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April 13, 2015

Dr.
~~Mr~~. Tomas Oberding
Environmental Bureau
Oil Conservation Division
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: 12-inch Crossover Release Site
Remediation Summary and Closure Request
NMOCD Reference #1RP-1538

Dear Dr. ~~Mr~~. Oberding:

CK Associates (CK) prepared this report on behalf of Regency Energy Partners (Regency) for the 12-inch Crossover Release Site in Lea County, New Mexico. Site assessment and remediation activities have been completed at the site in cooperation with the New Mexico Oil Conservation Division (OCD). The information presented in this report was obtained by Regency from NOVA Safety & Environmental and has been summarized by CK Associates. Based on this information, Regency respectfully requests site closure for the 12-inch Crossover Release Site.

1.0 Background

The 12-inch Crossover site is located on Sid Richardson Road (32.178183°, -103.155617°) in Section 34, Township 24S, and Range 37E (**Figure 1**). On August 14, 2007, a release of crude oil and natural gas from a 12-inch steel pipeline was discovered. Based on information reported on the C-141 Release Notification Form, the cause of the release was attributed to failure of a segment of the 12-inch pipeline, which released approximately 125 barrels (bbls) of crude oil and an estimated 203 thousand cubic feet (mcf) of natural gas.

According to the C-141 form (**Appendix A**), approximately 90 bbls of "free standing" crude oil was recovered using a vacuum truck following release discovery. Based on measurements collected during initial response activities, the release covered approximately 2,100 square feet (sq. ft.) at the point of release and approximately 8,200 sq. ft. of a former production pit site located adjacent to the release point. The total surface area impacted totaled approximately ¼ of an acre.

2.0 Remediation Activities

The following section describes remediation activities that occurred at the site.

2.1 Remediation Action Levels

Using the OCD guidelines for site ranking, the following criteria have been applied: 1) the depth to groundwater is between 50 and 99 feet below ground surface, 2) the distance to the nearest water well is greater than 1,000 feet, 3) and the distance to the nearest surface water body is greater than 200 feet. This information was obtained from online records of the New Mexico Office of the State Engineer and aerial photographs.

Based on these criteria, the soil remediation levels for chemicals of concern (COCs) are as follows: benzene (10 mg/kg), Total benzene, toluene, ethylbenzene, xylene (BTEX) (50 mg/kg), and total petroleum hydrocarbon (TPH) (1,000 mg/kg). The OCD requested that for this site delineation of chlorides be conducted to 250 mg/kg.

2.2 Excavation Activities

Excavation was conducted between August 2012 and January 2013. The final excavation was irregular and extended away from the main area of impact where delineation was conducted. The size of the excavation was approximately 210 feet in length and ranged from approximately 80 to 150 feet in width and from approximately 4 to 23 feet in depth. The excavation is depicted on **Figure 2**. Photographic documentation of the excavation is shown in **Appendix B**.

Several areas of the excavation were denoted using particular names during excavation and assessment activities. Those areas (listed below) were excavated with the intent to remove or delineate affected soil. Based on the data provided, the approximate range of length, width, and depth of the areas is presented below:

Excavation Area	**Length (ft)**	**Width (ft)**	**Depth (ft)**
Entire Excavation	210	150	4-25
Main Excavation Area	100	120-150	4-25
Former Production Pit	110	80-100	4
Delineation Trenches			
Main Delineation Trench	55	15	9-25
Main Delineation Trench East	35	4	9-23
Main Delineation Trench West	15	4	9-23
North Trench	110	8	14
South Trench	10	8	16
South Trench 2	65	8	16
West Trench	10	8	16
West Trench 2	55	8	14

2.3 Confirmation Sample Results

Confirmation soil samples were taken on side walls and the base of the excavation to enable delineation of affected soil. Soil samples were analyzed for BTEX by EPA method 8021B, TPH by EPA method 8015, and chlorides by method E 300.1. Soil samples were sent to Permian Basin Environmental Labs, LP in Midland, Texas for analysis. As shown on **Table 1**, 38 soil samples were collected from the side walls and floors of the excavation from depths ranging from 9 feet to 25 feet below ground surface (bgs). Additionally, eight soil samples were collected from the former production pit from depths between 3 and 4 feet bgs. A total of 16 composite samples were collected from stockpiled soil. Analytical laboratory data is included in **Appendix C**.

In most areas sufficient soil was excavated such that no soil sample contained benzene, BTEX, TPH, or chlorides at concentrations that exceeded the soil remediation levels. However, in two locations affected soil was left in place (following discussions and agreement with the OCD). Sample locations are shown on **Figure 2**. One soil sample (Pit Floor @ 4') was reported to have a TPH concentration of 1,630 mg/kg, which was above the soil remediation level of 1,000 mg/kg. Also, one soil sample (West S/W-4@14') exceeded the chloride 250 mg/kg soil remediation level with a reported concentration of 976 mg/kg. It appears that this material may have been left in place due to the presence of a nearby transite pipe, coupled with clean results from delineation trenches further to the west.

2.4 Liner Installation

Regency and the OCD agreed that it would be appropriate to use a 20-mil polyethylene liner to limit further infiltration of water through the affected area. The OCD required that affected soil be excavated to a depth of 15 feet. Although the excavation was advanced to a depth of 23 feet in some places, the excavation was backfilled to a total depth of 15 feet bgs on the north end sloping to a depth of 17 feet bgs on the south end. Following this backfill, the base of the excavation was covered with a liner.

The OCD also approved of the use of a sidewall liner, draped along the western-most sidewall of the excavation where chloride impacted soil was left in place (near sample point West S/W-4@14'). The OCD and Regency also agreed that excavated soil containing chlorides with a concentration less than 500 mg/kg could be used as backfill on top of the liner. Photographs showing the liner are presented in **Appendix B**. **Figure 2** depicts the location and direction of each photograph.

The OCD approved Regency's request to limit excavation of the former production pit to a depth of only 4 feet bgs, which was followed by the installation of a polyethylene liner at the base of the excavation. The OCD and Regency also agreed to the installation of a second sidewall liner to be draped along the eastern sidewall of the excavation on the west side of the former production pit area (**Figure 2**).

2.5 Final Backfill Activities

In April 2013, approximately 852 cubic yards of clean soil was transported to the site from the landowner's borrow pit. A six-inch layer of sand was placed on the floor of the excavation. The 20-mil polyethylene liner was then installed on top of the sand with an additional six inches of clean sand placed on top of the liner. The excavation was then backfilled with the onsite stockpiled soil and compacted in lifts. The site was then contoured to match the surrounding topography.

3.0 Conclusions

CK has reviewed the information relating to the 12-inch Crossover Release site and made the following conclusions:

- Soil affected by the release of crude oil has been excavated and a liner has been installed in a manner appropriate to meet criteria agreed upon by the OCD.
- A 20-mil polyethylene liner was installed in the excavation and covered with clean backfill sand and soil that meets the OCD's predetermined criteria.
- Consistent with OCD guidance, the placement of the liner is intended to limit the infiltration of surface water and protect groundwater from future migration of COCs.

Based on the successful completion of these remediation activities, Regency requests closure of the 12-inch Crossover Release site.

4.0 Closing

We appreciate your consideration of this report. If you have any questions or comments, please feel free to contact our office at (281) 397-9016.

Sincerely,
CK Associates

Jeff J. Lane
Environmental Scientist

Hollis F. Millard, P.G.
Risk Assessment & Remediation Team Leader

CC: Crystal Callaway, Regency Energy Partners, LP

TABLES

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

REGENCY FIELD SERVICES, LLC
12 INCH CROSSOVER HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD # 1RP-1538

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
North Floor 1 @ 9'	08/07/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.8	<15.8	<15.8	<15.8	**996**
North S/W -2 @ 8'	08/09/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<16.7	<16.7	<16.7	<16.7	102
North Floor-1 @ 14.5'	08/09/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<18.3	<18.3	<18.3	<18.3	116
North S/W-1 @ 13'	08/09/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<17.9	<17.9	<17.9	<17.9	13.9
North Floor -2 @ 9'	08/09/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<18.8	<18.8	<18.8	<18.8	1.81
South Floor-1 @ 12'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<16.9	36.1	<16.9	36.1	**1,520**
South Floor-2 @ 9'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<16.1	<16.1	<16.1	<16.1	**937**
South Floor-1 @ 17.5'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.5	16.2	<15.5	16.2	235
South S/W-1 @ 16.5'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.6	133	<15.6	133	**276**
South Floor-2 @ 13'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.8	<15.8	<15.8	<15.8	**358**
South S/W-2 @ 12'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.8	<15.8	<15.8	<15.8	**263**
East Floor-1 @ 12'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<16.9	<16.9	<16.9	<16.9	**1,500**
East Floor-1 @ 18.5'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.6	<15.6	<15.6	<15.6	**297**
East S/W-1 @ 17.5'	08/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.8	<15.8	<15.8	<15.8	**566**
West Floor-1 @ 9'	08/14/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<16.5	<16.5	<16.5	<16.5	**1,140**
West Floor-1 @ 17'	08/14/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.5	<15.5	<15.5	<15.5	**301**
West S/W-1 @ 16'	08/14/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<15.6	<15.6	<15.6	<15.6	**259**
East Floor @ 23'	10/10/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	155
West Floor @ 22'	10/10/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	79.6
South Floor @ 25'	10/10/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	249
SP-1	10/10/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	99
East Pit 1 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	5.29
East Pit 2 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	102
South Pit 1 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	157
SouthPit 2 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	31.1

Bold - Exceeds OCD regulatory limit

Tabulated data shown were obtained from Nova Safety & Environmental

TABLE 1

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REGENCY FIELD SERVICES, LLC
12 INCH CROSSOVER HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
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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
North Pit 1 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.8	<27.8	<27.8	<27.8	2.62
North Pit 2 @ 3'	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	**880**
Pit SP-1	10/25/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	822	170	992	87.7
West Trench-1 @ 16'	10/26/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	209
North Pit 2A @ 3'	11/12/12	-	-	-	-	-	-	-	-	-	-	118
North Wall 1 @ 14'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	189
North Wall 2 @ 14'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	**307**
South Wall 1 @ 16'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	62.8
South Wall 2 @ 16'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	**400**
West Wall 1 @ 16'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	**287**
West Wall 2 @ 14'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	132
Pit Floor @ 4'	11/30/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<27.2	1,250	383	1,630	197
SP-2	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	**361**
SP-3	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	**356**
SP-4	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	**309**
SP-5	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	243
SP-6	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	220
SP-7	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	**339**
SP-8	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	**383**
SP-9	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	194
SP-10	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	233
SP-11	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	**394**
SP-12	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	154
Topsoil	12/03/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.3	<25.3	<25.3	<25.3	66.5
North S-W 1A @ 14'	12/07/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	230

