></u>	• •			<u>.</u>		· .
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lab use only)	20			• . •			· * ;		ros	e.sl	lade	@sug	<u>ı.con</u>	<u>n</u>		\vdash			TCLF	_	$\left \cdot \right $		-				70 hre	
ORDER #: <	<u> 36.04003</u>						, T T	F	Pres	servat	tion &	# of Co	ntainer	s	Matrix	015B				Se			260				24 AR	ŧ.
AB.# (lab use only)	FJELD CODE		Beginning Depth	Ending Depth	Date Sampled	Time Sampled	ield Filtered	i otal #. of Containers	lice HNO ₃	HCI	H ₂ SO4	NaOH Na S.O.	None	Other (Specify)	DW=Drinking Water SL=Sludge GW= Groundwater S=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 (8015) 1	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Mions (UI, 504, Akaliniy) 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.	Chlorides E 300		RUSH TAT (Pre-Schedule)	
-01	Road-5 Surface			- <u></u>	2/28/2013	1000			x						Soil	x					-	Ť	x	+	x		T	1
-02	Road-5 @ 6'		•.		2/28/2013	1015		1	×	·	ŀ		· ·		Soil	x					;		x		x			T
-03	Road-5 @ 12'				2/28/2013	1025		1)	X .			·			Soil	x							×		x			
<i>~</i> ø℃	Road-5 East S/W @ 11	•			2/28/2013	1030		1)	x			_	· ·		Soil	x			· ·	. 			<u>×</u>	1	x		4	
-05	North-1 Surface				2/28/2013	1050		<u>1</u>)	x						Soil	x							×	<u>.</u>	×		<u> </u>	_
-06	North-1 @ 6'			· ·	2/28/2013	1100		1)							Soil	x			·	<u> -</u>			<u>×</u>	· 	<u> </u>	┢╌┟	<u> </u>	-
-07	North S-W @ 5'			<u> .</u>	2/28/2013	1130		1.	×						Soil	x						_	<u>× </u> -	+	×	╞╌┼	÷	-
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APPENDIX B: Photographs



Photographic Documentation

Client: Southern Union Gas Services Project Name: California "B" (4-10)

Prepared by: NOVA Location: Lea County, New Mexico

Photograph No. 1

Direction: Facing East

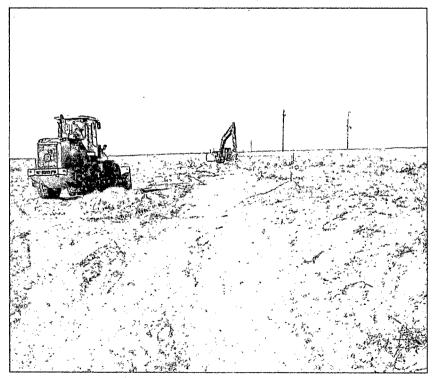
Description: View of historical release prior to excavation activities.

Photograph No. 2

Direction: Facing West

Description: View of excavation of the trenches in caliche road.







Photographic Documentation

Client: Southern Union Gas Services **Project Name:** California "B" (4-10)

Photograph No. 3

Direction: Facing West

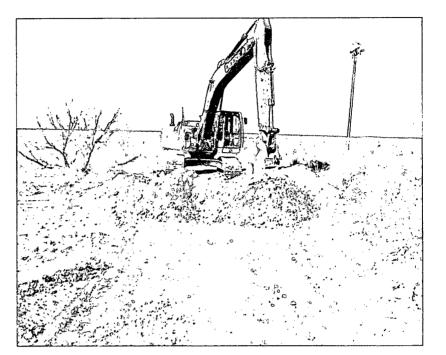
Description: View of excavation of trenches in the caliche road.

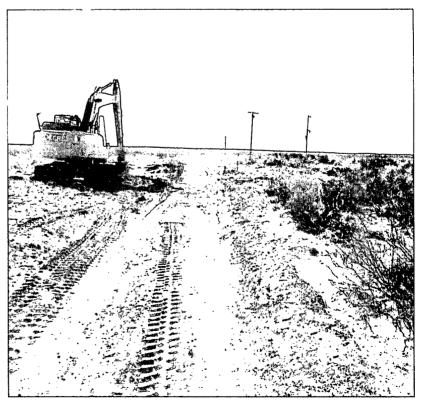
Photograph No. 4

Direction: Facing West

Description:

View of excavation of the trench on the south side of the caliche road.





