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

State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED
By JKeyes at 10:15 am, Nov 02, 2015

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Southern Union Gas Services, Ltd.	Contact: Rose Slade
Address: 800 East Sonterra Suite 4 San Antonio, TX 78249	Telephone No. 210-403-6525
Facility Name: Lea County Field Department	Facility Type: Natural Gas Gathering

Surface Owner: Greg Fulfer	Mineral Owner: Fee	API No. 30-025-11486

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
P	7	25S	37E					

Latitude N32 4.842 **Longitude** W103 12.658

NATURE OF RELEASE

Type of Release: Natural Gas & Crude Oil	Volume of Release: 100 mcf natural gas and 45 bbls crude oil	Volume Recovered: None
Source of Release: 12” Natural Gas Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 5/27/08 Time: 2:00 PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson	
By Whom?	Date and Hour: 5/27/08 @ 2:25 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

APPROVED
By JKeyes at 10:15 am, Nov 02, 2015

If a Watercourse was Impacted, Describe Fully.*

Not impacted

120’ Depth to Groundwater

Describe Cause of Problem and Remedial Action Taken.*

A 12” Natural Gas Pipeline operating at approximately 15 psi developed a leak, a repair crew excavated the leak area and installed two 12” repair clamps. The pipeline was permanently repaired on 5/29/08.

Describe Area Affected and Cleanup Action Taken.*

Please refer to the Remediation Summary & Site Closure Request Report attached.

Based on the analytical results of confirmation samples, Energy Transfer Field Services (Southern Union Gas Services) request closure approval from the NMOCD on the Trunk MB-5 Historical Release Site.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Rose Slade

Printed Name: Rose Slade

Title: Sr. Environmental Specialist

E-mail Address: Rose.Slade@energytransfer.com

Date: 11/2/15 Phone: 210-403-6525

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 11/02/2015 Expiration Date: ///

Conditions of Approval: ///

Attached ☐

1RP 1872

* Attach Additional Sheets If Necessary

REMEDIATION SUMMARY

AND SITE CLOSURE REQUEST

Regency Field Services, LLC
Formerly Southern Union Gas Services
Trunk MB-5 Historical Release Site
Lea County, New Mexico
UNIT LTR "P" (SE ¼ /SE ¼), Section 07, Township 25 South, Range 37 East
Latitude 32° 08.279' North, Longitude 103° 12.867' West
NMOCD Reference # 1RP-1872

Prepared For:

Regency Field Services, LLC,
801 South Loop 464
Monahans, Texas 79756

Prepared By:

NOVA Safety & Environmental
2057 Commerce
Midland, Texas 79703

November 2014

Curt D. Stanley
Senior Project Manager

Brittan K. Byerly, P.G.
Managing Principal

TABLE OF CONTENTS

1.0 INTRODUCTION

NOVA Safety & Environmental (NOVA), on behalf of Regency Field Services LLC (Regency), formerly Southern Union Gas Services, has prepared this Remediation Summary and Site Closure Request for the Trunk MB-5 Historical Release Site (Release Site). The legal description of the Release Site is Unit Letter "P" (SE ¼ SE ¼), Section 07, Township 25 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Greg Fulfer. The Release Site GPS coordinates are 32º 08.279' North and 103º 12.867' West. Please note, the GPS coordinates submitted on the initial Release Notification and Corrective Action (Form C-141) were incorrect and have been corrected. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Details and Confirmation Soil Sample Locations Map. Site photographs are provided as Appendix B.

On May 27, 2008, Regency discovered a release of crude oil and natural gas had occurred from a twelve (12) inch steel pipeline. The cause of the release was attributed to failure of a segment of the steel pipeline. The release affected approximately 3,700 square feet of soil at the point of the release and in an adjacent pasture. On May 30, 2008, Regency submitted the Release Notification and Corrective Action (C-141) to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office. The C-141 indicated approximately forty-five (45) barrels of crude oil and 100 mcf of natural gas were released from the pipeline with no recovery. Initial and Final NMOCD Forms C-141 are provided as Appendix D.

Regency has researched and identified various historical release sites located in New Mexico. At the request of Regency, 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 07, Township 25 South, Range 37 East. A reference map utilized by the NMOCD indicated depth to groundwater at the Release Site should be encountered at a depth of approximately seventy-five (75) feet below ground surface (bgs). The depth to groundwater at the Trunk MB-5 Historical Release Site results in a score of ten (10) points being assigned to the site, based on the NMOCD depth to groundwater criteria.

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

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

The NMOCD guidelines indicate the Trunk MB-5 Historical Release Site has ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 milligrams per kilogram (mg/Kg), parts per million (ppm)
- Benzene, Toluene, Ethylbenzene, Xylene (BTEX) – 50 mg/Kg (ppm)
- Total Petroleum Hydrocarbon (TPH) – 1,000 mg/Kg (ppm)

The NMOCD chloride cleanup level concentrations are site specific and are determined by the NMOCD Hobbs District Office. Based on discussions with the NMOCD Hobbs District Office, soil exhibiting chloride concentrations of less than 500 mg/Kg was permitted to remain in-situ provided vertical and horizontal delineation of chloride to concentrations of less than 250 mg/Kg was achieved.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

3.1 Excavation Activities

On January 7, 2013, NOVA commenced soil remediation activities at the Trunk MB-5 Historical Release Site. During the excavation of the Release Site, chloride field screening employing Hach Quantab ® low range "titrators" were utilized to guide the excavation efforts. The excavated soil was stockpiled in a cleared area adjacent to the excavation pending final disposition. Please reference Figure 2 for site details.

Based on historical documentation and stressed vegetation, the twelve (12) inch steel pipeline was "stripped" to locate two (2) pipeline clamps at the point of release. Following the location of the pipeline clamps, delineation and excavation of the release proceeded. As stated above, chloride field screening was utilized to guide the delineation and excavation efforts. On January 7, 2013, two (2) delineation floor soil samples (RP @ 16' and RP-1 @ 24') were collected and submitted to the laboratory for determination of concentrations of BTEX, TPH, and chloride using EPA Methods 8021B, 8015M, and E 300, respectively. The analytical results indicated benzene, BTEX and TPH concentrations were less than the applicable laboratory method detection limits (MDL) for each soil sample. Chloride concentrations ranged from 432 mg/Kg in soil sample RP @ 16' to 106 mg/Kg in soil sample RP-1 @ 24'. Based on the analytical results, vertical delineation of the release was complete. In addition, two (2) excavation sidewall soil samples (West S/W @ 23' and South S/W @ 23') were collected and submitted to the laboratory. The analytical results indicated benzene, BTEX and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 176 mg/Kg in soil sample South S/W @ 23' to 144 mg/Kg in soil sample West S/W @ 23'. Based on the analytical results, delineation on the south and west sidewalls of the excavation was complete. For a summary of Concentrations of BTEX, TPH, and chloride in soil, please reference Table 1. Laboratory analytical reports are provided as Appendix A.

On January 8, 2013, delineation and excavation of the east and north sidewalls was completed and two (2) excavation sidewall soil samples (East S/W @ 23' and North S/W @ 23') were collected and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 124 mg/Kg in soil sample North S/W @ 23' to 57.4 mg/Kg in soil sample East S/W @ 23'. Based on the analytical results, delineation on the east and north sidewalls of the excavation was complete. In addition, a composite stockpile soil sample (Stockpile) was collected from the excavation stockpile and submitted to the laboratory. The

analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL and the chloride concentration was 60.1 mg/Kg. Based on the analytical results, the stockpile material was deemed suitable for use as backfill material.

3.2 Trenching Activities

Based on historical documentation, the release flowed to the east of the release point along the pipeline right-of-way. On January 9 and 11, 2013, ten (10) delineation trenches (FP-1, FP-1A, FP-1B, FP-2, FP-2A, FP-2B, FP-2C, FP-3, FP-3A, and FP-3B) were utilized to delineate the flowpath of the release.

Trench FP-1 was advanced on the south side of the 12-inch pipeline approximately fifty (50) feet east of the east sidewall of the main excavation. Soil samples (FP-1 @ 2', FP-1 @ 8', and FP-1 @ 16') were collected at two (2), eight (8), and sixteen (16) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 42 mg/Kg in soil sample FP-1 @ 2' to 8.65 mg/Kg in soil sample FP-1 @ 16'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-1A was advanced on the south side of the 12-inch pipeline approximately one hundred (100) feet east of the east sidewall of the main excavation. Soil samples (FP-1A @ 2' and FP-1A @ 10') were collected at two (2), and ten (10) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 10.1 mg/Kg in soil sample FP-1A @ 2' to 4.51 mg/Kg in soil sample FP-1A @ 10'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-1B was advanced on the south side of the 12-inch pipeline approximately one hundred fifty (150) feet east of the east sidewall of the main excavation. Soil samples (Flowpath 1B @ 2' and FP-1B @ 6') were collected at two (2), and six (6) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 23.6 mg/Kg in soil sample Flowpath 1B @ 2' to 14.4 mg/Kg in soil sample FP-1B @ 6'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-2 was advanced on the north side of the 12-inch pipeline approximately fifty (50) feet east of the east sidewall of the main excavation. Soil samples (FP-2 @ 2', FP-2 @ 8', and FP-2 @ 16') were collected at two (2), and eight (8), and sixteen (16) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 284 mg/Kg in soil sample FP-2 @ 16' to 4.09 mg/Kg in soil sample FP-2 @ 8'. Based on the analytical results additional delineation efforts were warranted to vertically delineate chloride impact in Trench FP-2.

Trench FP-2A was advanced on the north side of the 12-inch pipeline approximately one hundred (100) feet east of the east sidewall of the main excavation. Soil samples (FP-2A @ 2' and FP-2A @ 10') were collected at two (2), and ten (10) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 25.4 mg/Kg in soil sample FP-2A @ 10' to 11.1 mg/Kg in soil sample FP-2A @ 2'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-2B was advanced on the north side of the 12-inch pipeline approximately one hundred fifty (150) feet east of the east sidewall of the main excavation. Soil samples (FP-2B @ 2' and FP-2B @ 6') were collected at two (2), and six (6) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 17.7 mg/Kg in soil sample Flowpath 2B @ 2' to 8.89 mg/Kg in soil sample FP-2B @ 6'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-2C was advanced on the north side of the 12-inch pipeline approximately two hundred (200) feet east of the east sidewall of the main excavation. Soil samples FP-2C @ 2', FP-2C @ 6', and FP-2C @ 10') were collected at two (2), six (6), and ten (10) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 22.4 mg/Kg in soil sample FP-2C @ 2' to 4.62 mg/Kg in soil sample FP-2C @ 6'. Based on the analytical results no additional delineation or excavation was required and the trench was backfilled.