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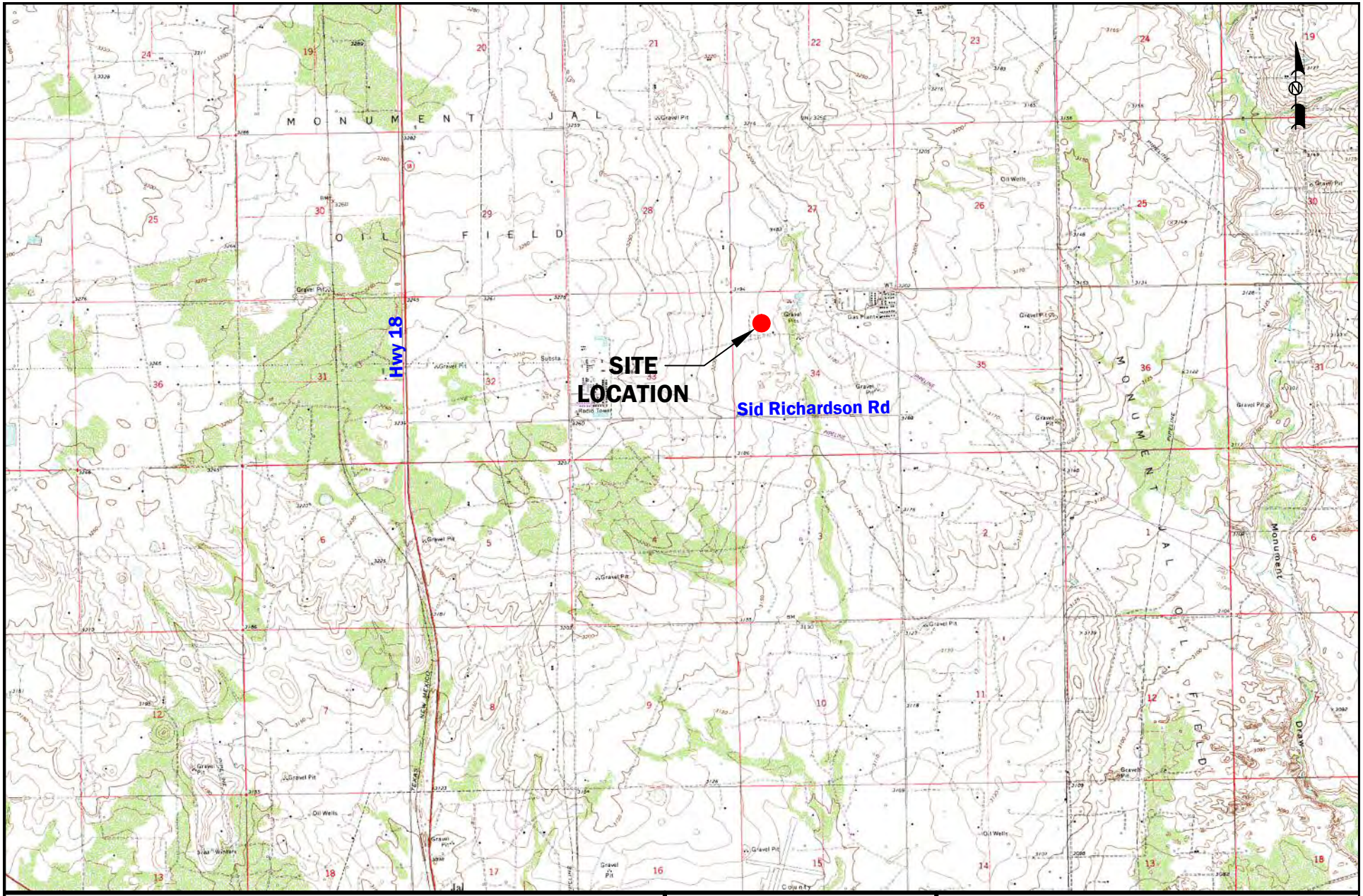
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
East S-W 1 @ 14'	12/07/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	197
West S-W 3 @ 14'	12/07/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.3	<26.3	<26.3	<26.3	**284**
West Trench 2 @ 14'	12/13/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	**324**
West Trench SW @ 14'	12/14/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	205
South Trench @ 16'	12/17/12	-	-	-	-	-	-	-	-	-	-	113
West Trench @ 16'	12/17/12	-	-	-	-	-	-	-	-	-	-	124
SP-13	12/20/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	**498**
SP-14	12/20/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.5	<25.5	<25.5	<25.5	**474**
SP-15	12/20/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	**500**
SP-16	12/20/12	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.0	<26.0	<26.0	<26.0	**495**
South S/W 2A @ 16'	01/21/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	144
North S/W 2A @ 14'	01/21/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<25.8	<25.8	<25.8	<25.8	245
West S/W-4 @ 14'	01/31/13	<0.00100	<0.00200	<0.00100	<0.00200	<0.00100	<0.00200	<26.6	<26.6	<26.6	<26.6	**979**

FIGURES



LEGEND:

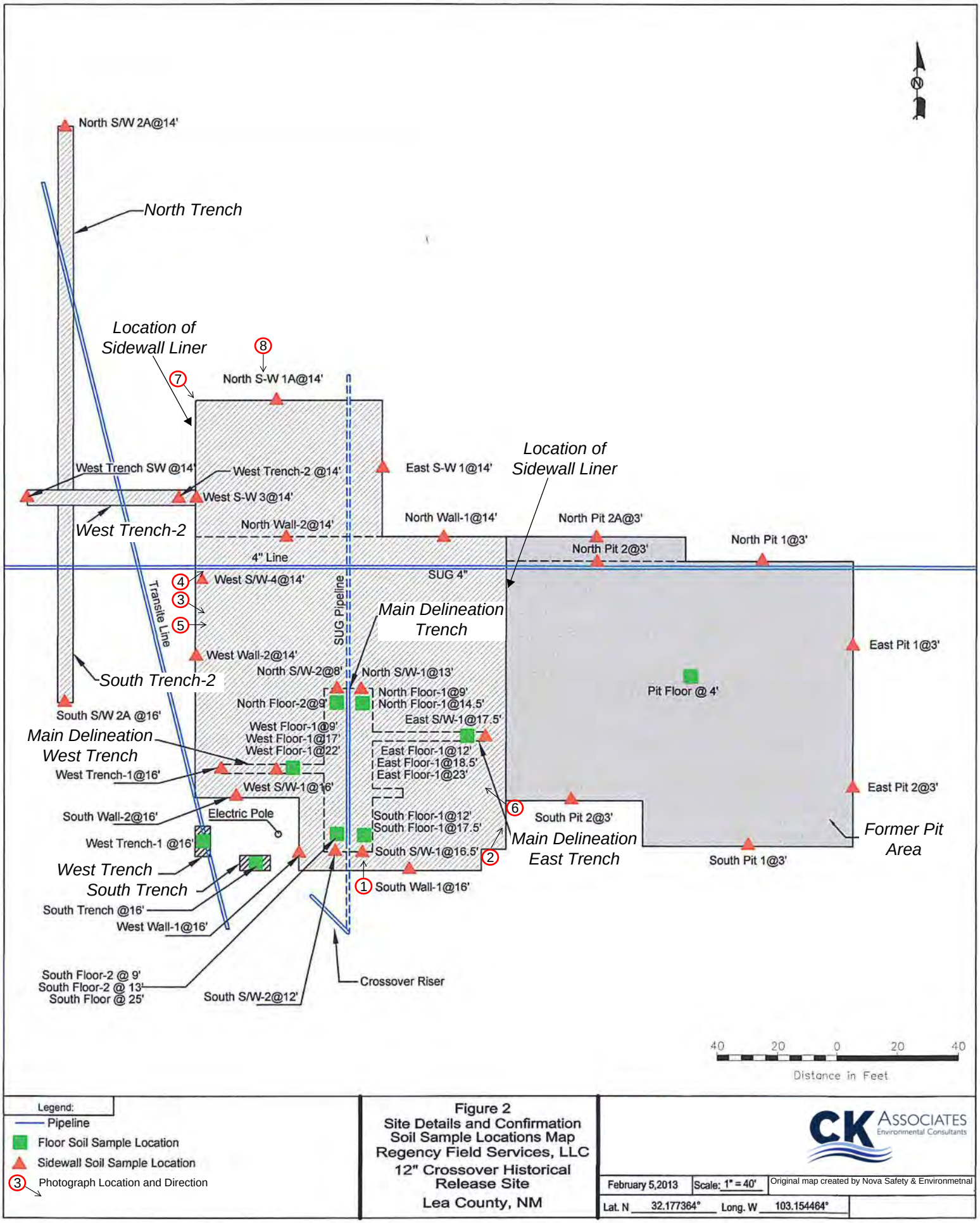
2000 1000 0 1000 2000

Distance in Feet

Figure 1
Site Location Map
Regency Field Services, LLC
12" Crossover Historical Release Site
Lea County, NM

CK Associates Environmental Consultants

August 17, 2012	Scale: 1" = 2000'	Original map created by Nova Safety & Environmetnal
Lat. N 32.177364°	Long. W 103.154464°	1RP-1538


North S/W 2A@14'
North Trench
Location of Sidewall Liner
8
7
North S-W 1A@14'
West Trench SW @14'
West Trench-2 @14'
East S-W 1@14'
West S-W 3@14'
Location of Sidewall Liner
West Trench-2
North Wall-2@14'
North Wall-1@14'
North Pit 2A@3'
North Pit 2@3'
North Pit 1@3'
4" Line
SUG 4"
4
3
5
West S/W-4@14'
Transite Line
SUG Pipeline
Main Delineation Trench
East Pit 1@3'
West Wall-2@14'
North S/W-2@8'
North S/W-1@13'
South Trench-2
North Floor-1@9'
North Floor-2@9'
North Floor-1@14.5'
Pit Floor @ 4'
East S/W-1@17.5'
South S/W 2A @16'
West Floor-1@9'
West Floor-1@17'
Main Delineation West Trench
West Floor-1@22'
East Floor-1@12'
East Floor-1@18.5'
East Floor-1@23'
West Trench-1@16'
West S/W-1@16'
East Pit 2@3'
South Wall-2@16'
Electric Pole
South Floor-1@12'
6
South Pit 2@3'
South Floor-1@17.5'
Former Pit Area
West Trench-1 @16'
Main Delineation East Trench
South S/W-1@16.5'
2
South Pit 1@3'
West Trench
South Trench
1
South Wall-1@16'
South Trench @16'
West Wall-1@16'
South Floor-2 @ 9'
South Floor-2 @ 13'
South Floor @ 25'
Crossover Riser
South S/W-2@12'
40
20
0
20
40
Distance in Feet
Legend:
Pipeline
Floor Soil Sample Location
Sidewall Soil Sample Location
3 Photograph Location and Direction
Figure 2
Site Details and Confirmation Soil Sample Locations Map
Regency Field Services, LLC
12" Crossover Historical Release Site
Lea County, NM
CK Associates
Environmental Consultants
February 5,2013
Scale: 1" = 40'
Original map created by Nova Safety & Environmetnal
Lat. N 32.177364°
Long. W 103.154464°

APPENDICES

APPENDIX A

C-141 Form

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

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

Surface Owner: Becky J. Doom	Mineral Owner: Fee	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	34	24S	37E					Lea

Latitude N32 10.691 Longitude W103 09.337

NATURE OF RELEASE

>50'

Type of Release : Crude Oil, and Natural Gas	Volume of Release: 125 Bbls Fluid and 203 MCF Nat. Gas	Volume Recovered 90 Bbls Crude oil
Source of Release : 12" Natural Gas Pipeline	Date and Hour of Occurrence not known	Date and Hour of Discovery 8/14/07 Time: 4:45 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Gary Wink On-call NMOCD	
By Whom? Tony Savoie	Date and Hour: 8/15/07 7:58 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

90' State engineer

AUG 2007 Received Hobbs OCD

Describe Cause of Problem and Remedial Action Taken.*
A 12" Natural Gas gathering line operating at approximately 30 p.s.i. developed a leak. Repair crews arrived at the leak site on 8/14/07 and isolated the section of line involved with the leak. The operator originally estimated the release at less than 25 Bbls, but failed to notice the release had traveled to an abandoned E&P pit.