Prepared by: NOVA Location: Lea County, New Mexico



Photographic Documentation

Client: Southern Union Gas Services Project Name: California "B" (4-10)

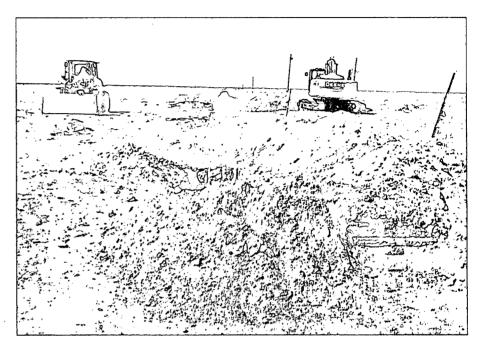
Prepared by: NOVA Location: Lea County, New Mexico

Photograph No. 5

Direction: Facing West

Description:

View of excavation of the trench on the north side of the caliche road.



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

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	Contact Curt Stanley		
Address	801 S. Loop 464, Monahans, Texas 79756	Telephone No. 575-390-7595		
Facility Name	California B (4-10)	Facility Type Natural Gas Pipeling	e	
	*			

Surface Owner Jay Anthony

Mineral Owner

Lease No. 30-025-38822

LOCATION OF RELEASE

Unit Letter "M"	Section 5	Township 26S	Range 36E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea

Latitude N 32 degrees 03.897' Longitude W 103 degrees 17.359'

NATURE OF RELEASE

Type of Release Crude Oil, Produced Water and Natural Gas	Volume of Release 154 BBLS	Volume Re	ecovered 147 BBLS							
Source of Release 16-Inch Steel Pipeline	Date and Hour of Occurrence		lour of Discovery							
	April 14, 2011, approx. 0100 hrs	April 14, 2	010, approximately 0200 hrs							
Was Immediate Notice Given?	If YES, To Whom?									
Yes 🗌 No 🗌 Not Required	Geoffrey Leking, NMOCD Hobbs District Office									
By Whom? Curt Stanley	Date and Hour April 14, 2011, 1113 hrs									
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.									
🗌 Yes 🖾 No										
If a Watercourse was Impacted, Describe Fully.*	1									
Describe Cause of Problem and Remedial Action Taken.*	a 1 a 1 1 1 a a 1									
The release occurred during pipeline pigging activities. On discovery of										
of the pig. A vacuum truck was used to recover liquids previously release released from the pipeline. When the volume of liquids released from the										
release. The cause of the release was attributed to external corrosion. The										
	volume of natural gas released, is to	be determined								
Describe Area Affected and Cleanup Action Taken.*										
The area affected by the release measures approximately 3,440 sq ft, the	largest area being a pipeline road. Fo	llowing repair	of the pipeline, the release							
will be remediated to NMOCD regulatory standards.										
I hereby certify that the information given above is true and complete to t	ha haat of mer la and an and undane									
regulations all operators are required to report and/or file certain release r										
public health or the environment. The acceptance of a C-141 report by the										
should their operations have failed to adequately investigate and remediat										
or the environment. In addition, NMOCD acceptance of a C-141 report of										
federal, state, or local laws and/or regulations.	·····									
	OIL CONSER	VATION	DIVISION							
Signature:										
	Approved by District Supervisor:	Approved by District Supervisor:								
Printed Name: Curt D. Stanley										
Title, EUS Compliance Specialist	American Deter									
Title: EHS Compliance Specialist	Approval Date:	Expiration D								
E-mail Address: curt.stanley@sug.com	Conditions of Approval:									
L-man / Kaross. cut.stamey@sug.com	Conditions of Approval.		Attached							
Date: April 15, 2011 Phone: 575-390-7595										

* Attach Additional Sheets If Necessary