Trench FP-3 was advanced approximately two hundred (200) feet east of the east sidewall of the main excavation and approximately forty (40) feet south of the 12-inch pipeline. Soil samples (FP-3 @ 2', FP-3 @ 4', and FP-3 @ 6') were collected at two (2), four (4), and six (6) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 1,280 mg/Kg in soil sample FP-3 @ 4' to 136 mg/Kg in soil sample FP-3 @ 2'. Based on the analytical results, chloride concentrations exhibited in the trench soil samples did not appear to be associated with the Trunk MB-5 Historical Release.

Trench FP-3A was advanced approximately two hundred (200) feet east of the east sidewall of the main excavation and approximately ninety-five (95) feet south of the 12-inch pipeline. Soil samples (FP-3A @ 2' and FP-3A @ 4') were collected at two (2), and four (4) feet bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 1,020 mg/Kg in soil sample FP-3A @ 4' to 964 mg/Kg in soil sample FP-3A @ 2'. Based on the analytical results, chloride concentrations exhibited in the trench soil samples did not appear to be associated with the Trunk MB-5 Historical Release.

Trench FP-3B was advanced approximately two hundred (200) feet east of the east sidewall of the main excavation and approximately one hundred twenty-five (125) feet south of the 12-inch pipeline. Soil samples (FP-3B @ 2' and FP-3B @ 4') were collected at two (2), and four (4) feet

bgs and submitted to the laboratory. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory MDL for each soil sample. Chloride concentrations ranged from 1,790 mg/Kg in soil sample FP-3B @ 2' to 1,350 mg/Kg in soil sample FP-3B @ 2'. Based on the analytical results, chloride concentrations exhibited in the trench soil samples did not appear to be associated with the Trunk MB-5 Historical Release.

On January 31, 2013, representatives of Regency and NOVA met with an NMOCD Hobbs District Office representative to present the soil sample analytical results and other pertinent information. Regency requested and received NMOCD approval to backfill the Release Site with stockpiled soil previously deemed suitable for backfill. NOVA presented research information, on behalf of Regency, identifying potential Third Party contributors in the Trench FP-3, FP-3A, and FP-3A areas.

On June 17, 2013, representatives of Regency and NOVA met with an NMOCD representative to discuss a path toward closure for the Release Site. The NMOCD representative requested additional vertical delineation activities at Trench FP-2. Additional delineation activities along the secondary flowpath and represented by Trenches FP-3, FP-3A, and FP-3B were placed on hold while the NMOCD investigated potential Third Party contributions.

On June 21, 2013, NOVA received an email from the NMOCD Hobbs District Office which indicated no further delineation of the secondary flowpath was required. The secondary flowpath is represented by Trenches FP-3, FP-3A, and FP-3B and is located ninety (90) degrees to the main flowpath of the Release Site. For reference, a copy of the June 21, 2013 NMOCD email is provided as Appendix C.

On August 20, 2013, equipment was mobilized to the Release Site to further vertically delineate chloride concentrations in Trench FP-2, as directed by the NMOCD. A soil sample (FP-2 @ 20') was collected at twenty (20) feet bgs and submitted to the laboratory. The analytical results indicated chloride concentrations were 133 mg/Kg. Based on the analytical results, no additional vertical delineation or excavation was warranted in the Trench FP-2 area.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Permian Basin Environmental Lab, LP in 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 by EPA Method 8021B, 5030
- TPH by modified EPA Method 8015M GRO/DRO
- Chloride by 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 soil sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

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

5.0 SITE CLOSURE REQUEST

Based on the analytical results of confirmation soil samples, NOVA recommends Regency provide the NMOCD a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant final closure to the Trunk MB-5 Historical Release Site.

6.0 LIMITATIONS

NOVA Safety and Environmental has prepared this Report on behalf of, and for the sole and exclusive use of Regency Field Services, LLC. This report was prepared by NOVA Safety and Environmental for the benefit of Regency Field Services, LLC. The information contained in this Report may be released to third parties, who may use and rely upon the information at their discretion. However, any use of or reliance upon the information by a party other than specifically named above shall create no rights, obligations, or liabilities on the part of NOVA Safety and Environmental with respect to any such party. The information shall not be used or relied upon by a party that does not agree to be bound by the above statement.

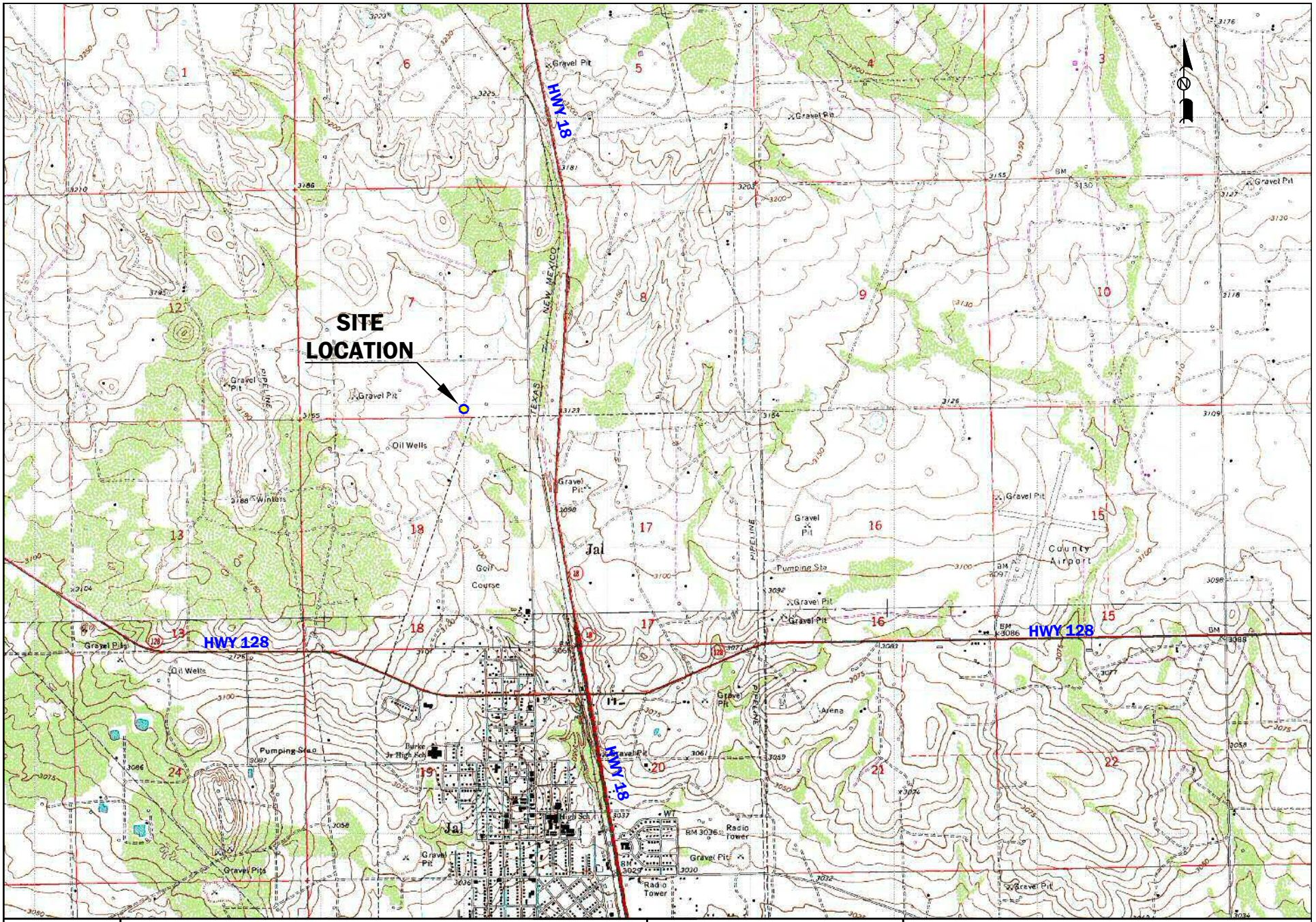
In preparing this Report, NOVA Safety and Environmental may have obtained and relied upon information from multiple sources including the Regency Field Services, LLC, and other consultants working for the Regency Field Services, LLC, or other parties. Unless specifically stated, NOVA Safety and Environmental has made no attempt to verify the accuracy or completeness of such information.

7.0 DISTRIBUTION:

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

Copy 2: Crystal Callaway
Regency Energy Partners
301 Commerce Street, Suite 700
Fort Worth, Texas 76102

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



Legend:

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

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

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

Fine red dashed lines indicate selected fence lines.