☐

Describe Area Affected and Cleanup Action Taken. An E.S.A. was performed on 8/15/07 by Tony Savoie, a vacuum truck was dispatched to the site to remove all of the free standing liquids on top of the abandoned E&P pit and the immediate release area. Instructions were given not disturb the area on and around the old pit. The NMOCD was notified and a request was made for a field inspector to inspect the leak area and abandoned pit. The landowner was notified about the release area and pit location. The release area covered approximately 2100 sq. ft. before reaching the pit area. The pit area measured approximately 12,600 sq.ft. of which about 65% of that area was covered with product from the pipeline release. The area affected around the leak area that is not associated with the pit will be remediated in accordance with the NMOCD recommended guidelines for leaks and spills. An agreement will be reached with the landowner and NMOCD on how the affected area on the E&P pit will be handled.

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: Chris Johnson
Title: Remediation Supervisor	Approval Date: 8-31-07 Expiration Date: 10-1-07 ENVIRONMENTAL ENGINEER
E-mail Address: tony.savoie@sug.com	Conditions of Approval: SUBMIT H&D DOCUMENTATION REPORT FOR CLOSURE APPROVAL BY OCD Attached ☐
Date: 8/28/07 Phone: 505-395-2116	

RP#1538

* Attach Additional Sheets If Necessary

Appendix B

Photographic Documentation

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services **Prepared by:** NOVA
Project Name: 12 Inch Crossover Historical Release Site **Location:** Lea County, New Mexico

Photograph No. 1

Direction:
Facing North

Description:
Excavation activities in progress.

Photograph No. 2

Direction:
Facing Northeast

Description:
Excavation activities in progress. Pit Area excavation at right.

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services **Prepared by:** NOVA
Project Name: 12 Inch Crossover Historical Release Site **Location:** Lea County, New Mexico

Photograph No. 3

Direction:
Facing Southeast

Description:
Excavation activities in progress.

Photograph No. 4

Direction:
Facing Northeast

Description:
Excavation activities in progress.

Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services **Prepared by:** NOVA
Project Name: 12 Inch Crossover Historical Release Site **Location:** Lea County, New Mexico

Photograph No. 5

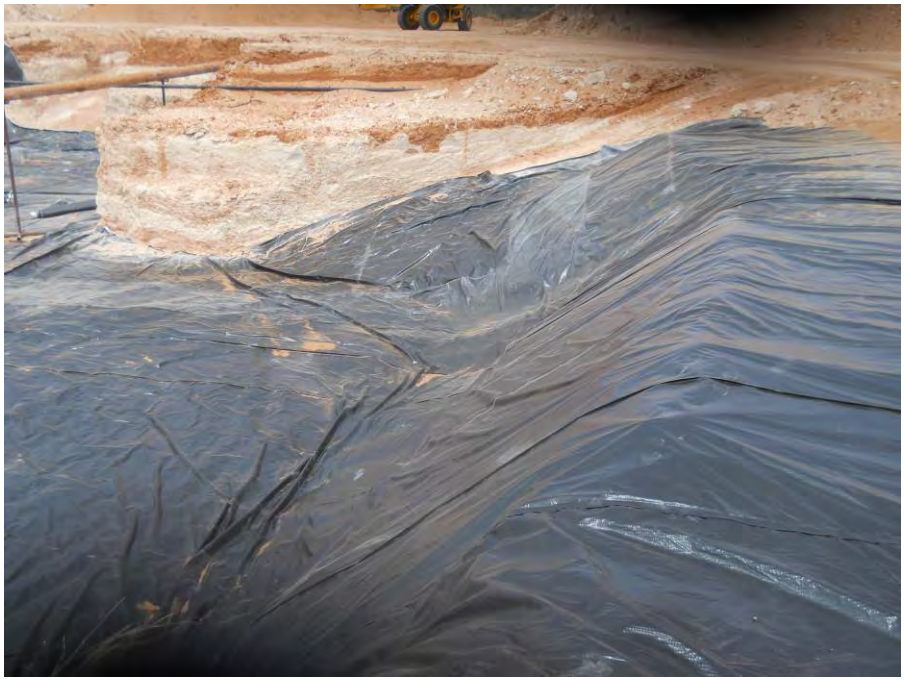
Direction:
Facing East

Description:
Excavation complete, Sand layer placed in excavation prior to Liner installation.

Photograph No. 6

Direction:
Facing Northwest

Description:
Liner installation prior to Sand layer placement.



Photographic Documentation

Client: Regency Field Services, LLC,
Formerly Southern Union Gas Services **Prepared by:** NOVA
Project Name: 12 Inch Crossover Historical Release Site **Location:** Lea County, New Mexico

Photograph No. 7

Direction:
Facing East

Description:
Liner installed on excavation floor.

Photograph No. 8

Direction:
Facing South

Description:
Liner installed on excavation floor. Liner draped on west sidewall.

Appendix C

Laboratory Data Reports

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

PBELAB

Analytical Report

Prepared for:

Camille Bryant

Nova Safety & Environment

2057 Commerce

Midland, TX 79703

Project: TRP-1538

Project Number: Historical 12in. Crossover TRP-1538

Location: Lea Co, NM

Lab Order Number: 2H15001

NELAP/TCEQ # T104704156-12-1

Report Date: 09/04/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: TRP-1538
Project Number: Historical 12in. Crossover TRP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Floor-1 @9'	2H15001-01	Soil	08/07/12 14:10	08-15-2012 08:55
North S/W-2 @8'	2H15001-02	Soil	08/09/12 08:00	08-15-2012 08:55
North Floor-1 @14.5'	2H15001-03	Soil	08/09/12 08:20	08-15-2012 08:55
North S/W-1 @13'	2H15001-04	Soil	08/09/12 08:25	08-15-2012 08:55
North Floor-2@9'	2H15001-05	Soil	08/09/12 15:23	08-15-2012 08:55
South Floor-1 @ 12'	2H15001-06	Soil	08/13/12 08:00	08-15-2012 08:55
South Floor-2 @ 9'	2H15001-07	Soil	08/13/12 08:20	08-15-2012 08:55
South Floor-1 @ 17.5'	2H15001-08	Soil	08/13/12 09:00	08-15-2012 08:55
South S/W-1 @ 16.5'	2H15001-09	Soil	08/13/12 09:20	08-15-2012 08:55
South Floor-2 @ 13'	2H15001-10	Soil	08/13/12 10:00	08-15-2012 08:55
South S/W-2 @ 12'	2H15001-11	Soil	08/13/12 10:20	08-15-2012 08:55
East Floor-1 @ 12'	2H15001-12	Soil	08/13/12 13:20	08-15-2012 08:55
East Floor-1 @ 18.5'	2H15001-13	Soil	08/13/12 14:00	08-15-2012 08:55
East S/W-1 @ 17.5'	2H15001-14	Soil	08/13/12 14:20	08-15-2012 08:55
West Floor-1 @ 9'	2H15001-15	Soil	08/14/12 08:10	08-15-2012 08:55
West Floor-1 @ 17'	2H15001-16	Soil	08/14/12 08:40	08-15-2012 08:55
West S/W-1 @ 16'	2H15001-17	Soil	08/14/12 12:15	08-15-2012 08:55

Samples received were analyzed for BTEX, TPH and Chlorides.

For the TPH analysis the surrogate O-Terphenyl was recovered above the QC limit in most samples. For those samples that had surrogate failures for the surrogate 1-Chloroctane, a re-extraction and re-analysis was performed to confirm the surrogate failures. Because these samples were clean, the surrogate failures have no effect on the quality of the data. Please see the flagging criteria listed in the Notes section.

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
North Floor-1 @9' (2H15001-01) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*98.7 %*	*75-125*		"	"	"	"	
C6-C12	**ND**	15.8	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	15.8	"	"	"	"	"	"	
>C28-C35	ND	15.8	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.8	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		"	"	"	"	
Surrogate: o-Terphenyl		*142 %*	*70-130*		"	"	"	"	*S-GC*
North S/W-2 @8' (2H15001-02) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*104 %*	*75-125*		"	"	"	"	
C6-C12	ND	16.7	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	16.7	"	"	"	"	"	"	
>C28-C35	ND	16.7	"	"	"	"	"	"	
Total Hydrocarbons	ND	16.7	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*127 %*	*70-130*		"	"	"	"	
Surrogate: o-Terphenyl		*143 %*	*70-130*		"	"	"	"	*S-GC*
North Floor-1 @14.5' (2H15001-03) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**ND**	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.0 %*	*75-125*		"	"	"	"	
C6-C12	**ND**	18.3	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: TRP-1538
Project Number: Historical 12in. Crossover TRP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
North Floor-1 @14.5' (2H15001-03) Soil									
>C12-C28	ND	18.3	mg/kg dry	1	EH21703	08/15/12	08/15/12	EPA 8015M	
>C28-C35	ND	18.3	"	"	"	"	"	"	
Total Hydrocarbons	ND	18.3	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*134 %*	*70-130*		"	"	"	"	*S-DUP*
Surrogate: o-Terphenyl		*141 %*	*70-130*		"	"	"	"	*S-DUP*
North S/W-1 @13' (2H15001-04) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*75-125*		"	"	"	"	
C6-C12	ND	17.9	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	17.9	"	"	"	"	"	"	
>C28-C35	ND	17.9	"	"	"	"	"	"	
Total Hydrocarbons	ND	17.9	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*145 %*	*70-130*		"	"	"	"	*S-DUP*
Surrogate: o-Terphenyl		*153 %*	*70-130*		"	"	"	"	*S-DUP*
North Floor-2@9' (2H15001-05) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*97.3 %*	*75-125*		"	"	"	"	
C6-C12	ND	18.8	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	18.8	"	"	"	"	"	"	
>C28-C35	ND	18.8	"	"	"	"	"	"	
Total Hydrocarbons	ND	18.8	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*119 %*	*70-130*		"	"	"	"	
Surrogate: o-Terphenyl		*137 %*	*70-130*		"	"	"	"	*S-GC*

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
South Floor-1 @ 12' (2H15001-06) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-125*		"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*101 %*	*75-125*		"	"	"	"	
C6-C12	ND	16.9	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	**36.1**	16.9	"	"	"	"	"	"	
>C28-C35	**ND**	16.9	"	"	"	"	"	"	
Total Hydrocarbons	**36.1**	16.9	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*126 %*	*70-130*		"	"	"	"	
Surrogate: o-Terphenyl		*133 %*	*70-130*		"	"	"	"	*S-GC*
South Floor-2 @ 9' (2H15001-07) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*75-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*	*75-125*		"	"	"	"	
C6-C12	**ND**	16.1	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	16.1	"	"	"	"	"	"	
>C28-C35	ND	16.1	"	"	"	"	"	"	
Total Hydrocarbons	ND	16.1	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*122 %*	*70-130*		"	"	"	"	
Surrogate: o-Terphenyl		*128 %*	*70-130*		"	"	"	"	
South Floor-1 @ 17.5' (2H15001-08) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*98.3 %*	*75-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-125*		"	"	"	"	
C6-C12	**ND**	15.5	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
South Floor-1 @ 17.5' (2H15001-08) Soil									
>C12-C28	**16.2**	15.5	mg/kg dry	1	EH21703	08/15/12	08/15/12	EPA 8015M	
>C28-C35	**ND**	15.5	"	"	"	"	"	"	
Total Hydrocarbons	**16.2**	15.5	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*120 %*	*70-130*		*"*	*"*	*"*	*"*	
South S/W-1 @ 16.5' (2H15001-09) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*97.7 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	15.6	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	**133**	15.6	"	"	"	"	"	"	
>C28-C35	**ND**	15.6	"	"	"	"	"	"	
Total Hydrocarbons	**133**	15.6	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*126 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*131 %*	*70-130*		*"*	*"*	*"*	*"*	*S-DUP, S-GC*
South Floor-2 @ 13' (2H15001-10) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.0 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	15.8	mg/kg dry	"	EH21703	08/15/12	08/15/12	EPA 8015M	
>C12-C28	ND	15.8	"	"	"	"	"	"	
>C28-C35	**ND**	15.8	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.8	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*125 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*131 %*	*70-130*		*"*	*"*	*"*	*"*	*S-GC*

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
South S/W-2 @ 12' (2H15001-11) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	ND	15.8	mg/kg dry	"	EH21703	08/15/12	08/16/12	EPA 8015M	
>C12-C28	ND	15.8	"	"	"	"	"	"	
>C28-C35	**ND**	15.8	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.8	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*123 %*	*70-130*		*"*	*"*	*"*	*"*	
East Floor-1 @ 12' (2H15001-12) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.3 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	ND	16.9	mg/kg dry	"	EH21703	08/15/12	08/16/12	EPA 8015M	
>C12-C28	ND	16.9	"	"	"	"	"	"	
>C28-C35	**ND**	16.9	"	"	"	"	"	"	
Total Hydrocarbons	ND	16.9	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*128 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*133 %*	*70-130*		*"*	*"*	*"*	*"*	*S-GC*
East Floor-1 @ 18.5' (2H15001-13) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 1,4-Difluorobenzene		*97.2 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	15.6	mg/kg dry	"	EH21704	08/16/12	08/17/12	EPA 8015M	

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
East Floor-1 @ 18.5' (2H15001-13) Soil									
>C12-C28	ND	15.6	mg/kg dry	1	EH21704	08/16/12	08/17/12	EPA 8015M	
>C28-C35	**ND**	15.6	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.6	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*128 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*136 %*	*70-130*		*"*	*"*	*"*	*"*	*S-DUP, S-GC*
East S/W-1 @ 17.5' (2H15001-14) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.3 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	15.8	mg/kg dry	"	EH21704	08/16/12	08/17/12	EPA 8015M	
>C12-C28	ND	15.8	"	"	"	"	"	"	
>C28-C35	ND	15.8	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.8	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*132 %*	*70-130*		*"*	*"*	*"*	*"*	*S-DUP, S-GC*
West Floor-1 @ 9' (2H15001-15) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	16.5	mg/kg dry	"	EH21704	08/16/12	08/17/12	EPA 8015M	
>C12-C28	**ND**	16.5	"	"	"	"	"	"	
>C28-C35	**ND**	16.5	"	"	"	"	"	"	
Total Hydrocarbons	ND	16.5	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*124 %*	*70-130*		*"*	*"*	*"*	*"*	

Organics by GC

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
West Floor-1 @ 17' (2H15001-16) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*97.5 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	ND	15.5	mg/kg dry	"	EH21703	08/15/12	08/16/12	EPA 8015M	
>C12-C28	ND	15.5	"	"	"	"	"	"	
>C28-C35	**ND**	15.5	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.5	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*124 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*130 %*	*70-130*		*"*	*"*	*"*	*"*	
West S/W-1 @ 16' (2H15001-17) Soil									
Benzene	ND	0.00100	mg/kg dry	1	EH21602	08/15/12	08/15/12	EPA 8021B	
Toluene	ND	0.00200	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00200	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: 1,4-Difluorobenzene		*99.2 %*	*75-125*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*97.5 %*	*75-125*		*"*	*"*	*"*	*"*	
C6-C12	**ND**	15.6	mg/kg dry	"	EH21704	08/16/12	08/17/12	EPA 8015M	
>C12-C28	**ND**	15.6	"	"	"	"	"	"	
>C28-C35	**ND**	15.6	"	"	"	"	"	"	
Total Hydrocarbons	ND	15.6	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*94.7 %*	*70-130*		*"*	*"*	*"*	*"*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*"*	*"*	*"*	*"*	

General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
North Floor-1 @9' (2H15001-01) Soil									
Chloride	**996**	10.5	mg/kg dry wt. dry	10	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EH21601	08/15/12	08/16/12	% calculation	
North S/W-2 @8' (2H15001-02) Soil									
Chloride	**102**	1.11	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**10.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
North Floor-1 @14.5' (2H15001-03) Soil									
Chloride	**116**	1.22	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**18.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
North S/W-1 @13' (2H15001-04) Soil									
Chloride	**13.9**	5.95	mg/kg dry wt. dry	5	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	EH21601	08/15/12	08/16/12	% calculation	
North Floor-2@9' (2H15001-05) Soil									
Chloride	**1.81**	1.25	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**20.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
South Floor-1 @ 12' (2H15001-06) Soil									
Chloride	**1520**	2.81	mg/kg dry wt. dry	2.5	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	EH21601	08/15/12	08/16/12	% calculation	
South Floor-2 @ 9' (2H15001-07) Soil									
Chloride	**937**	1.08	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**7.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
South Floor-1 @ 17.5' (2H15001-08) Soil									
Chloride	**235**	1.03	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	

General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
South S/W-1 @ 16.5' (2H15001-09) Soil									
Chloride	**276**	1.04	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
South Floor-2 @ 13' (2H15001-10) Soil									
Chloride	**358**	1.05	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
South S/W-2 @ 12' (2H15001-11) Soil									
Chloride	**263**	1.05	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	"	EH21601	08/15/12	08/16/12	% calculation	
East Floor-1 @ 12' (2H15001-12) Soil									
Chloride	**1500**	5.62	mg/kg dry wt. dry	5	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	EH21601	08/16/12	08/16/12	% calculation	
East Floor-1 @ 18.5' (2H15001-13) Soil									
Chloride	**297**	1.04	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	"	EH21601	08/16/12	08/16/12	% calculation	
East S/W-1 @ 17.5' (2H15001-14) Soil									
Chloride	**566**	1.05	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	"	EH21601	08/16/12	08/16/12	% calculation	
West Floor-1 @ 9' (2H15001-15) Soil									
Chloride	**1140**	5.49	mg/kg dry wt. dry	5	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	EH21601	08/16/12	08/16/12	% calculation	
West Floor-1 @ 17' (2H15001-16) Soil									
Chloride	**301**	1.03	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	"	EH21601	08/16/12	08/16/12	% calculation	

Nova Safety & Environment
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Midland TX, 79703

Project: TRP-1538
Project Number: Historical 12in. Crossover TRP-1538
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General Chemistry Parameters by EPA / Standard Methods

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
West S/W-1 @ 16' (2H15001-17) Soil									
Chloride	**259**	1.04	mg/kg dry wt. dry	1	EH21702	08/15/12	08/17/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	"	EH21601	08/16/12	08/16/12	% calculation	

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 EH21602 - General Preparation (GC)										
Blank (EH21602-BLK1)				Prepared & Analyzed: 08/15/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*58.0*		*ug/kg*	*60.0*		*96.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.0*		*"*	*60.0*		*105*	*75-125*			
LCS (EH21602-BS1)				Prepared & Analyzed: 08/15/12						
Benzene	0.0916	0.00100	mg/kg wet	0.100		91.6	80-120			
Toluene	0.108	0.00200	"	0.100		108	80-120			
Ethylbenzene	0.0946	0.00100	"	0.100		94.6	80-120			
Xylene (p/m)	0.188	0.00200	"	0.200		94.0	80-120			
Xylene (o)	0.0949	0.00100	"	0.100		94.9	80-120			
Surrogate: 1,4-Difluorobenzene	*57.7*		*ug/kg*	*60.0*		*96.2*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*64.0*		*"*	*60.0*		*107*	*75-125*			
LCS Dup (EH21602-BSD1)				Prepared & Analyzed: 08/15/12						
Benzene	0.0870	0.00100	mg/kg wet	0.100		87.0	80-120	5.15	20	
Toluene	0.102	0.00200	"	0.100		102	80-120	5.71	20	
Ethylbenzene	0.0888	0.00100	"	0.100		88.8	80-120	6.32	20	
Xylene (p/m)	0.175	0.00200	"	0.200		87.5	80-120	7.16	20	
Xylene (o)	0.0900	0.00100	"	0.100		90.0	80-120	5.30	20	
Surrogate: 1,4-Difluorobenzene	*57.7*		*ug/kg*	*60.0*		*96.2*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.4*		*"*	*60.0*		*106*	*75-125*			
Matrix Spike (EH21602-MS1)		**Source: 2H15001-10**		Prepared & Analyzed: 08/15/12						
Benzene	0.0671	0.00100	mg/kg dry	0.105	ND	63.9	80-120			QM-05
Toluene	0.0818	0.00200	"	0.105	ND	77.9	80-120			QM-05
Ethylbenzene	0.0719	0.00100	"	0.105	ND	68.5	80-120			QM-05
Xylene (p/m)	0.142	0.00200	"	0.211	ND	67.3	80-120			QM-05
Xylene (o)	0.0739	0.00100	"	0.105	ND	70.4	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*58.9*		*ug/kg*	*60.0*		*98.2*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*67.5*		*"*	*60.0*		*112*	*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 EH21602 - General Preparation (GC)										
Matrix Spike Dup (EH21602-MSD1)	**Source: 2H15001-10**			Prepared & Analyzed: 08/15/12						
Benzene	0.0720	0.00100	mg/kg dry	0.105	ND	68.6	80-120	7.09	20	QM-05
Toluene	0.0956	0.00200	"	0.105	ND	91.0	80-120	15.5	20	
Ethylbenzene	0.0846	0.00100	"	0.105	ND	80.6	80-120	16.2	20	
Xylene (p/m)	0.157	0.00200	"	0.211	ND	74.4	80-120	10.0	20	QM-05
Xylene (o)	0.0836	0.00100	"	0.105	ND	79.6	80-120	12.3	20	QM-05
Surrogate: 1,4-Difluorobenzene	*58.6*		*ug/kg*	*60.0*		*97.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*65.2*		*"*	*60.0*		*109*	*75-125*			
Batch EH21703 - 8015M										
Blank (EH21703-BLK1)				Prepared & Analyzed: 08/15/12						
C6-C12	ND	15.0	mg/kg wet							
>C12-C28	ND	15.0	"							
>C28-C35	ND	15.0	"							
Total Hydrocarbons	ND	15.0	"							
Surrogate: 1-Chlorooctane	*130*		*"*	*100*		*130*	*70-130*			
Surrogate: o-Terphenyl	*68.6*		*"*	*50.0*		*137*	*70-130*			*S-GC*
LCS (EH21703-BS1)				Prepared & Analyzed: 08/15/12						
C6-C12	909	15.0	mg/kg wet	1000		90.9	75-125			
>C12-C28	958	15.0	"	1000		95.8	75-125			
>C28-C35	ND	15.0	"				75-125			
Total Hydrocarbons	ND	15.0	"				75-125			
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*63.9*		*"*	*50.0*		*128*	*70-130*			
LCS Dup (EH21703-BSD1)				Prepared & Analyzed: 08/15/12						
C6-C12	854	15.0	mg/kg wet	1000		85.4	75-125	6.24	20	
>C12-C28	990	15.0	"	1000		99.0	75-125	3.29	20	
>C28-C35	ND	15.0	"				75-125		20	
Total Hydrocarbons	ND	15.0	"				75-125		20	
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*64.0*		*"*	*50.0*		*128*	*70-130*			