This map Complies with National Map Accuracy Standards

3000 1500 0 1500 3000

Distance in Feet

Figure 1

Site Location Map
Historical Release
Trunk MB-5
Regency Field Services, LLC.
Lea County, NM

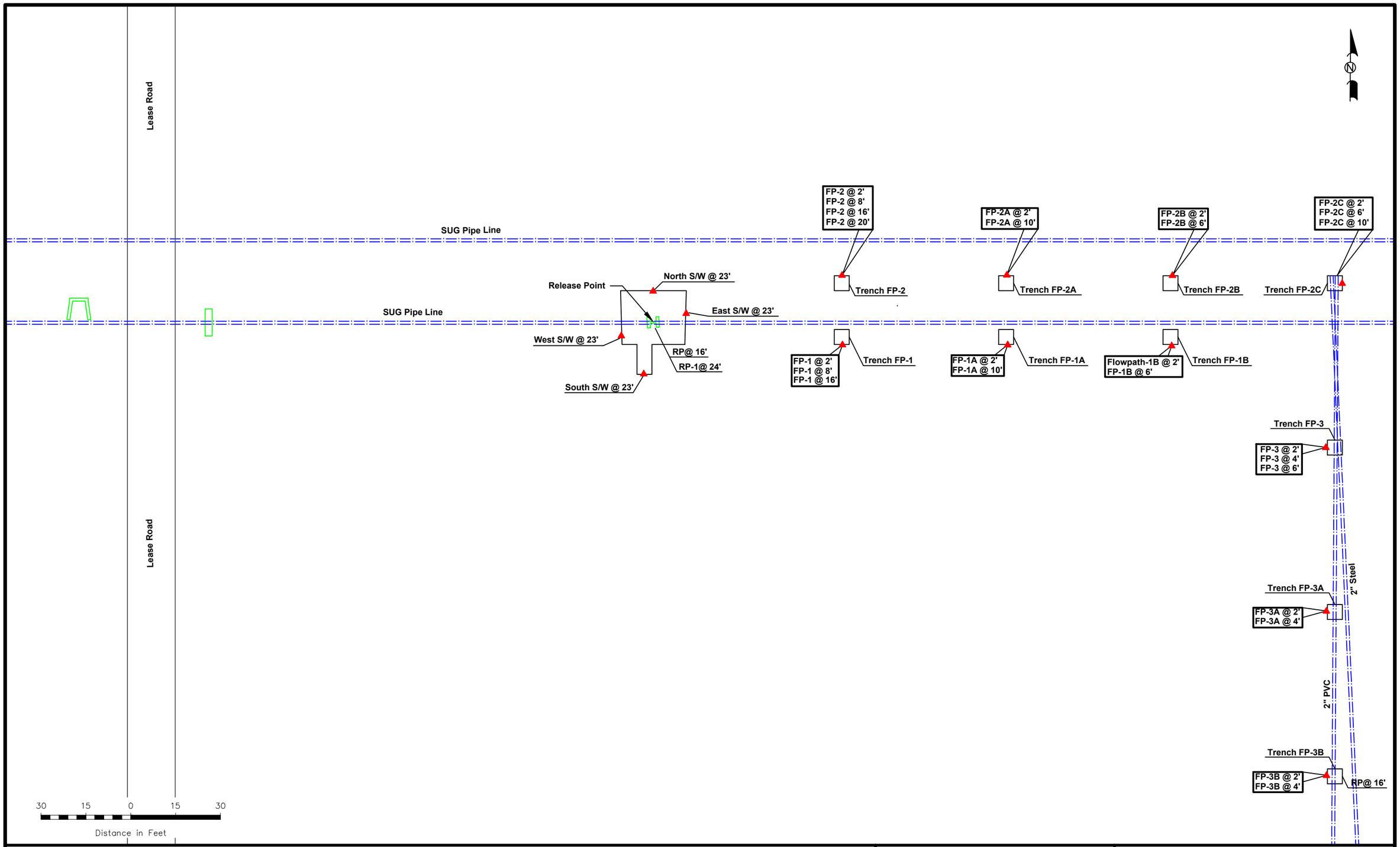
NOVA safety and environmental

2057 Commerce Drive
Midland, Texas 79703
432.520.7720

www.novasafetyandenvironmental.com

February 4, 2013	Scale: 1"=3000'	CAD By: CAS	Checked By:

Lat. N 32° 8' 16.56" Long. W 103° 11' 51.99"



LEGEND:

- Sidewall Soil Sample Location
- Pipeline
- MB-5
- PVC Marker
- Clamps

Figure 2
Site Details & Confirmation
Soil Sample Locations
Historical Release
Trunk MB-5
Regency Field Services, LLC.
Lea County, NM

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

February 4, 2013	Scale: 1" = 30'	CAD By: CAS	Checked By: CS
Lat. N 32° 8' 16.78" Long. W 103° 11' 52.01"			

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

REGENCY FIELD SERVICES, LLC
TRUNK MB-5 HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE # 1RP-1872

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
RP @ 16'	01/07/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	432
RP-1 @ 24'	01/07/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	106
West S/W @ 23'	01/07/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	144
South S/W @ 23'	01/07/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	176
East S/W @ 23'	01/08/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	57.4
North S/W @ 23'	01/08/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	124
Stockpile	01/08/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	60.1
FP-1 @ 2'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.5	<27.5	<27.5	<27.5	42.0
FP-1 @ 8'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	3.07
FP-1 @ 16'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	8.65
FP-1A @ 2'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	10.1
FP-1A @ 10'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	4.51
FP-2 @ 2'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	5.70
FP-2 @ 8'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	4.09
FP-2 @ 16'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	284
FP-2A @ 2'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	11.1
FP-2A @ 10'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	25.4
Flowpath 1B @ 2'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	23.6
FP-1B @ 6'	01/09/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	14.4
FP-2B @ 2'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	17.7
FP-2B @ 6'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	8.89
FP-2C @ 2'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	22.4
FP-2C @ 6'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	4.62
FP-2C @ 10'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	19.7
FP-3 @ 2'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	136
FP-3 @ 4'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.2	<27.2	<27.2	<27.2	1,280
FP-3 @ 6'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	708
FP-3A @ 2'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	964
FP-3A @ 4'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	1,020

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDE IN SOIL

REGENCY FIELD SERVICES, LLC
TRUNK MB-5 HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE # 1RP-1872

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
FP-3B @ 2'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.9	<26.9	<26.9	<26.9	1,790
FP-3B @ 4'	01/11/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.2	<27.2	<27.2	<27.2	1,350
FP-2 @ 20'	08/20/13	-	-	-	-	-	-	-	-	-	-	133

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

PBELAB

Analytical Report

Prepared for:

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

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Location: Lea County New Mexico

Lab Order Number: 3A08002

NELAP/TCEQ # T104704156-12-1

Report Date: 01/11/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RP-1 @ 24 '	3A08002-01	Soil	01/07/13 14:00	01-08-2013 10:29
West S/W @ 23'	3A08002-02	Soil	01/07/13 14:20	01-08-2013 10:29
South S/W @ 23"	3A08002-03	Soil	01/07/13 14:50	01-08-2013 10:29

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

RP-1 @ 24 '

3A08002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*54.0 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**106**	1.02	mg/kg dry	1	EA30803	01/08/13	01/08/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA30901	01/09/13	01/09/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EA31002	01/09/13	01/10/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31002	01/09/13	01/10/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31002	01/09/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*124 %*	*70-130*		*EA31002*	*01/09/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*129 %*	*70-130*		*EA31002*	*01/09/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/09/13	01/10/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

West S/W @ 23'

3A08002-02 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*24.6 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**144**	1.02	mg/kg dry	1	EA30803	01/08/13	01/08/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA30901	01/09/13	01/09/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*87.9 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

South S/W @ 23"

3A08002-03 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*67.2 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**176**	1.02	mg/kg dry	1	EA30803	01/08/13	01/08/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA30901	01/09/13	01/09/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*87.6 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*95.8 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31104 - General Preparation (GC)										
Blank (EA31104-BLK1)				Prepared & Analyzed: 01/11/13						
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	*43.9*		*"*	*60.0*		*73.1*	*75-125*			*S-GC*
LCS (EA31104-BS1)				Prepared & Analyzed: 01/11/13						
Benzene	0.0816	0.00100	mg/kg wet	0.100		81.6	80-120			
Toluene	0.109	0.00200	"	0.100		109	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.213	0.00200	"	0.200		107	80-120			
Xylene (o)	0.0987	0.00100	"	0.100		98.7	80-120			
Surrogate: 1,4-Difluorobenzene	*67.7*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.3*		*"*	*60.0*		*100*	*75-125*			
LCS Dup (EA31104-BSD1)				Prepared & Analyzed: 01/11/13						
Benzene	0.0803	0.00100	mg/kg wet	0.100		80.3	80-120	1.61	20	
Toluene	0.103	0.00200	"	0.100		103	80-120	5.63	20	
Ethylbenzene	0.0981	0.00100	"	0.100		98.1	80-120	5.51	20	
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120	5.30	20	
Xylene (o)	0.0945	0.00100	"	0.100		94.5	80-120	4.33	20	
Surrogate: 1,4-Difluorobenzene	*67.3*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.7*		*"*	*60.0*		*101*	*75-125*			
Duplicate (EA31104-DUP1)		**Source: 3A08002-01**		Prepared & Analyzed: 01/11/13						
Benzene	ND	0.00100	mg/kg dry		ND				20	
Toluene	ND	0.00200	"		ND				20	
Ethylbenzene	ND	0.00100	"		ND				20	
Xylene (p/m)	ND	0.00200	"		ND				20	
Xylene (o)	ND	0.00100	"		ND				20	
Surrogate: 1,4-Difluorobenzene	*64.5*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*34.4*		*"*	*60.0*		*57.4*	*75-125*			*S-GC*

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA30803 - * DEFAULT PREP *** **										
Blank (EA30803-BLK1)				Prepared & Analyzed: 01/08/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA30803-BS1)				Prepared & Analyzed: 01/08/13						
Chloride	10.4		mg/kg Wet	10.0		104	80-120			
LCS Dup (EA30803-BSD1)				Prepared & Analyzed: 01/08/13						
Chloride	10.3		mg/kg Wet	10.0		103	80-120	0.996	20	
Duplicate (EA30803-DUP1)		**Source: 3A07008-01**		Prepared & Analyzed: 01/08/13						
Chloride	1250	2.84	mg/kg dry		1350			7.25	20	
Matrix Spike (EA30803-MS1)		**Source: 3A07008-01**		Prepared & Analyzed: 01/08/13						
Chloride	1530	2.84	mg/kg dry	156	1350	115	80-120			
Batch EA30901 - * DEFAULT PREP *** **										
Blank (EA30901-BLK1)				Prepared & Analyzed: 01/09/13						
% Moisture	ND	0.1	%							
Duplicate (EA30901-DUP1)		**Source: 3A08001-01**		Prepared & Analyzed: 01/09/13						
% Moisture	6.0	0.1	%		7.0			15.4	20	