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 EH21703 - 8015M										
Matrix Spike (EH21703-MS1)		**Source: 2H15001-10**		Prepared & Analyzed: 08/15/12						
C6-C12	1020	15.8	mg/kg dry	1050	ND	97.1	75-125			
>C12-C28	1080	15.8	"	1050	ND	103	75-125			
Total Hydrocarbons	ND	15.8	"		ND		75-125			
Surrogate: 1-Chlorooctane	*183*		*"*	*105*		*174*	*70-130*			*S-04*
Surrogate: o-Terphenyl	*71.0*		*"*	*52.6*		*135*	*70-130*			*S-04*
Matrix Spike Dup (EH21703-MSD1)		**Source: 2H15001-10**		Prepared: 08/15/12 Analyzed: 08/16/12						
C6-C12	1050	15.8	mg/kg dry	1050	ND	100	75-125	2.94	20	
>C12-C28	1110	15.8	"	1050	ND	106	75-125	2.87	20	
Total Hydrocarbons	ND	15.8	"		ND		75-125		20	
Surrogate: 1-Chlorooctane	*192*		*"*	*105*		*183*	*70-130*			*S-04*
Surrogate: o-Terphenyl	*72.5*		*"*	*52.6*		*138*	*70-130*			*S-04*
Batch EH21704 - TX 1005										
Blank (EH21704-BLK1)				Prepared & Analyzed: 08/16/12						
C6-C12	ND	15.0	mg/kg wet							
>C12-C28	ND	15.0	"							
>C28-C35	ND	15.0	"							
Total Hydrocarbons	ND	15.0	"							
Surrogate: 1-Chlorooctane	*154*		*"*	*120*		*128*	*70-130*			
Surrogate: o-Terphenyl	*81.6*		*"*	*60.0*		*136*	*70-130*			*S-GC*
LCS (EH21704-BS1)				Prepared & Analyzed: 08/16/12						
C6-C12	1040	15.0	mg/kg wet	1000		104	75-125			
>C12-C28	1100	15.0	"	1000		110	75-125			
>C28-C35	ND	15.0	"				75-125			
Total Hydrocarbons	ND	15.0	"				75-125			
Surrogate: 1-Chlorooctane	*190*		*"*	*120*		*158*	*70-130*			*S-GC*
Surrogate: o-Terphenyl	*76.6*		*"*	*60.0*		*128*	*70-130*			

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 EH21704 - TX 1005										
LCS Dup (EH21704-BSD1)				Prepared & Analyzed: 08/16/12						
C6-C12	1080	15.0	mg/kg wet	1000		108	75-125	3.77	20	
>C12-C28	1120	15.0	"	1000		112	75-125	1.80	20	
>C28-C35	ND	15.0	"				75-125		20	
Total Hydrocarbons	ND	15.0	"				75-125		20	
Surrogate: 1-Chlorooctane	*189*		*"*	*120*		*158*	*70-130*			*S-GC*
Surrogate: o-Terphenyl	*75.8*		*"*	*60.0*		*126*	*70-130*			
Matrix Spike (EH21704-MS1)	**Source: 2H15001-17**			Prepared: 08/16/12 Analyzed: 08/17/12						
C6-C12	936	15.6	mg/kg dry	1040	ND	90.0	75-125			
>C12-C28	943	15.6	"	1040	ND	90.7	75-125			
>C28-C35	ND	15.6	"		ND		75-125			
Total Hydrocarbons	ND	15.6	"		ND		75-125			
Surrogate: 1-Chlorooctane	*129*		*"*	*104*		*124*	*70-130*			
Surrogate: o-Terphenyl	*63.9*		*"*	*52.1*		*123*	*70-130*			
Matrix Spike Dup (EH21704-MSD1)	**Source: 2H15001-17**			Prepared: 08/16/12 Analyzed: 08/17/12						
C6-C12	801	15.6	mg/kg dry	1040	ND	77.0	75-125	15.6	20	
>C12-C28	811	15.6	"	1040	ND	78.0	75-125	15.1	20	
>C28-C35	ND	15.6	"		ND		75-125		20	
Total Hydrocarbons	ND	15.6	"		ND		75-125		20	
Surrogate: 1-Chlorooctane	*130*		*"*	*104*		*125*	*70-130*			
Surrogate: o-Terphenyl	*55.6*		*"*	*52.1*		*107*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: TRP-1538
Project Number: Historical 12in. Crossover TRP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EH21601 - * DEFAULT PREP *** **										
Blank (EH21601-BLK1)				Prepared: 08/15/12 Analyzed: 08/16/12						
% Moisture	ND	0.1	%							
Duplicate (EH21601-DUP1)	**Source: 2H15001-01**			Prepared: 08/15/12 Analyzed: 08/16/12						
% Moisture	5.0	0.1	%		5.0			0.00	20	
Batch EH21702 - * DEFAULT PREP *** **										
Blank (EH21702-BLK1)				Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	ND	1.00	mg/kg dry wt. wet							
LCS (EH21702-BS1)				Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	9.71		mg/kg Wet	10.0		97.1	80-120			
LCS Dup (EH21702-BSD1)				Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	9.48		mg/kg Wet	10.0		94.8	80-120	2.40	20	
Duplicate (EH21702-DUP1)	**Source: 2H15001-01**			Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	967	10.5	mg/kg dry wt. dry		996			2.95	20	
Matrix Spike (EH21702-MS1)	**Source: 2H15001-01**			Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	2220	10.5	mg/kg dry wt. dry	1320	996	92.7	80-120			
Matrix Spike (EH21702-MS2)	**Source: 2H15001-11**			Prepared: 08/15/12 Analyzed: 08/17/12						
Chloride	543	1.05	mg/kg dry wt. dry	263	263	106	80-120			

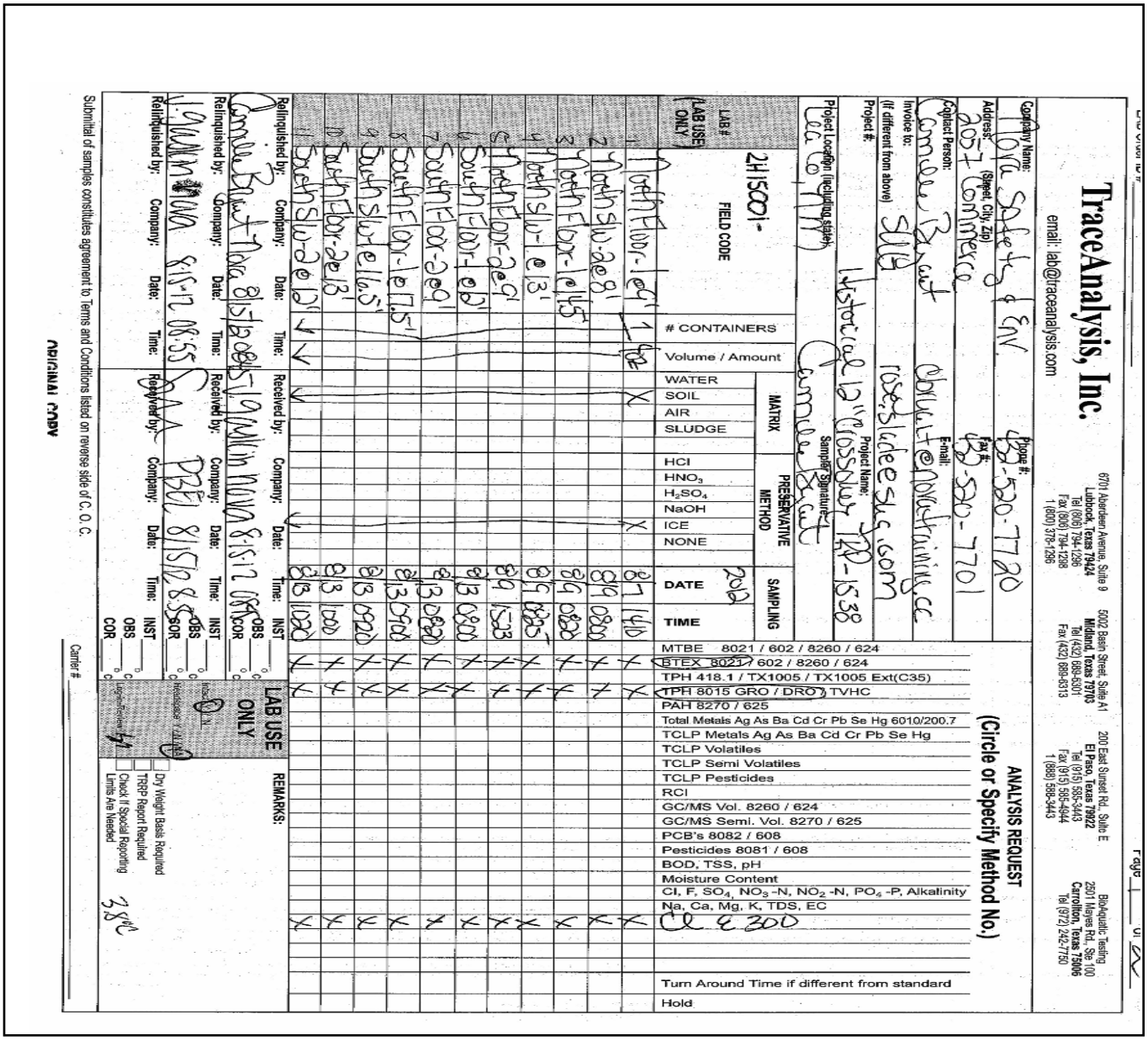
Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
S-DUP	Duplicate analysis confirmed surrogate failure due to matrix effects.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

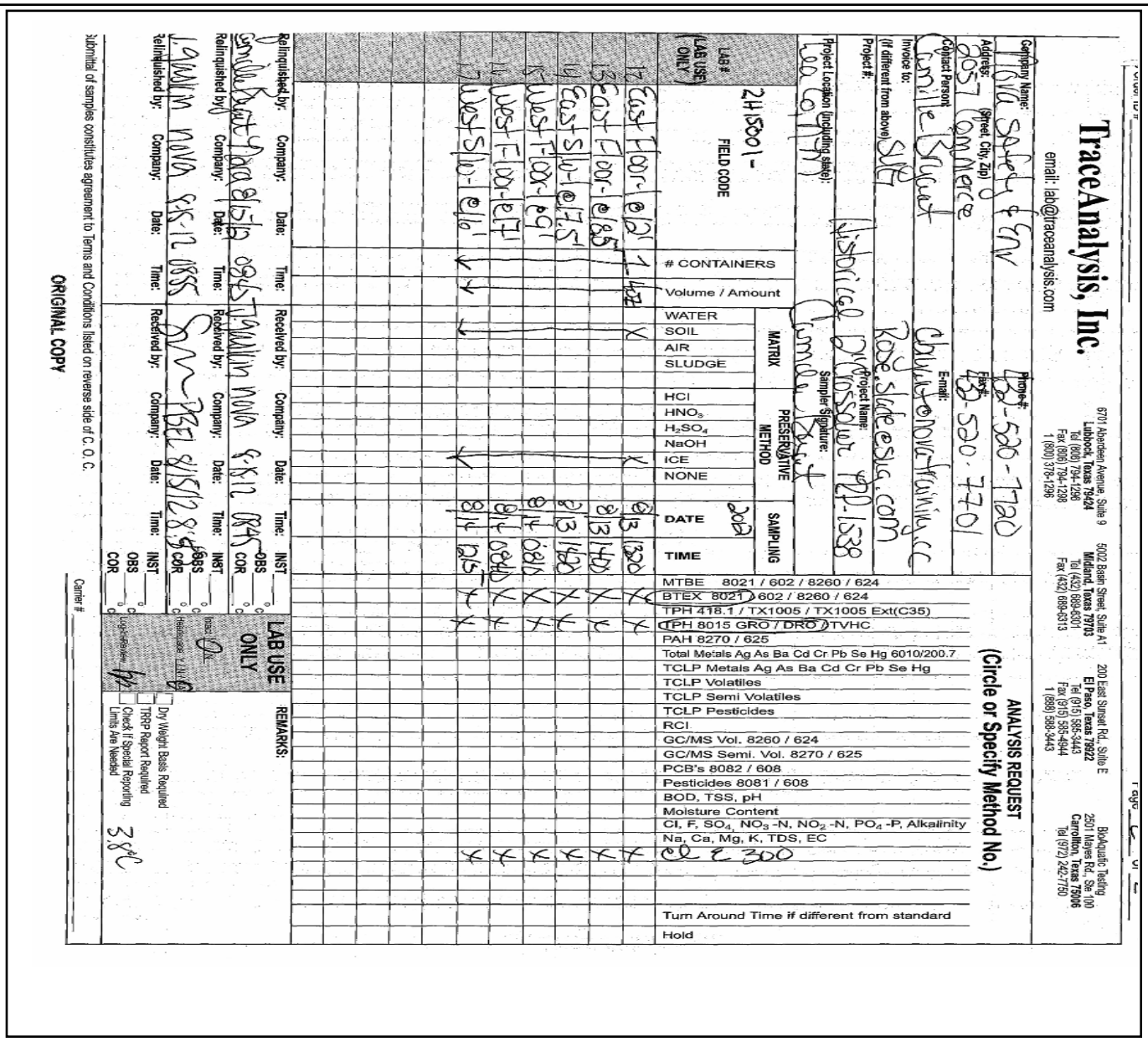
Report Approved By: Brent Barron Date: 9/4/2012

Brent Barron, Laboratory Director/Technical Director

Nova Safety & Environment	Project: TRP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: Historical 12in. Crossover TRP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	



Nova Safety & Environment	Project: TRP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: Historical 12in. Crossover TRP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	



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 12 in. Crossover 1RP-1538

Project Number: [none]

Location: Lea County, NM

Lab Order Number: 2J10004

NELAP/TCEQ # T104704156-12-1

Report Date: 10/11/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
East Floor @ 23'	2J10004-01	Soil	10/10/12 09:50	10-10-2012 17:09
West Floor @ 22'	2J10004-02	Soil	10/10/12 10:50	10-10-2012 17:09
South Floor @ 25'	2J10004-03	Soil	10/10/12 14:50	10-10-2012 17:09
SP-1	2J10004-04	Soil	10/10/12 15:10	10-10-2012 17:09

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

East Floor @ 23'

2J10004-01 (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	EJ21105	10/10/12	10/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.0 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
C6-C12	ND	26.0	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/10/12	10/10/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**155**	1.04	mg/kg dry wt. dr	1	EJ21102	10/10/12	10/11/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EJ21101	10/10/12	10/11/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

West Floor @ 22'

2J10004-02 (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	EJ21105	10/10/12	10/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.0 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
C6-C12	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/10/12	10/10/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**79.6**	1.03	mg/kg dry wt. dr	1	EJ21102	10/10/12	10/11/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EJ21101	10/10/12	10/11/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

South Floor @ 25'

2J10004-03 (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	EJ21105	10/10/12	10/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.8 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
C6-C12	ND	26.3	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/10/12	10/10/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**249**	1.05	mg/kg dry wt. dr	1	EJ21102	10/10/12	10/11/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EJ21101	10/10/12	10/11/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

SP-1

2J10004-04 (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	EJ21105	10/10/12	10/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ21105	10/10/12	10/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*85.0 %*	*75-125*		*EJ21105*	*10/10/12*	*10/10/12*	*EPA 8021B*	
C6-C12	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EJ21104	10/10/12	10/10/12	8015M	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/10/12	10/10/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**99.0**	1.03	mg/kg dry wt. dr	1	EJ21102	10/10/12	10/11/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EJ21101	10/10/12	10/11/12	% calculation	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EJ21104 - 8015M										
Blank (EJ21104-BLK1)				Prepared & Analyzed: 10/10/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*54.8*		*"*	*50.0*		*110*	*70-130*			
Surrogate: o-Terphenyl	*29.0*		*"*	*25.0*		*116*	*70-130*			
LCS (EJ21104-BS1)				Prepared & Analyzed: 10/10/12						
C6-C12	574	25.0	mg/kg wet	500		115	75-125			
>C12-C28	552	25.0	"	500		110	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*70.7*		*"*	*100*		*70.7*	*70-130*			
Surrogate: o-Terphenyl	*31.9*		*"*	*50.0*		*63.9*	*70-130*			*S-GC*
LCS Dup (EJ21104-BSD1)				Prepared & Analyzed: 10/10/12						
C6-C12	612	25.0	mg/kg wet	500		122	75-125	6.37	20	
>C12-C28	583	25.0	"	500		117	75-125	5.54	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*74.1*		*"*	*100*		*74.1*	*70-130*			
Surrogate: o-Terphenyl	*33.1*		*"*	*50.0*		*66.2*	*70-130*			*S-GC*
Matrix Spike (EJ21104-MS1)	**Source: 2J10001-01**			Prepared: 10/10/12 Analyzed: 10/11/12						
C6-C12	585	26.9	mg/kg dry	538	ND	109	75-125			
>C12-C28	571	26.9	"	538	ND	106	75-125			
>C28-C35	ND	26.9	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*67.9*		*"*	*53.8*		*126*	*70-130*			
Surrogate: o-Terphenyl	*30.0*		*"*	*26.9*		*111*	*70-130*			
Matrix Spike Dup (EJ21104-MSD1)	**Source: 2J10001-01**			Prepared: 10/10/12 Analyzed: 10/11/12						
C6-C12	580	26.9	mg/kg dry	538	ND	108	75-125	0.851	20	
>C12-C28	583	26.9	"	538	ND	108	75-125	2.00	20	
>C28-C35	ND	26.9	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*69.1*		*"*	*53.8*		*129*	*70-130*			
Surrogate: o-Terphenyl	*30.6*		*"*	*26.9*		*114*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EJ21105 - General Preparation (GC)										
Blank (EJ21105-BLK1)				Prepared & Analyzed: 10/10/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*65.5*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*55.1*		*"*	*60.0*		*91.8*	*75-125*			
LCS (EJ21105-BS1)				Prepared & Analyzed: 10/10/12						
Benzene	0.0862	0.00100	mg/kg wet	0.100		86.2	80-120			
Toluene	0.105	0.00200	"	0.100		105	80-120			
Ethylbenzene	0.0995	0.00100	"	0.100		99.5	80-120			
Xylene (p/m)	0.199	0.00200	"	0.200		99.7	80-120			
Xylene (o)	0.0940	0.00100	"	0.100		94.0	80-120			
Surrogate: 1,4-Difluorobenzene	*65.4*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*57.2*		*"*	*60.0*		*95.3*	*75-125*			
LCS Dup (EJ21105-BSD1)				Prepared & Analyzed: 10/10/12						
Benzene	0.0868	0.00100	mg/kg wet	0.100		86.8	80-120	0.636	20	
Toluene	0.107	0.00200	"	0.100		107	80-120	1.99	20	
Ethylbenzene	0.101	0.00100	"	0.100		101	80-120	1.50	20	
Xylene (p/m)	0.203	0.00200	"	0.200		101	80-120	1.72	20	
Xylene (o)	0.0958	0.00100	"	0.100		95.8	80-120	1.99	20	
Surrogate: 1,4-Difluorobenzene	*65.2*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*56.5*		*"*	*60.0*		*94.1*	*75-125*			
Matrix Spike (EJ21105-MS1)		**Source: 2J10004-01**		Prepared & Analyzed: 10/10/12						
Benzene	0.0656	0.00100	mg/kg dry	0.104	ND	63.0	80-120			QM-05
Toluene	0.0815	0.00200	"	0.104	ND	78.2	80-120			QM-05
Ethylbenzene	0.0786	0.00100	"	0.104	ND	75.5	80-120			QM-05
Xylene (p/m)	0.154	0.00200	"	0.208	ND	73.8	80-120			QM-05
Xylene (o)	0.0737	0.00100	"	0.104	ND	70.7	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*64.7*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*54.9*		*"*	*60.0*		*91.6*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EJ21105 - General Preparation (GC)										
Matrix Spike Dup (EJ21105-MSD1)		**Source: 2J10004-01**		Prepared & Analyzed: 10/10/12						
Benzene	0.0562	0.00100	mg/kg dry	0.104	ND	54.0	80-120	15.4	20	QM-05
Toluene	0.0711	0.00200	"	0.104	ND	68.3	80-120	13.6	20	QM-05
Ethylbenzene	0.0687	0.00100	"	0.104	ND	65.9	80-120	13.5	20	QM-05
Xylene (p/m)	0.134	0.00200	"	0.208	ND	64.6	80-120	13.4	20	QM-05
Xylene (o)	0.0656	0.00100	"	0.104	ND	63.0	80-120	11.6	20	QM-05
Surrogate: 1,4-Difluorobenzene	*63.3*		*ug/kg*	*60.0*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*54.6*		*"*	*60.0*		*90.9*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EJ21101 - * DEFAULT PREP *** **										
Blank (EJ21101-BLK1)				Prepared: 10/10/12 Analyzed: 10/11/12						
% Moisture	ND	0.1	%							
Duplicate (EJ21101-DUP1)		**Source: 2J09001-01**		Prepared: 10/10/12 Analyzed: 10/11/12						
% Moisture	ND	0.1	%		0.0				20	
Duplicate (EJ21101-DUP2)		**Source: 2J10005-04**		Prepared: 10/10/12 Analyzed: 10/11/12						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Batch EJ21102 - * DEFAULT PREP *** **										
Blank (EJ21102-BLK1)				Prepared: 10/10/12 Analyzed: 10/11/12						
Chloride	ND	1.00	mg/kg dry wt. wet							
LCS (EJ21102-BS1)				Prepared: 10/10/12 Analyzed: 10/11/12						
Chloride	9.75		mg/kg Wet	10.0		97.5	80-120			
LCS Dup (EJ21102-BSD1)				Prepared: 10/10/12 Analyzed: 10/11/12						
Chloride	9.88		mg/kg Wet	10.0		98.8	80-120	1.37	20	
Duplicate (EJ21102-DUP1)		**Source: 2J09001-01**		Prepared: 10/10/12 Analyzed: 10/11/12						
Chloride	15.4	1.00	mg/kg dry wt. dry		16.5			6.58	20	
Matrix Spike (EJ21102-MS1)		**Source: 2J09001-01**		Prepared: 10/10/12 Analyzed: 10/11/12						
Chloride	57.5	1.00	mg/kg dry wt. dry	50.0	16.5	82.0	80-120			

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2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
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Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
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: 10/11/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12" Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only)
ORDER #: 2J1000 04

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 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.	(C) 300			RUSH TAT (Pre-Schedule) (24, 48, 72 hrs)	Standard TAT
-01	East Floor @ 23'			10/10/2012	9:50		1	X								Soil	X								X			X			X	
-02	West Floor @ 22'			10/10/2012	10:50		1	X								Soil	X								X			X			X	
-03	South Floor @ 25'			10/10/2012	14:50		1	X								Soil	X								X			X			X	
-04	SP-1			10/10/2012	15:10		1	X								Soil	X								X			X			X	

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	10/10/12	1709			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				10/10/12	17:09

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: 5.8 °C
Adjusted: 5.8 °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 12 in. Crossover 1RP-1538

Project Number: 1RP-1538

Location: Lea County New Mexico

Lab Order Number: 2J26006

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-12-1

Report Date: 10/31/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
East Pit 1 @ 3'	2J26006-01	Soil	10/25/12 15:00	10-26-2012 09:23
East Pit 2 @ 3'	2J26006-02	Soil	10/25/12 15:05	10-26-2012 09:23
South Pit 1 @ 3'	2J26006-03	Soil	10/25/12 15:50	10-26-2012 09:23
South Pit 2 @ 3'	2J26006-04	Soil	10/25/12 15:55	10-26-2012 09:23
North Pit 1 @ 3'	2J26006-05	Soil	10/25/12 15:20	10-26-2012 09:23
North Pit 2 @ 3'	2J26006-06	Soil	10/25/12 15:25	10-26-2012 09:23
Pit SP-1	2J26006-07	Soil	10/25/12 13:00	10-26-2012 09:23