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31002 - 8015M										
Blank (EA31002-BLK1)				Prepared & Analyzed: 01/09/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*79.6*		*"*	*100*		*79.6*	*70-130*			
Surrogate: o-Terphenyl	*43.1*		*"*	*50.0*		*86.2*	*70-130*			
LCS (EA31002-BS1)				Prepared & Analyzed: 01/09/13						
C6-C12	1340	25.0	mg/kg wet	1500		89.1	75-125			
>C12-C28	1480	25.0	"	1500		98.7	75-125			
>C28-C35	27.9	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*111*		*"*	*100*		*111*	*70-130*			
Surrogate: o-Terphenyl	*39.0*		*"*	*50.0*		*78.1*	*70-130*			
LCS Dup (EA31002-BSD1)				Prepared & Analyzed: 01/09/13						
C6-C12	1500	25.0	mg/kg wet	1500		100	75-125	11.9	20	
>C12-C28	1490	25.0	"	1500		99.4	75-125	0.631	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*41.5*		*"*	*50.0*		*83.0*	*70-130*			
Matrix Spike (EA31002-MS1)	**Source: 3A08002-01**			Prepared & Analyzed: 01/09/13						
C6-C12	1670	25.5	mg/kg dry	1530	ND	109	75-125			
>C12-C28	1760	25.5	"	1530	ND	115	75-125			
>C28-C35	32.6	25.5	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*117*		*"*	*102*		*115*	*70-130*			
Surrogate: o-Terphenyl	*47.7*		*"*	*51.0*		*93.5*	*70-130*			
Matrix Spike Dup (EA31002-MSD1)	**Source: 3A08002-01**			Prepared & Analyzed: 01/09/13						
C6-C12	1670	25.5	mg/kg dry	1530	ND	109	75-125	0.446	20	
>C12-C28	1750	25.5	"	1530	ND	114	75-125	0.637	20	
>C28-C35	28.7	25.5	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*130*		*"*	*102*		*127*	*70-130*			
Surrogate: o-Terphenyl	*48.7*		*"*	*51.0*		*95.5*	*70-130*			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31004 - 8015M										
Matrix Spike (EA31004-MS1)	**Source: 3A09002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1630	26.9	mg/kg dry	1610	ND	101	75-125			
>C12-C28	1920	26.9	"	1610	ND	119	75-125			
>C28-C35	ND	26.9	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*127*		*"*	*108*		*118*	*70-130*			
Surrogate: o-Terphenyl	*46.3*		*"*	*53.8*		*86.1*	*70-130*			
Matrix Spike Dup (EA31004-MSD1)	**Source: 3A09002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1760	26.9	mg/kg dry	1610	ND	109	75-125	7.60	20	
>C12-C28	1970	26.9	"	1610	ND	122	75-125	2.56	20	
>C28-C35	ND	26.9	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*125*		*"*	*108*		*116*	*70-130*			
Surrogate: o-Terphenyl	*56.3*		*"*	*53.8*		*105*	*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.
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: 1/11/2013

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical MB-5 1RP-1872

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only) ORDER #: 3A08002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	TOTAL: 1300 CI			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	RP-1 @ 24'			1/7/2013	14:00		1	X								Soil	X								X			X				X
-02	West S/W @ 23'			1/7/2013	14:20		1	X								Soil	X								X			X				X
-03	South S/W @ 23'			1/7/2013	14:50		1	X								Soil	X								X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	1/8/13	10:29			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL	Date	Time
				1/8/13	10:29

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: 3.0 °C Factor NCF

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

PBELAB

Analytical Report

Prepared for:

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

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Location: Lea County, New Mexico

Lab Order Number: 3A09002

NELAP/TCEQ # T104704156-12-1

Report Date: 01/11/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RP @ 16'	3A09002-01	Soil	01/07/13 13:00	01-09-2013 10:35
East S-W @ 23'	3A09002-02	Soil	01/08/13 11:50	01-09-2013 10:35
North S-W @ 23"	3A09002-03	Soil	01/08/13 12:00	01-09-2013 10:35

Nova Safety & Environment
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Midland TX, 79703

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Fax: (432) 520-7701

RP @ 16'

3A09002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*120 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**432**	1.08	mg/kg dry	1	EA31005	01/10/13	01/10/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31001	01/09/13	01/10/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*93.2 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

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East S-W @ 23'

3A09002-02 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*119 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**57.4**	1.02	mg/kg dry	1	EA31005	01/10/13	01/10/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA31001	01/09/13	01/10/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*123 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

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North S-W @ 23"

3A09002-03 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31003	01/09/13	01/09/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*122 %*	*75-125*		*EA31003*	*01/09/13*	*01/09/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**124**	1.02	mg/kg dry	1	EA31005	01/10/13	01/10/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA31001	01/09/13	01/10/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31004	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*EA31004*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31003 - General Preparation (GC)										
Blank (EA31003-BLK1)				Prepared & Analyzed: 01/09/13						
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	*62.4*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*73.4*		*"*	*60.0*		*122*	*75-125*			
LCS (EA31003-BS1)				Prepared & Analyzed: 01/09/13						
Benzene	0.0815	0.00100	mg/kg wet	0.100		81.5	80-120			
Toluene	0.0898	0.00200	"	0.100		89.8	80-120			
Ethylbenzene	0.0951	0.00100	"	0.100		95.1	80-120			
Xylene (p/m)	0.199	0.00200	"	0.200		99.6	80-120			
Xylene (o)	0.0956	0.00100	"	0.100		95.6	80-120			
Surrogate: 1,4-Difluorobenzene	*63.0*		*ug/kg*	*60.0*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*77.2*		*"*	*60.0*		*129*	*75-125*			*S-GC*
LCS Dup (EA31003-BSD1)				Prepared & Analyzed: 01/09/13						
Benzene	0.0816	0.00100	mg/kg wet	0.100		81.6	80-120	0.184	20	
Toluene	0.0942	0.00200	"	0.100		94.2	80-120	4.79	20	
Ethylbenzene	0.0996	0.00100	"	0.100		99.6	80-120	4.71	20	
Xylene (p/m)	0.207	0.00200	"	0.200		103	80-120	3.63	20	
Xylene (o)	0.0969	0.00100	"	0.100		96.9	80-120	1.42	20	
Surrogate: 1,4-Difluorobenzene	*62.5*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*71.9*		*"*	*60.0*		*120*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31001 - * DEFAULT PREP *** **										
Blank (EA31001-BLK1)				Prepared: 01/09/13 Analyzed: 01/10/13						
% Moisture	ND	0.1	%							
Duplicate (EA31001-DUP1)		**Source: 3A09001-01**		Prepared: 01/09/13 Analyzed: 01/10/13						
% Moisture	11.0	0.1	%		12.0			8.70	20	
Batch EA31005 - * DEFAULT PREP *** **										
Blank (EA31005-BLK1)				Prepared & Analyzed: 01/10/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA31005-BS1)				Prepared & Analyzed: 01/10/13						
Chloride	10.7		mg/kg Wet	10.0		107	80-120			
LCS Dup (EA31005-BSD1)				Prepared & Analyzed: 01/10/13						
Chloride	10.6		mg/kg Wet	10.0		106	80-120	0.927	20	
Duplicate (EA31005-DUP1)		**Source: 3A09002-01**		Prepared & Analyzed: 01/10/13						
Chloride	432	1.08	mg/kg dry		432			0.0249	20	
Matrix Spike (EA31005-MS1)		**Source: 3A09002-01**		Prepared & Analyzed: 01/10/13						
Chloride	515	1.08	mg/kg dry	94.1	432	88.3	80-120			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31004 - 8015M										
Matrix Spike (EA31004-MS1)	**Source: 3A09002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1630	26.9	mg/kg dry	1610	ND	101	75-125			
>C12-C28	1920	26.9	"	1610	ND	119	75-125			
>C28-C35	ND	26.9	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*127*		*"*	*108*		*118*	*70-130*			
Surrogate: o-Terphenyl	*46.3*		*"*	*53.8*		*86.1*	*70-130*			
Matrix Spike Dup (EA31004-MSD1)	**Source: 3A09002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1760	26.9	mg/kg dry	1610	ND	109	75-125	7.60	20	
>C12-C28	1970	26.9	"	1610	ND	122	75-125	2.56	20	
>C28-C35	ND	26.9	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*125*		*"*	*108*		*116*	*70-130*			
Surrogate: o-Terphenyl	*56.3*		*"*	*53.8*		*105*	*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.
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: 1/11/2013

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical MB-5 1RP-1872

Project #:

Project Loc: Lea County New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 3A09002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge / GW=Groundwater S=Soil/Solid / NP=Non-Potable Specify Other	Analyze For: TPH: 418.1	8015B 8015M	TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 BTEX 8260	RCI	N.O.R.M.	8260	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	RP @ 16'			1/7/2013	13:00		1	X								Soil	X									X			X		X
-02	East S-W @ 23'			1/8/2013	11:50		1	X								Soil	X									X			X		X
-03	North S-W @ 23'			1/8/2013	12:00		1	X								Soil	X									X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	1/9/13	10:32			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				1/9/13	10:35

Laboratory Comments:

Sample Containers Intact?	@	N
VOCs Free of Headspace?	@	N
Labels on container(s)	@	N
Custody seals on container(s)	@	N
Custody seals on cooler(s)	@	N
Sample Hand Delivered	@	N
by Sampler/Client Rep. ?	@	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: 4.0 °C Factor N C F

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

PBELAB

Analytical Report

Prepared for:

Camille Bryant

Nova Safety & Environment

2057 Commerce

Midland, TX 79703

Project: SUG Historical MB-5 1RP-1872

Project Number: 1RP-1872

Location: Lea County, New Mexico

Lab Order Number: 3A10002

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-12-1

Report Date: 01/11/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Stockpile	3A10002-01	Soil	01/08/13 15:00	01-10-2013 10:27