East Pit 1 @ 3'

2J26006-01 (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	EJ23003	10/29/12	10/29/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
C6-C12	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*86.3 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*93.1 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5.29**	1.01	mg/kg dry wt. dry	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

East Pit 2 @ 3'

2J26006-02 (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	EJ22605	10/26/12	10/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
C6-C12	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*89.3 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*95.1 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**102**	1.01	mg/kg dry wt. dr	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

South Pit 1 @ 3'

2J26006-03 (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	EJ22605	10/26/12	10/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*99.4 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
C6-C12	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*81.7 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*90.7 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**157**	1.02	mg/kg dry wt. dr	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

South Pit 2 @ 3'

2J26006-04 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
C6-C12	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	25.3	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*81.6 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*89.2 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**31.1**	1.01	mg/kg dry wt. dr	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

North Pit 1 @ 3'

2J26006-05 (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	EJ22605	10/26/12	10/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.3 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
C6-C12	ND	27.8	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	27.8	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	27.8	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*78.7 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*71.7 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2.62**	1.11	mg/kg dry wt. dr	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

North Pit 2 @ 3'

2J26006-06 (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	EJ23003	10/29/12	10/29/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ23003	10/29/12	10/29/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*EJ23003*	*10/29/12*	*10/29/12*	*EPA 8021B*	
C6-C12	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*83.7 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*87.5 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**880**	2.55	mg/kg dry wt. dr	2.5	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

Pit SP-1

2J26006-07 (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	EJ22605	10/26/12	10/26/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ22605	10/26/12	10/26/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-125*		*EJ22605*	*10/26/12*	*10/26/12*	*EPA 8021B*	
C6-C12	ND	26.0	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C12-C28	**822**	26.0	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
>C28-C35	**170**	26.0	mg/kg dry	1	EJ23001	10/28/12	10/28/12	8015M	
Surrogate: 1-Chlorooctane		*79.6 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Surrogate: o-Terphenyl		*89.8 %*	*70-130*		*EJ23001*	*10/28/12*	*10/28/12*	*8015M*	
Total Hydrocarbon nC6-nC35	**992**	25.0	mg/kg dry	1	[CALC]	10/28/12	10/28/12	8015M	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**87.7**	1.04	mg/kg dry wt. dr	1	EJ23002	10/30/12	10/30/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EJ22901	10/26/12	10/29/12	% calculation	

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 EJ22605 - General Preparation (GC)										
Blank (EJ22605-BLK1)				Prepared & Analyzed: 10/26/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*67.4*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.6*		*"*	*60.0*		*106*	*75-125*			
LCS (EJ22605-BS1)				Prepared & Analyzed: 10/26/12						
Benzene	0.0861	0.00100	mg/kg wet	0.100		86.1	80-120			
Toluene	0.116	0.00200	"	0.100		116	80-120			
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120			
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	*73.2*		*ug/kg*	*60.0*		*122*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.5*		*"*	*60.0*		*118*	*75-125*			
LCS Dup (EJ22605-BSD1)				Prepared & Analyzed: 10/26/12						
Benzene	0.0814	0.00100	mg/kg wet	0.100		81.4	80-120	5.56	20	
Toluene	0.110	0.00200	"	0.100		110	80-120	5.24	20	
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120	4.63	20	
Xylene (p/m)	0.235	0.00200	"	0.200		118	80-120	1.23	20	
Xylene (o)	0.110	0.00100	"	0.100		110	80-120	4.39	20	
Surrogate: 1,4-Difluorobenzene	*70.6*		*ug/kg*	*60.0*		*118*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.0*		*"*	*60.0*		*117*	*75-125*			
Matrix Spike (EJ22605-MS1)		**Source: 2J26006-02**		Prepared & Analyzed: 10/26/12						
Benzene	0.0451	0.00100	mg/kg dry	0.101	ND	44.6	80-120			QM-05
Toluene	0.0588	0.00200	"	0.101	ND	58.2	80-120			QM-05
Ethylbenzene	0.0565	0.00100	"	0.101	ND	55.9	80-120			QM-05
Xylene (p/m)	0.107	0.00200	"	0.202	ND	53.0	80-120			QM-05
Xylene (o)	0.0577	0.00100	"	0.101	ND	57.1	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*66.3*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*49.3*		*"*	*60.0*		*82.2*	*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 EJ22605 - General Preparation (GC)										
Matrix Spike Dup (EJ22605-MSD1)	**Source: 2J26006-02**			Prepared & Analyzed: 10/26/12						
Benzene	0.0487	0.00100	mg/kg dry	0.101	ND	48.2	80-120	7.65	20	QM-05
Toluene	0.0654	0.00200	"	0.101	ND	64.8	80-120	10.6	20	QM-05
Ethylbenzene	0.0597	0.00100	"	0.101	ND	59.1	80-120	5.49	20	QM-05
Xylene (p/m)	0.110	0.00200	"	0.202	ND	54.4	80-120	2.52	20	QM-05
Xylene (o)	0.0592	0.00100	"	0.101	ND	58.7	80-120	2.71	20	QM-05
Surrogate: 1,4-Difluorobenzene	*66.0*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*40.3*		*"*	*60.0*		*67.2*	*75-125*			*S-GC*
Batch EJ23001 - 8015M										
Blank (EJ23001-BLK1)				Prepared & Analyzed: 10/28/12						
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	*43.8*		*"*	*50.0*		*87.5*	*70-130*			
LCS (EJ23001-BS1)				Prepared & Analyzed: 10/28/12						
C6-C12	841	25.0	mg/kg wet	1000		84.1	75-125			
>C12-C28	794	25.0	"	1000		79.4	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*85.3*		*"*	*100*		*85.3*	*70-130*			
Surrogate: o-Terphenyl	*39.1*		*"*	*50.0*		*78.2*	*70-130*			
LCS Dup (EJ23001-BSD1)				Prepared & Analyzed: 10/28/12						
C6-C12	849	25.0	mg/kg wet	1000		84.9	75-125	0.907	20	
>C12-C28	818	25.0	"	1000		81.8	75-125	2.95	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*83.4*		*"*	*100*		*83.4*	*70-130*			
Surrogate: o-Terphenyl	*38.3*		*"*	*50.0*		*76.6*	*70-130*			

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 EJ23001 - 8015M										
Matrix Spike (EJ23001-MS1)	**Source: 2J26005-02**			Prepared & Analyzed: 10/28/12						
C6-C12	822	25.8	mg/kg dry	1030	ND	79.7	75-125			
>C12-C28	852	25.8	"	1030	ND	82.6	75-125			
>C28-C35	ND	25.8	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*87.6*		*"*	*103*		*85.0*	*70-130*			
Surrogate: o-Terphenyl	*41.2*		*"*	*51.5*		*79.9*	*70-130*			
Matrix Spike Dup (EJ23001-MSD1)	**Source: 2J26005-02**			Prepared & Analyzed: 10/28/12						
C6-C12	929	25.8	mg/kg dry	1030	ND	90.1	75-125	12.3	20	
>C12-C28	834	25.8	"	1030	ND	80.9	75-125	2.14	20	
>C28-C35	ND	25.8	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*90.8*		*"*	*103*		*88.1*	*70-130*			
Surrogate: o-Terphenyl	*43.8*		*"*	*51.5*		*84.9*	*70-130*			
Batch EJ23003 - General Preparation (GC)										
Blank (EJ23003-BLK1)				Prepared & Analyzed: 10/29/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*67.2*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*64.1*		*"*	*60.0*		*107*	*75-125*			
LCS (EJ23003-BS1)				Prepared & Analyzed: 10/29/12						
Benzene	0.0877	0.00100	mg/kg wet	0.100		87.7	80-120			
Toluene	0.118	0.00200	"	0.100		118	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.232	0.00200	"	0.200		116	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 1,4-Difluorobenzene	*68.4*		*ug/kg*	*60.0*		*114*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.4*		*"*	*60.0*		*116*	*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 EJ23003 - General Preparation (GC)										
LCS Dup (EJ23003-BSD1)				Prepared & Analyzed: 10/29/12						
Benzene	0.0872	0.00100	mg/kg wet	0.100		87.2	80-120	0.549	20	
Toluene	0.118	0.00200	"	0.100		118	80-120	0.466	20	
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120	0.378	20	
Xylene (p/m)	0.231	0.00200	"	0.200		116	80-120	0.335	20	
Xylene (o)	0.114	0.00100	"	0.100		114	80-120	0.658	20	
Surrogate: 1,4-Difluorobenzene	*67.6*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.3*		*"*	*60.0*		*117*	*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 EJ22901 - * DEFAULT PREP *** **										
Blank (EJ22901-BLK1)				Prepared: 10/26/12 Analyzed: 10/29/12						
% Moisture	ND	0.1	%							
Duplicate (EJ22901-DUP1)		**Source: 2J26001-01**		Prepared: 10/26/12 Analyzed: 10/29/12						
% Moisture	3.0	0.1	%		2.0			40.0	20	R3
Batch EJ23002 - * DEFAULT PREP *** **										
Blank (EJ23002-BLK1)				Prepared & Analyzed: 10/30/12						
Chloride	ND	1.00	mg/kg dry wt. wet							
LCS (EJ23002-BS1)				Prepared & Analyzed: 10/30/12						
Chloride	10.8		mg/kg Wet	10.0		108	80-120			
LCS Dup (EJ23002-BSD1)				Prepared & Analyzed: 10/30/12						
Chloride	11.0		mg/kg Wet	10.0		110	80-120	1.49	20	
Duplicate (EJ23002-DUP1)		**Source: 2J26005-01**		Prepared & Analyzed: 10/30/12						
Chloride	51.7	1.03	mg/kg dry wt. dry		51.4			0.620	20	
Matrix Spike (EJ23002-MS1)		**Source: 2J26005-01**		Prepared & Analyzed: 10/30/12						
Chloride	127	1.03	mg/kg dry wt. dry	64.4	51.4	117	80-120			
Matrix Spike (EJ23002-MS2)		**Source: 2J26006-07**		Prepared & Analyzed: 10/30/12						
Chloride	236	1.04	mg/kg dry wt. dry	130	87.7	114	80-120			

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 10/31/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

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

Project Name: SUG Historical 12" Crossover 1RP-1538
Project #:
Project Loc: Lea County New Mexico
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 2126006

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	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	C1 330			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	East Pit 1 @ 3'			10/25/2012	15:00		1	X								Soil	X											X			X					X
-02	East Pit 2 @ 3'			10/25/2012	15:05		1	X								Soil	X											X			X					X
-03	South Pit 1 @ 3'			10/25/2012	15:50		1	X								Soil	X											X			X					X
-04	South Pit 2 @ 3'			10/25/2012	15:55		1	X								Soil	X											X			X					X
-05	North Pit 1 @ 3'			10/25/2012	15:20		1	X								Soil	X											X			X					X
-06	North Pit 2 @ 3'			10/25/2012	15:25		1	X								Soil	X											X			X					X
-07	Pit SP-1			10/22/2012	13:00		1	X								Soil	X											X			X					X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	10/24/12	9:23			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				10/24/12	9:23

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: 3.2 °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 12 in. Crossover 1RP-1538

Project Number: [none]

Location: Lea County New Mexico

Lab Order Number: 2J29007

NELAP/TCEQ # T104704156-12-1

Report Date: 11/02/12

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West Trench-1 @ 16'	2J29007-01	Soil	10/26/12 13:45	10-29-2012 13:31

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

West Trench-1 @ 16'