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

Stockpile

3A10002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31104	01/11/13	01/11/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*52.3 %*	*75-125*		*EA31104*	*01/11/13*	*01/11/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**60.1**	1.04	mg/kg dry	1	EA31103	01/11/13	01/11/13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EA31101	01/10/13	01/11/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EA31102	01/10/13	01/10/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EA31102	01/10/13	01/10/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EA31102	01/10/13	01/10/13	8015M	
Surrogate: 1-Chlorooctane		*94.4 %*	*70-130*		*EA31102*	*01/10/13*	*01/10/13*	*8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*EA31102*	*01/10/13*	*01/10/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/10/13	01/10/13	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31104 - General Preparation (GC)										
Blank (EA31104-BLK1)				Prepared & Analyzed: 01/11/13						
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	*43.9*		*"*	*60.0*		*73.1*	*75-125*			*S-GC*
LCS (EA31104-BS1)				Prepared & Analyzed: 01/11/13						
Benzene	0.0816	0.00100	mg/kg wet	0.100		81.6	80-120			
Toluene	0.109	0.00200	"	0.100		109	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.213	0.00200	"	0.200		107	80-120			
Xylene (o)	0.0987	0.00100	"	0.100		98.7	80-120			
Surrogate: 1,4-Difluorobenzene	*67.7*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.3*		*"*	*60.0*		*100*	*75-125*			
LCS Dup (EA31104-BSD1)				Prepared & Analyzed: 01/11/13						
Benzene	0.0803	0.00100	mg/kg wet	0.100		80.3	80-120	1.61	20	
Toluene	0.103	0.00200	"	0.100		103	80-120	5.63	20	
Ethylbenzene	0.0981	0.00100	"	0.100		98.1	80-120	5.51	20	
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120	5.30	20	
Xylene (o)	0.0945	0.00100	"	0.100		94.5	80-120	4.33	20	
Surrogate: 1,4-Difluorobenzene	*67.3*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.7*		*"*	*60.0*		*101*	*75-125*			
Duplicate (EA31104-DUP1)		**Source: 3A08002-01**		Prepared & Analyzed: 01/11/13						
Benzene	ND	0.00100	mg/kg dry		ND				20	
Toluene	ND	0.00200	"		ND				20	
Ethylbenzene	ND	0.00100	"		ND				20	
Xylene (p/m)	ND	0.00200	"		ND				20	
Xylene (o)	ND	0.00100	"		ND				20	
Surrogate: 1,4-Difluorobenzene	*64.5*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*34.4*		*"*	*60.0*		*57.4*	*75-125*			*S-GC*

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31101 - * DEFAULT PREP *** **										
Blank (EA31101-BLK1)				Prepared: 01/10/13 Analyzed: 01/11/13						
% Moisture	ND	0.1	%							
Duplicate (EA31101-DUP1)	**Source: 3A10002-01**			Prepared: 01/10/13 Analyzed: 01/11/13						
% Moisture	2.0	0.1	%		4.0			66.7	20	R2
Batch EA31103 - * DEFAULT PREP *** **										
Blank (EA31103-BLK1)				Prepared & Analyzed: 01/11/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA31103-BS1)				Prepared & Analyzed: 01/11/13						
Chloride	10.1		mg/kg Wet	10.0		101	80-120			
LCS Dup (EA31103-BSD1)				Prepared & Analyzed: 01/11/13						
Chloride	9.97		mg/kg Wet	10.0		99.7	80-120	0.938	20	
Duplicate (EA31103-DUP1)	**Source: 3A10002-01**			Prepared & Analyzed: 01/11/13						
Chloride	59.7	1.04	mg/kg dry		60.1			0.713	20	
Matrix Spike (EA31103-MS1)	**Source: 3A10002-01**			Prepared & Analyzed: 01/11/13						
Chloride	186	1.04	mg/kg dry	117	60.1	107	80-120			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31102 - 8015M										
Blank (EA31102-BLK1)				Prepared & Analyzed: 01/10/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*93.0*		*"*	*100*		*93.0*	*70-130*			
Surrogate: o-Terphenyl	*48.3*		*"*	*50.0*		*96.5*	*70-130*			
LCS (EA31102-BS1)				Prepared & Analyzed: 01/10/13						
C6-C12	1600	25.0	mg/kg wet	1500		107	75-125			
>C12-C28	1590	25.0	"	1500		106	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*110*		*"*	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*50.6*		*"*	*50.0*		*101*	*70-130*			
LCS Dup (EA31102-BSD1)				Prepared & Analyzed: 01/10/13						
C6-C12	1640	25.0	mg/kg wet	1500		109	75-125	2.48	20	
>C12-C28	1760	25.0	"	1500		118	75-125	10.1	20	
>C28-C35	27.4	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*49.7*		*"*	*50.0*		*99.5*	*70-130*			
Matrix Spike (EA31102-MS1)	**Source: 3A10002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1650	26.0	mg/kg dry	1560	ND	106	75-125			
>C12-C28	1610	26.0	"	1560	ND	103	75-125			
>C28-C35	ND	26.0	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*132*		*"*	*104*		*127*	*70-130*			
Surrogate: o-Terphenyl	*63.4*		*"*	*52.1*		*122*	*70-130*			
Matrix Spike Dup (EA31102-MSD1)	**Source: 3A10002-01**			Prepared & Analyzed: 01/10/13						
C6-C12	1760	26.0	mg/kg dry	1560	ND	113	75-125	6.58	20	
>C12-C28	1610	26.0	"	1560	ND	103	75-125	0.196	20	
>C28-C35	ND	26.0	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*133*		*"*	*104*		*128*	*70-130*			
Surrogate: o-Terphenyl	*61.2*		*"*	*52.1*		*117*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
R2	The RPD exceeded the acceptance limit.
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: 1/11/2013

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

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

Project Name: SUG Historical MB-5 1RP-1872
Project #:
Project Loc: Lea County New Mexico
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 3A10002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW= Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M	TOTAL: 8015B TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	(Cl, SO4)			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	Stockpile			1/8/2013	15:00		1	X								Soil	X							X			X				X

Special Instructions:

Laboratory Comments:

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

Temperature Upon Receipt:
Received: 2.8 °C
Adjusted: 2.8 °C Factor NCF

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	1/10/13	10:27			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				1/10/13	10:27

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

PBELAB

Analytical Report

Prepared for:

Camille Bryant

Nova Safety & Environment

2057 Commerce

Midland, TX 79703

Project: SUG Historical MB-5 1RP-1872

Project Number: 1RP-1872

Location: Lea County New Mexico

Lab Order Number: 3A11002

NELAP/TCEQ # T104704156-12-1

Report Date: 01/16/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FP-1 @ 2'	3A11002-01	Soil	01/09/13 08:30	01-11-2013 13:32
FP-1 @ 8'	3A11002-02	Soil	01/09/13 08:50	01-11-2013 13:32
FP-1 @ 16'	3A11002-03	Soil	01/09/13 09:00	01-11-2013 13:32
FP-1A @ 2'	3A11002-04	Soil	01/09/13 09:15	01-11-2013 13:32
FP-1A @ 10'	3A11002-05	Soil	01/09/13 09:25	01-11-2013 13:32
FP-2 @ 2'	3A11002-06	Soil	01/09/13 09:45	01-11-2013 13:32
FP-2 @ 8'	3A11002-07	Soil	01/09/13 09:50	01-11-2013 13:32
FP-2 @ 16'	3A11002-08	Soil	01/09/13 10:00	01-11-2013 13:32
FP-2A @ 2'	3A11002-09	Soil	01/09/13 10:15	01-11-2013 13:32
FP-2A @ 10'	3A11002-10	Soil	01/09/13 10:30	01-11-2013 13:32

FP-1 @ 2'

3A11002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31501	01/14/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31501	01/14/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31501	01/14/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31501	01/14/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31501	01/14/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*120 %*	*75-125*		*EA31501*	*01/14/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*92.6 %*	*75-125*		*EA31501*	*01/14/13*	*01/15/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**42.0**	1.10	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	27.5	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	27.5	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*95.9 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP-1 @ 8'

3A11002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*117 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*42.4 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3.07**	1.03	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*83.6 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment	Project: SUG Historical MB-5 1RP-1872	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1872	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-1 @ 16'

3A11002-03 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*73.1 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8.65**	1.06	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*89.2 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP-1A @ 2'

3A11002-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*71.8 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10.1**	1.06	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*88.1 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP-1A @ 10'

3A11002-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*70.2 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4.51**	1.05	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

FP-2 @ 2'

3A11002-06 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*68.3 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.70**	1.08	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*89.2 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment	Project: SUG Historical MB-5 1RP-1872	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1872	
Midland TX, 79703	Project Manager: Camille Bryant	

FP-2 @ 8'

3A11002-07 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*55.0 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4.09**	1.05	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EA31503	01/14/13	01/14/13	8015M	
Surrogate: 1-Chlorooctane		*98.4 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*EA31503*	*01/14/13*	*01/14/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/14/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP-2 @ 16'

3A11002-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*59.3 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**284**	1.08	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*125 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/15/13	8015M	

FP-2A @ 2'

3A11002-09 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*67.0 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11.1**	1.08	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*129 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP-2A @ 10'

3A11002-10 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*43.9 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**25.4**	1.04	mg/kg dry	1	EA31605	01/16/13	01/16/13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EA31502	01/14/13	01/15/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EA31503	01/14/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*93.6 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*EA31503*	*01/14/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/14/13	01/15/13	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31501 - General Preparation (GC)										
Blank (EA31501-BLK1)				Prepared & Analyzed: 01/14/13						
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	*74.6*		*ug/kg*	*60.0*		*124*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*42.4*		*"*	*60.0*		*70.7*	*75-125*			*S-GC*
LCS (EA31501-BS1)				Prepared & Analyzed: 01/14/13						
Benzene	0.0810	0.00100	mg/kg wet	0.100		81.0	80-120			
Toluene	0.113	0.00200	"	0.100		113	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.225	0.00200	"	0.200		112	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 1,4-Difluorobenzene	*71.3*		*ug/kg*	*60.0*		*119*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.9*		*"*	*60.0*		*102*	*75-125*			
LCS Dup (EA31501-BSD1)				Prepared & Analyzed: 01/14/13						
Benzene	0.0862	0.00100	mg/kg wet	0.100		86.2	80-120	6.20	20	
Toluene	0.119	0.00200	"	0.100		119	80-120	5.38	20	
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120	5.11	20	
Xylene (p/m)	0.237	0.00200	"	0.200		118	80-120	5.15	20	
Xylene (o)	0.110	0.00100	"	0.100		110	80-120	5.76	20	
Surrogate: 1,4-Difluorobenzene	*71.6*		*ug/kg*	*60.0*		*119*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*61.5*		*"*	*60.0*		*102*	*75-125*			
Matrix Spike (EA31501-MS1)		**Source: 3A11002-01**		Prepared: 01/14/13 Analyzed: 01/15/13						
Benzene	0.0197	0.00100	mg/kg dry	0.110	ND	18.0	80-120			QM-05
Toluene	0.0208	0.00200	"	0.110	ND	19.0	80-120			QM-05
Ethylbenzene	0.0229	0.00100	"	0.110	ND	20.9	80-120			QM-05
Xylene (p/m)	0.0457	0.00200	"	0.220	ND	20.8	80-120			QM-05
Xylene (o)	0.0253	0.00100	"	0.110	ND	23.0	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*70.5*		*ug/kg*	*60.0*		*118*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*44.6*		*"*	*60.0*		*74.4*	*75-125*			*S-GC*

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31501 - General Preparation (GC)										
Matrix Spike Dup (EA31501-MSD1)	**Source: 3A11002-01**			Prepared: 01/14/13 Analyzed: 01/15/13						
Benzene	0.0216	0.00100	mg/kg dry	0.110	ND	19.7	80-120	9.03	20	QM-05
Toluene	0.0239	0.00200	"	0.110	ND	21.7	80-120	13.6	20	QM-05
Ethylbenzene	0.0254	0.00100	"	0.110	ND	23.1	80-120	9.97	20	QM-05
Xylene (p/m)	0.0519	0.00200	"	0.220	ND	23.6	80-120	12.7	20	QM-05
Xylene (o)	0.0295	0.00100	"	0.110	ND	26.8	80-120	15.3	20	QM-05
Surrogate: 1,4-Difluorobenzene	*72.9*		*ug/kg*	*60.0*		*121*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*48.2*		*"*	*60.0*		*80.3*	*75-125*			
Batch EA31603 - General Preparation (GC)										
Blank (EA31603-BLK1)				Prepared & Analyzed: 01/15/13						
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	*65.5*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*43.4*		*"*	*60.0*		*72.3*	*75-125*			*S-GC*
LCS (EA31603-BS1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0842	0.00100	mg/kg wet	0.100		84.2	80-120			
Toluene	0.118	0.00200	"	0.100		118	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.241	0.00200	"	0.200		120	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*64.4*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*55.1*		*"*	*60.0*		*91.9*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31603 - General Preparation (GC)										
LCS Dup (EA31603-BSD1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0860	0.00100	mg/kg wet	0.100		86.0	80-120	2.10	20	
Toluene	0.118	0.00200	"	0.100		118	80-120	0.102	20	
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120	0.963	20	
Xylene (p/m)	0.231	0.00200	"	0.200		116	80-120	4.12	20	
Xylene (o)	0.112	0.00100	"	0.100		112	80-120	0.503	20	
Surrogate: 1,4-Difluorobenzene	*61.4*		*ug/kg*	*60.0*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*51.6*		*"*	*60.0*		*86.0*	*75-125*			
Matrix Spike (EA31603-MS1)		**Source: 3A11002-10**		Prepared & Analyzed: 01/15/13						
Benzene	0.0858	0.00100	mg/kg dry	0.104	ND	82.4	80-120			
Toluene	0.105	0.00200	"	0.104	ND	101	80-120			
Ethylbenzene	0.0928	0.00100	"	0.104	ND	89.0	80-120			
Xylene (p/m)	0.184	0.00200	"	0.208	ND	88.2	80-120			
Xylene (o)	0.0875	0.00100	"	0.104	ND	84.0	80-120			
Surrogate: 1,4-Difluorobenzene	*72.5*		*ug/kg*	*60.0*		*121*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*50.1*		*"*	*60.0*		*83.5*	*75-125*			

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Project: SUG Historical MB-5 1RP-1872
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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31502 - * DEFAULT PREP *** **										
Blank (EA31502-BLK1)				Prepared: 01/14/13 Analyzed: 01/15/13						
% Moisture	ND	0.1	%							
Duplicate (EA31502-DUP1)	**Source: 3A11001-01**			Prepared: 01/14/13 Analyzed: 01/15/13						
% Moisture	10.7	0.1	%		10.8			0.930	20	
Batch EA31605 - * DEFAULT PREP *** **										
Blank (EA31605-BLK1)				Prepared & Analyzed: 01/16/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA31605-BS1)				Prepared & Analyzed: 01/16/13						
Chloride	10.8		mg/kg Wet	10.0		108	80-120			
LCS Dup (EA31605-BSD1)				Prepared & Analyzed: 01/16/13						
Chloride	10.4		mg/kg Wet	10.0		104	80-120	3.69	20	
Duplicate (EA31605-DUP1)	**Source: 3A11002-01**			Prepared & Analyzed: 01/16/13						
Chloride	42.1	1.10	mg/kg dry		42.0			0.340	20	
Matrix Spike (EA31605-MS1)	**Source: 3A11002-01**			Prepared & Analyzed: 01/16/13						
Chloride	157	1.10	mg/kg dry	137	42.0	84.0	80-120			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31503 - 8015M										
Blank (EA31503-BLK1)				Prepared: 01/14/13 Analyzed: 01/15/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*98.1*		*"*	*100*		*98.1*	*70-130*			
Surrogate: o-Terphenyl	*54.0*		*"*	*50.0*		*108*	*70-130*			
LCS (EA31503-BS1)				Prepared & Analyzed: 01/14/13						
C6-C12	1050	25.0	mg/kg wet	1000		105	75-125			
>C12-C28	1060	25.0	"	1000		106	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*53.1*		*"*	*50.0*		*106*	*70-130*			
LCS Dup (EA31503-BSD1)				Prepared & Analyzed: 01/14/13						
C6-C12	1020	25.0	mg/kg wet	1000		102	75-125	3.01	20	
>C12-C28	969	25.0	"	1000		96.9	75-125	8.93	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*107*		*"*	*100*		*107*	*70-130*			
Surrogate: o-Terphenyl	*46.8*		*"*	*50.0*		*93.5*	*70-130*			
Duplicate (EA31503-DUP1)	**Source: 3A11002-01**			Prepared & Analyzed: 01/14/13						
C6-C12	ND	27.5	mg/kg dry		ND				20	
>C12-C28	ND	27.5	"		ND				20	
>C28-C35	ND	27.5	"		ND				20	
Surrogate: 1-Chlorooctane	*98.0*		*"*	*110*		*89.2*	*70-130*			
Surrogate: o-Terphenyl	*55.5*		*"*	*54.9*		*101*	*70-130*			
Matrix Spike (EA31503-MS1)	**Source: 3A11002-01**			Prepared: 01/14/13 Analyzed: 01/15/13						
C6-C12	1120	27.5	mg/kg dry	1100	ND	102	75-125			
>C12-C28	1100	27.5	"	1100	ND	100	75-125			
>C28-C35	33.3	27.5	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*110*		*"*	*110*		*99.9*	*70-130*			
Surrogate: o-Terphenyl	*56.4*		*"*	*54.9*		*103*	*70-130*			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31503 - 8015M										
Matrix Spike Dup (EA31503-MSD1)	**Source: 3A11002-01**			Prepared: 01/14/13 Analyzed: 01/15/13						
C6-C12	1120	27.5	mg/kg dry	1100	ND	102	75-125	0.339	20	
>C12-C28	1120	27.5	"	1100	ND	101	75-125	1.28	20	
>C28-C35	ND	27.5	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*114*		*"*	*110*		*104*	*70-130*			
Surrogate: o-Terphenyl	*55.2*		*"*	*54.9*		*100*	*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: 1/16/2013

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.

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Project Name: SUG Historical MB-5 1RP-1872

Company Name: NOVA Safety and Environmental

Project #:

Company Address: 2057 Commerce

Project Loc: Lea County New Mexico

City/State/Zip: Midland, Texas 79703

PO #:

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

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

rose.slade@sug.com

(lab use only) ORDER #: 3A11002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 / 8015M	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	8015 B (C6-C30)			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	FP-1 @ 2'			1/9/2013	8:30		1	X								Soil	X								X			X				X
-02	FP-1 @ 8'			1/9/2013	8:50		1	X								Soil	X								X			X				X
-03	FP-1 @ 16'			1/9/2013	9:00		1	X								Soil	X								X			X				X
-04	FP-1A @ 2'			1/9/2013	9:15		1	X								Soil	X								X			X				X
-05	FP-1A @ 10'			1/9/2013	9:25		1	X								Soil	X								X			X				X
-06	FP-2 @ 2'			1/9/2013	9:45		1	X								Soil	X								X			X				X
-07	FP-2 @ 8'			1/9/2013	9:50		1	X								Soil	X								X			X				X
-08	FP- 2 @ 16'			1/9/2013	10:00		1	X								Soil	X								X			X				X
-09	FP-2A @ 2'			1/9/2013	10:15		1	X								Soil	X								X			X				X
-10	FP-2A @ 10'			1/9/2013	10:30		1	X								Soil	X								X			X				X

Special Instructions:

	Date	Time		Date	Time
Relinquished by: Camille Bryant	1/11/13	13:32	Received by:		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	1/11/13	13:32

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: 1.2 °C
Adjusted: °C Factor NCP

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

PBELAB

Analytical Report

Prepared for:

Camille Bryant

Nova Safety & Environment

2057 Commerce

Midland, TX 79703

Project: SUG Historical MB-5 1RP-1872

Project Number: 1RP-1872

Location: Lea County, New Mexico

Lab Order Number: 3A14004

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-12-1

Report Date: 01/16/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Flow Path 1B @ 2'	3A14004-01	Soil	01/09/13 14:00	01-14-2013 15:14
FP - 1B @ 6'	3A14004-02	Soil	01/09/13 15:00	01-14-2013 15:14
FP - 2B @ 2'	3A14004-03	Soil	01/11/13 08:30	01-14-2013 15:14
FP - 2B @ 6'	3A14004-04	Soil	01/11/13 08:40	01-14-2013 15:14
FP - 2C @ 2'	3A14004-05	Soil	01/11/13 08:50	01-14-2013 15:14
FP - 2C @ 6'	3A14004-06	Soil	01/11/13 09:00	01-14-2013 15:14
FP - 2C @ 10'	3A14004-07	Soil	01/11/13 09:15	01-14-2013 15:14
FP - 3 @ 2'	3A14004-08	Soil	01/11/13 10:00	01-14-2013 15:14
FP - 3 @ 4'	3A14004-09	Soil	01/11/13 10:10	01-14-2013 15:14
FP - 3 @ 6'	3A14004-10	Soil	01/11/13 10:20	01-14-2013 15:14
FP - 3A @ 2'	3A14004-11	Soil	01/11/13 10:40	01-14-2013 15:14
FP - 3A @ 4'	3A14004-12	Soil	01/11/13 10:50	01-14-2013 15:14
FP - 3B @ 2'	3A14004-13	Soil	01/11/13 11:20	01-14-2013 15:14
FP - 3B @ 4'	3A14004-14	Soil	01/11/13 11:40	01-14-2013 15:14

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
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Fax: (432) 520-7701

Flow Path 1B @ 2'

3A14004-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*117 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*45.6 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**23.6**	1.06	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.1**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*118 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
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FP - 1B @ 6'

3A14004-02 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*60.0 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14.4**	1.04	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*128 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

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FP - 2B @ 2'

3A14004-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*45.4 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**17.7**	1.06	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*159 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	*S-GC*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Organics by GC

Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*35.2 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*

General Chemistry Parameters by EPA / Standard Methods

Chloride	**8.89**	1.02	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	25.5	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*128 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment	Project: SUG Historical MB-5 1RP-1872	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1872	
Midland TX, 79703	Project Manager: Camille Bryant	

FP - 2C @ 2'

3A14004-05 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*39.0 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**22.4**	1.06	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*76.3 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*89.5 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

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Project Number: 1RP-1872
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FP - 2C @ 6'

3A14004-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*53.3 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4.62**	1.04	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*130 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

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Project Number: 1RP-1872
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FP - 2C @ 10'

3A14004-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*50.3 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**19.7**	1.05	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*145 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	*S-GC*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
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FP - 3 @ 2'

3A14004-08 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*37.8 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**136**	1.04	mg/kg dry	1	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*130 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*157 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	*S-GC*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

Fax: (432) 520-7701

FP - 3 @ 4'

3A14004-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31603	01/15/13	01/15/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*53.0 %*	*75-125*		*EA31603*	*01/15/13*	*01/15/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1280**	2.72	mg/kg dry	2.5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*125 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*153 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	*S-GC*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Organics by GC

Benzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*45.6 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	*S-GC*

General Chemistry Parameters by EPA / Standard Methods

Chloride	**708**	2.66	mg/kg dry	2.5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*126 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Organics by GC

Benzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*40.0 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	*S-GC*

General Chemistry Parameters by EPA / Standard Methods

Chloride	**964**	2.66	mg/kg dry	2.5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*74.1 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*85.1 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Organics by GC

Benzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*50.7 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	*S-GC*

General Chemistry Parameters by EPA / Standard Methods

Chloride	**1020**	2.69	mg/kg dry	2.5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M

C6-C12	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*76.0 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*90.6 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

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FP - 3B @ 2'

3A14004-13 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*44.2 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1790**	5.38	mg/kg dry	5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	26.9	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*80.5 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*94.4 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: 1RP-1872
Project Manager: Camille Bryant

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FP - 3B @ 4'

3A14004-14 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA31602	01/15/13	01/16/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*32.4 %*	*75-125*		*EA31602*	*01/15/13*	*01/16/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1350**	2.72	mg/kg dry	2.5	EA31606	01/16/13	01/16/13	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	EA31601	01/15/13	01/16/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C12-C28	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
>C28-C35	ND	27.2	mg/kg dry	1	EA31604	01/15/13	01/15/13	8015M	
Surrogate: 1-Chlorooctane		*81.2 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Surrogate: o-Terphenyl		*96.1 %*	*70-130*		*EA31604*	*01/15/13*	*01/15/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/15/13	01/15/13	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31602 - General Preparation (GC)										
Blank (EA31602-BLK1)				Prepared & Analyzed: 01/15/13						
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	*71.0*		*ug/kg*	*60.0*		*118*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*37.5*		*"*	*60.0*		*62.5*	*75-125*			*S-GC*
LCS (EA31602-BS1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0834	0.00100	mg/kg wet	0.100		83.4	80-120			
Toluene	0.113	0.00200	"	0.100		113	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.220	0.00200	"	0.200		110	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 1,4-Difluorobenzene	*59.7*		*ug/kg*	*60.0*		*99.6*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*49.5*		*"*	*60.0*		*82.5*	*75-125*			
LCS Dup (EA31602-BSD1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0856	0.00100	mg/kg wet	0.100		85.6	80-120	2.65	20	
Toluene	0.115	0.00200	"	0.100		115	80-120	1.87	20	
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120	3.63	20	
Xylene (p/m)	0.229	0.00200	"	0.200		114	80-120	4.05	20	
Xylene (o)	0.108	0.00100	"	0.100		108	80-120	3.66	20	
Surrogate: 1,4-Difluorobenzene	*65.0*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*52.7*		*"*	*60.0*		*87.9*	*75-125*			
Matrix Spike (EA31602-MS1)		**Source: 3A14004-10**		Prepared: 01/15/13 Analyzed: 01/16/13						
Benzene	0.0480	0.00100	mg/kg dry	0.106	ND	45.1	80-120			QM-05
Toluene	0.0496	0.00200	"	0.106	ND	46.6	80-120			QM-05
Ethylbenzene	0.0376	0.00100	"	0.106	ND	35.3	80-120			QM-05
Xylene (p/m)	0.0701	0.00200	"	0.213	ND	32.9	80-120			QM-05
Xylene (o)	0.0381	0.00100	"	0.106	ND	35.8	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*64.3*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*"*	*60.0*		*40.6*	*75-125*			*S-GC*

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31602 - General Preparation (GC)										
Matrix Spike Dup (EA31602-MSD1)	**Source: 3A14004-10**			Prepared: 01/15/13 Analyzed: 01/16/13						
Benzene	0.0451	0.00100	mg/kg dry	0.106	ND	42.4	80-120	6.33	20	QM-05
Toluene	0.0376	0.00200	"	0.106	ND	35.4	80-120	27.4	20	QM-05
Ethylbenzene	0.0257	0.00100	"	0.106	ND	24.2	80-120	37.5	20	QM-05
Xylene (p/m)	0.0489	0.00200	"	0.213	ND	23.0	80-120	35.7	20	QM-05
Xylene (o)	0.0252	0.00100	"	0.106	ND	23.6	80-120	40.8	20	QM-05
Surrogate: 1,4-Difluorobenzene	*66.3*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*21.9*		*"*	*60.0*		*36.5*	*75-125*			*S-GC*
Batch EA31603 - General Preparation (GC)										
Blank (EA31603-BLK1)				Prepared & Analyzed: 01/15/13						
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	*65.5*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*43.4*		*"*	*60.0*		*72.3*	*75-125*			*S-GC*
LCS (EA31603-BS1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0842	0.00100	mg/kg wet	0.100		84.2	80-120			
Toluene	0.118	0.00200	"	0.100		118	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.241	0.00200	"	0.200		120	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*64.4*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*55.1*		*"*	*60.0*		*91.9*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31603 - General Preparation (GC)										
LCS Dup (EA31603-BSD1)				Prepared & Analyzed: 01/15/13						
Benzene	0.0860	0.00100	mg/kg wet	0.100		86.0	80-120	2.10	20	
Toluene	0.118	0.00200	"	0.100		118	80-120	0.102	20	
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120	0.963	20	
Xylene (p/m)	0.231	0.00200	"	0.200		116	80-120	4.12	20	
Xylene (o)	0.112	0.00100	"	0.100		112	80-120	0.503	20	
Surrogate: 1,4-Difluorobenzene	*61.4*		*ug/kg*	*60.0*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*51.6*		*"*	*60.0*		*86.0*	*75-125*			
Matrix Spike (EA31603-MS1)		**Source: 3A11002-10**		Prepared & Analyzed: 01/15/13						
Benzene	0.0858	0.00100	mg/kg dry	0.104	ND	82.4	80-120			
Toluene	0.105	0.00200	"	0.104	ND	101	80-120			
Ethylbenzene	0.0928	0.00100	"	0.104	ND	89.0	80-120			
Xylene (p/m)	0.184	0.00200	"	0.208	ND	88.2	80-120			
Xylene (o)	0.0875	0.00100	"	0.104	ND	84.0	80-120			
Surrogate: 1,4-Difluorobenzene	*72.5*		*ug/kg*	*60.0*		*121*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*50.1*		*"*	*60.0*		*83.5*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31601 - * DEFAULT PREP *** **										
Blank (EA31601-BLK1)				Prepared: 01/15/13 Analyzed: 01/16/13						
% Moisture	ND	0.1	%							
Duplicate (EA31601-DUP1)	**Source: 3A14004-01**			Prepared: 01/15/13 Analyzed: 01/16/13						
% Moisture	6.1	0.1	%		6.1			0.00	20	
Batch EA31606 - * DEFAULT PREP *** **										
Blank (EA31606-BLK1)				Prepared & Analyzed: 01/16/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA31606-BS1)				Prepared & Analyzed: 01/16/13						
Chloride	9.96		mg/kg Wet	10.0		99.6	80-120			
LCS Dup (EA31606-BSD1)				Prepared & Analyzed: 01/16/13						
Chloride	10.1		mg/kg Wet	10.0		101	80-120	1.80	20	
Duplicate (EA31606-DUP1)	**Source: 3A14004-01**			Prepared & Analyzed: 01/16/13						
Chloride	23.6	1.06	mg/kg dry		23.6			0.0901	20	
Matrix Spike (EA31606-MS1)	**Source: 3A14004-01**			Prepared & Analyzed: 01/16/13						
Chloride	114	1.06	mg/kg dry	133	23.6	68.1	80-120			

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA31604 - 8015M										
Blank (EA31604-BLK1)				Prepared & Analyzed: 01/15/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*94.6*		*"*	*100*		*94.6*	*70-130*			
Surrogate: o-Terphenyl	*53.7*		*"*	*50.0*		*107*	*70-130*			
LCS (EA31604-BS1)				Prepared & Analyzed: 01/15/13						
C6-C12	1060	25.0	mg/kg wet	1000		106	75-125			
>C12-C28	1030	25.0	"	1000		103	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*114*		*"*	*100*		*114*	*70-130*			
Surrogate: o-Terphenyl	*51.7*		*"*	*50.0*		*103*	*70-130*			
LCS Dup (EA31604-BSD1)				Prepared & Analyzed: 01/15/13						
C6-C12	1000	25.0	mg/kg wet	1000		100	75-125	5.60	20	
>C12-C28	975	25.0	"	1000		97.5	75-125	5.93	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*48.5*		*"*	*50.0*		*97.0*	*70-130*			
Matrix Spike (EA31604-MS1)	**Source: 3A14004-10**			Prepared & Analyzed: 01/15/13						
C6-C12	1250	26.6	mg/kg dry	1060	ND	118	75-125			
>C12-C28	1090	26.6	"	1060	ND	102	75-125			
>C28-C35	ND	26.6	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*174*		*"*	*213*		*81.8*	*70-130*			
Surrogate: o-Terphenyl	*88.3*		*"*	*106*		*83.0*	*70-130*			
Matrix Spike Dup (EA31604-MSD1)	**Source: 3A14004-10**			Prepared & Analyzed: 01/15/13						
C6-C12	1280	26.6	mg/kg dry	1060	ND	120	75-125	2.30	20	
>C12-C28	1100	26.6	"	1060	ND	104	75-125	1.27	20	
>C28-C35	ND	26.6	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*175*		*"*	*213*		*82.1*	*70-130*			
Surrogate: o-Terphenyl	*90.5*		*"*	*106*		*85.1*	*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: Brent Barron Date: 1/16/2013

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
10014 S. County Road 1213
Midland, Texas 79706
Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720

Fax No: 432.520.7701

Sampler Signature: Rebecca Haskell

e-mail: cbryant@novatraining.cc

rose.slade@sug.com

Project Name: SUG Historical MB-5 1RP-1872

Project #:

Project Loc: Lea County New Mexico

PO #:

Report Format: x Standard TRRP NPDES

(lab use only)
ORDER #: 3A14004

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	Flow Path 1B @ 2'			1/9/2013	14:00		1	X								Soil	X								X			X				X
-02	FP-1B @ 6'			1/9/2013	15:00		1	X								Soil	X								X			X				X
-03	FP-2B @ 2'			1/11/2013	8:30		1	X								Soil	X								X			X				X
-04	FP-2B @6'			1/11/2013	8:40		1	X								Soil	X								X			X				X
-05	FP-2C @ 2'			1/11/2013	8:50		1	X								Soil	X								X			X				X
-06	FP-2C @ 6'			1/11/2013	9:00		1	X								Soil	X								X			X				X
-07	FP-2C @ 10'			1/11/2013	9:15		1	X								Soil	X								X			X				X
-08	FP-3 @ 2 '			1/11/2013	10:00		1	X								Soil	X								X			X				X
-09	FP-3 @ 4'			1/11/2013	10:10		1	X								Soil	X								X			X				X
-10	FP-3 @ 6'			1/11/2013	10:20		1	X								Soil	X								X			X				X

Analyze For: TCLP: TOTAL:

1/15/13 01

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Rebecca Haskell	1/14/13	1514			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL: Rala d/c	1-14-13	1514

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

Temperature Upon Receipt:
Received: °C
Adjusted: 2.2 °C Factor NCF

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

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

Project Name: SUG Historical MB-5 1RP-1872
Project #:
Project Loc: Lea County New Mexico
PO #:
Report Format: x Standard TRRP NPDES

(lab use only) ORDER #: 3A14004

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-11	FP-3A @ 2'			1/11/2013	10:40		1	X								Soil	X								X			X				X
-12	FP-3A @ 4'			1/11/2013	10:50		1	X								Soil	X								X			X				X
-13	FP-3B @ 2'			1/11/2013	11:20		1	X								Soil	X								X			X				X
-14	FP-3B @ 4'			1/11/2013	11:40		1	X								Soil	X								X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Rebecca Haskell	1/14/13	1514			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
			Rack	1-14-13	1514

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

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

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

PBELAB

Analytical Report

Prepared for:

Camille Bryant
Nova Safety & Environmental
2057 Commerce Street
Midland, TX 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: [none]
Location: Lea County New Mexico

Lab Order Number: 3H21006

NELAP/TCEQ # T104704156-12-1

Report Date: 08/22/13

Nova Safety & Environmental
2057 Commerce Street
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FP-2@20'	3H21006-01	Soil	08/20/13 14:20	08-21-2013 08:41

FP-2@20'

3H21006-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**133**	1.09	mg/kg dry	1	P3H2106	08/21/13	08/21/13	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P3H2105	08/21/13	08/21/13	% calculation	

Nova Safety & Environmental
2057 Commerce Street
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P3H2105 - * DEFAULT PREP *** **										
Blank (P3H2105-BLK1)				Prepared & Analyzed: 08/21/13						
% Moisture	ND	0.1	%							
Duplicate (P3H2105-DUP1)		**Source: 3H21006-01**		Prepared & Analyzed: 08/21/13						
% Moisture	7.0	0.1	%		8.0			13.3	20	
Batch P3H2106 - * DEFAULT PREP *** **										
Blank (P3H2106-BLK1)				Prepared & Analyzed: 08/21/13						
Chloride	ND	1.00	mg/kg wet							
LCS (P3H2106-BS1)				Prepared & Analyzed: 08/21/13						
Chloride	10.6		mg/kg Wet	10.0		106	80-120			
LCS Dup (P3H2106-BSD1)				Prepared & Analyzed: 08/21/13						
Chloride	10.5		mg/kg Wet	10.0		105	80-120	1.60	20	
Duplicate (P3H2106-DUP1)		**Source: 3H21001-01**		Prepared & Analyzed: 08/21/13						
Chloride	9.63	1.01	mg/kg dry		9.81			1.87	20	
Matrix Spike (P3H2106-MS1)		**Source: 3H21001-01**		Prepared & Analyzed: 08/21/13						
Chloride	116	1.01	mg/kg dry	126	9.81	84.1	80-120			

Nova Safety & Environmental
2057 Commerce Street
Midland TX, 79703

Project: SUG Historical MB-5 1RP-1872
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 8/22/2013

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant for Rick Pena

e-mail: cbryant@novatraining.cc
rachel.johnson@regencygas.com
phillip.little@regencygas.com

Project Name: SUG Historical MB-5 1RP-1872

Project #:

Project Loc: Lea County New Mexico

PO #:

Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 3H21006

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	FP-2 @ 20'			8/20/2013	14:20		1	X								Soil											X		X

Special Instructions:

Rick Pena

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant for	8/21/13	9:41			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time

Laboratory Comments:

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

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt:
Received: °C
Adjusted: 4.3 °C Factor

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services
Project Name: Trunk MB-5 Historical Release Site

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 1

Direction:
Facing West

Description:
Release Site prior to commencement of excavation activities.

Photograph No. 2

Direction:
Facing North

Description:
Excavation in progress, release point is at photo center. South and west sidewall delineation complete

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services
Project Name: Trunk MB-5 Historical Release Site

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 3

Direction:
Facing North

Description:
Excavation complete, vertical and horizontal delineation complete

Photograph No. 4

Direction:
Facing East

Description:
Advancement of delineation trenches in progress.

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services
Project Name: Trunk MB-5 Historical Release Site

Prepared by: NOVA
Location: Lea County, New Mexico

Photograph No. 5

Direction:
Facing East

Description:
Completed delineation trench.

Photograph No. 6

Direction:
Facing West

Description:
Excavation backfill activities completed

Camille Bryant

From: Leking, Geoffrey R, EMNRD <GeoffreyR.Leking@state.nm.us>
Sent: Friday, June 21, 2013 4:03 PM
To: Camille Bryant (cbryant@novatraining.cc)
Subject: MB-5 Trunkline

Camille

Review of the data and corroborative evidence indicates that the contamination present on the secondary flow path which is approximately 90 degrees to the main flow path at the site is not due to SUG practices or processes. Therefore, further delineation of this secondary flow path is not required of SUG. Other closure activities related to the site which exclude this secondary flow path should be finalized so a closure report may be submitted to the OCD. Please contact me If you have any questions. Thank you.

Geoffrey Leking
Environmental Specialist
NMOCD-Hobbs
1625 N. French Drive
Hobbs, NM 88240
Office: (575) 393-6161 Ext. 113
Cell: (575) 399-2990
email: geoffreyr.leking@state.nm.us

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Tony Savoie
Address	P.O. Box 1226 Jal, N.M. 88252	Telephone No.	575-395-2116
Facility Name	Lea County Field Dept.	Facility Type	Natural Gas Gathering

Surface Owner: Gregg Fulfer	Mineral Owner: Fee	Lease No. 30-025-11480

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	7	25S	37E					Lea

Latitude N32 4.842 Longitude W103 12.658

NATURE OF RELEASE

WTR 120'

Type of Release : Natural Gas and crude oil	Volume of Release: 100 mcf natural gas and 45 Bbls crude oil	Volume Recovered None
Source of Release : 12" Natural Gas Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 5/27/08 Time: 2:00 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Larry Johnson	
By Whom?	Date and Hour: 5/27/08 at 2:25 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

120' DTW

Describe Cause of Problem and Remedial Action Taken.*
A 12" Natural gas pipeline operating at approximately 15 p.s.i. developed a leak, a repair crew excavated the leak area and installed two 12" repair clamps. The line was permanently repaired on 5/29/08

Describe Area Affected and Cleanup Action Taken. Approximately 3700 Sq. ft. of pasture was affected by the release and repair activities. All remediation activities will follow the NMOCD guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: John A. Savoie	Approved by District Supervisor: Johnson
Title: Remediation Supervisor	ENVIRONMENTAL ENGINEER
E-mail Address: tony.savoie@sug.com	Approval Date: 5.30.08 Expiration Date: 8.4.08
Date: 5/29/08 Phone: 575-395-2116	Conditions of Approval: Submit Final C-141 By Attached ☐ IRP # 1872

* Attach Additional Sheets If Necessary

RECEIVED
MAY 30 2008
HOBBS OCD

fCOH0815152058