2J29007-01 (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	EJ23103	10/30/12	10/30/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EJ23103	10/30/12	10/30/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EJ23103	10/30/12	10/30/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EJ23103	10/30/12	10/30/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EJ23103	10/30/12	10/30/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EJ23103*	*10/30/12*	*10/30/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*EJ23103*	*10/30/12*	*10/30/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**209**	1.05	mg/kg dry wt. dr	1	EK20101	11/01/12	11/01/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EJ23004	10/29/12	10/30/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EK20102	10/31/12	10/31/12	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EK20102	10/31/12	10/31/12	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EK20102	10/31/12	10/31/12	8015M	
Surrogate: 1-Chlorooctane		*86.6 %*	*70-130*		*EK20102*	*10/31/12*	*10/31/12*	*8015M*	
Surrogate: o-Terphenyl		*96.7 %*	*70-130*		*EK20102*	*10/31/12*	*10/31/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	10/31/12	10/31/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ23103 - General Preparation (GC)										
Blank (EJ23103-BLK1)				Prepared & Analyzed: 10/30/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*68.8*		*ug/kg*	*60.0*		*115*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*58.0*		*"*	*60.0*		*96.6*	*75-125*			
LCS (EJ23103-BS1)				Prepared & Analyzed: 10/30/12						
Benzene	0.0836	0.00100	mg/kg wet	0.100		83.6	80-120			
Toluene	0.112	0.00200	"	0.100		112	80-120			
Ethylbenzene	0.112	0.00100	"	0.100		112	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*67.6*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.7*		*"*	*60.0*		*118*	*75-125*			
LCS Dup (EJ23103-BSD1)				Prepared & Analyzed: 10/30/12						
Benzene	0.0838	0.00100	mg/kg wet	0.100		83.8	80-120	0.251	20	
Toluene	0.112	0.00200	"	0.100		112	80-120	0.651	20	
Ethylbenzene	0.112	0.00100	"	0.100		112	80-120	0.366	20	
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120	0.514	20	
Xylene (o)	0.110	0.00100	"	0.100		110	80-120	1.34	20	
Surrogate: 1,4-Difluorobenzene	*67.9*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.0*		*"*	*60.0*		*117*	*75-125*			
Matrix Spike (EJ23103-MS1)		**Source: 2J29008-06**		Prepared & Analyzed: 10/30/12						
Benzene	0.0627	0.00100	mg/kg dry	0.106	ND	59.0	80-120			QM-05
Toluene	0.0840	0.00200	"	0.106	ND	78.9	80-120			QM-05
Ethylbenzene	0.0844	0.00100	"	0.106	ND	79.3	80-120			QM-05
Xylene (p/m)	0.175	0.00200	"	0.213	ND	82.2	80-120			
Xylene (o)	0.0823	0.00100	"	0.106	ND	77.4	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*68.1*		*ug/kg*	*60.0*		*114*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*68.0*		*"*	*60.0*		*113*	*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 EJ23103 - General Preparation (GC)										
Matrix Spike Dup (EJ23103-MSD1)		**Source: 2J29008-06**		Prepared & Analyzed: 10/30/12						
Benzene	0.0498	0.00100	mg/kg dry	0.106	ND	46.8	80-120	23.1	20	QM-05
Toluene	0.0640	0.00200	"	0.106	ND	60.2	80-120	27.0	20	QM-05
Ethylbenzene	0.0663	0.00100	"	0.106	ND	62.3	80-120	24.0	20	QM-05
Xylene (p/m)	0.137	0.00200	"	0.213	ND	64.4	80-120	24.3	20	QM-05
Xylene (o)	0.0669	0.00100	"	0.106	ND	62.9	80-120	20.7	20	QM-05
Surrogate: 1,4-Difluorobenzene	*70.4*		*ug/kg*	*60.0*		*117*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*67.2*		*"*	*60.0*		*112*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ23004 - * DEFAULT PREP *** **										
Blank (EJ23004-BLK1)				Prepared: 10/29/12 Analyzed: 10/30/12						
% Moisture	ND	0.1	%							
Duplicate (EJ23004-DUP1)		**Source: 2J29002-01**		Prepared: 10/29/12 Analyzed: 10/30/12						
% Moisture	7.0	0.1	%		7.0			0.00	20	
Batch EK20101 - * DEFAULT PREP *** **										
Blank (EK20101-BLK1)				Prepared & Analyzed: 11/01/12						
Chloride	ND	1.00	mg/kg dry wt. wet							
LCS (EK20101-BS1)				Prepared & Analyzed: 11/01/12						
Chloride	11.1		mg/kg Wet	10.0		111	80-120			
LCS Dup (EK20101-BSD1)				Prepared & Analyzed: 11/01/12						
Chloride	11.2		mg/kg Wet	10.0		112	80-120	1.22	20	
Duplicate (EK20101-DUP1)		**Source: 2J29007-01**		Prepared & Analyzed: 11/01/12						
Chloride	209	1.05	mg/kg dry wt. dry		209			0.0805	20	
Matrix Spike (EK20101-MS1)		**Source: 2J29007-01**		Prepared & Analyzed: 11/01/12						
Chloride	323	1.05	mg/kg dry wt. dry	105	209	108	80-120			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK20102 - 8015M										
Blank (EK20102-BLK1)				Prepared & Analyzed: 10/31/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*88.6*		*"*	*100*		*88.6*	*70-130*			
Surrogate: o-Terphenyl	*48.6*		*"*	*50.0*		*97.2*	*70-130*			
LCS (EK20102-BS1)				Prepared & Analyzed: 10/31/12						
C6-C12	876	25.0	mg/kg wet	1000		87.6	75-125			
>C12-C28	830	25.0	"	1000		83.0	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*98.2*		*"*	*100*		*98.2*	*70-130*			
Surrogate: o-Terphenyl	*47.0*		*"*	*50.0*		*94.0*	*70-130*			
LCS Dup (EK20102-BSD1)				Prepared & Analyzed: 10/31/12						
C6-C12	815	25.0	mg/kg wet	1000		81.5	75-125	7.20	20	
>C12-C28	818	25.0	"	1000		81.8	75-125	1.42	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*98.5*		*"*	*100*		*98.5*	*70-130*			
Surrogate: o-Terphenyl	*45.5*		*"*	*50.0*		*91.1*	*70-130*			
Matrix Spike (EK20102-MS1)	**Source: 2J29007-01**			Prepared & Analyzed: 10/31/12						
C6-C12	996	26.3	mg/kg dry	1050	ND	94.7	75-125			
>C12-C28	887	26.3	"	1050	ND	84.2	75-125			
>C28-C35	ND	26.3	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*115*		*"*	*105*		*110*	*70-130*			
Surrogate: o-Terphenyl	*55.3*		*"*	*52.6*		*105*	*70-130*			
Matrix Spike Dup (EK20102-MSD1)	**Source: 2J29007-01**			Prepared & Analyzed: 10/31/12						
C6-C12	950	26.3	mg/kg dry	1050	ND	90.2	75-125	4.81	20	
>C12-C28	907	26.3	"	1050	ND	86.2	75-125	2.29	20	
>C28-C35	ND	26.3	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*107*		*"*	*105*		*102*	*70-130*			
Surrogate: o-Terphenyl	*50.4*		*"*	*52.6*		*95.7*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

Notes and Definitions

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: 11/2/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12" Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only)

ORDER #: 2329007

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 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.	Q 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
101	West Trench-1 @ 16'			10/26/2012	13:45		1	X								Soil	X								X			X		X

Special Instructions:

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: 3.8 °C
Adjusted: °C Factor NCF

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	10/29/12	13:31			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBLL:	Date	Time
				10/29/12	13:31

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 12 in. Crossover 1RP-1538

Project Number: 1RP-1538

Location: Lea County, NM

Lab Order Number: 2K13001

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704156-12-1

Report Date: 11/16/12

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Pit-2A	2K13001-01	Soil	11/12/12 14:50	11-13-2012 10:43

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

North Pit-2A

2K13001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**118**	1.01	mg/kg dry wt. dr	1	EK21602	11/16/12	11/16/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EK21501	11/14/12	11/15/12	% calculation	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EK21501 - * DEFAULT PREP *** **										
Blank (EK21501-BLK1)				Prepared & Analyzed: 11/15/12						
% Moisture	ND	0.1	%							
Duplicate (EK21501-DUP1)		**Source: 2K12005-01**		Prepared: 11/14/12 Analyzed: 11/15/12						
% Moisture	ND	0.1	%		0.0				20	
Batch EK21602 - * DEFAULT PREP *** **										
Blank (EK21602-BLK1)				Prepared & Analyzed: 11/16/12						
Chloride	ND	1.00	mg/kg dry wt. wet							
LCS (EK21602-BS1)				Prepared & Analyzed: 11/16/12						
Chloride	9.84		mg/kg Wet	10.0		98.4	80-120			
LCS Dup (EK21602-BSD1)				Prepared & Analyzed: 11/16/12						
Chloride	10.1		mg/kg Wet	10.0		101	80-120	2.22	20	
Duplicate (EK21602-DUP1)		**Source: 2K14003-01**		Prepared & Analyzed: 11/16/12						
Chloride	747	1.11	mg/kg dry wt. dry		719			3.82	20	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
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: 11/16/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12 Inch Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only) ORDER #: 2K130001

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 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 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	North Pit-2A @ 3'			11/12/2012	14:50		1	X								Soil											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: 3.8 °C
Adjusted: °C Factor NCF

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	11/13/12	10:43			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	11/13/12	10:43

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 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Location: Lea, Co. New Mexico

Lab Order Number: 2L03001

NELAP/TCEQ # T104704156-12-1

Report Date: 12/10/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North Wall 1 @ 14 ft	2L03001-01	Soil	11/30/12 09:00	12-03-2012 08:42
North Wall 2 @ 14 ft	2L03001-02	Soil	11/30/12 09:05	12-03-2012 08:42
South Wall 1 @ 16 ft	2L03001-03	Soil	11/30/12 09:10	12-03-2012 08:42
South Wall 2 @ 16 ft	2L03001-04	Soil	11/30/12 09:15	12-03-2012 08:42
West Wall 1 @ 16 ft	2L03001-05	Soil	11/30/12 09:20	12-03-2012 08:42
West Wall 2 @ 14 ft	2L03001-06	Soil	11/30/12 09:25	12-03-2012 08:42
Pit Floor 1 @ 4 ft	2L03001-07	Soil	11/30/12 09:30	12-03-2012 08:42

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

North Wall 1 @ 14 ft

2L03001-01 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*98.4 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**189**	1.04	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*77.8 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*82.3 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

North Wall 2 @ 14 ft

2L03001-02 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**307**	1.05	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*76.1 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*82.3 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

South Wall 1 @ 16 ft

2L03001-03 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**62.8**	1.05	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*75.9 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*82.3 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

South Wall 2 @ 16 ft

2L03001-04 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**400**	1.04	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*78.3 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*83.9 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

West Wall 1 @ 16 ft

2L03001-05 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**287**	1.03	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*83.8 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*91.4 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

West Wall 2 @ 14 ft

2L03001-06 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**132**	1.04	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*82.2 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*90.2 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

Pit Floor 1 @ 4 ft

2L03001-07 (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	EL20305	12/03/12	12/03/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20305	12/03/12	12/03/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.8 %*	*75-125*		*EL20305*	*12/03/12*	*12/03/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**197**	1.09	mg/kg dry	1	EL20306	12/03/12	12/03/12	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	EL20307	12/03/12	12/03/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C12-C28	**1250**	27.2	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
>C28-C35	**383**	27.2	mg/kg dry	1	EL20304	12/03/12	12/03/12	8015M	
Surrogate: 1-Chlorooctane		*80.3 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Surrogate: o-Terphenyl		*87.4 %*	*70-130*		*EL20304*	*12/03/12*	*12/03/12*	*8015M*	
Total Hydrocarbon nC6-nC35	**1630**	25.0	mg/kg dry	1	[CALC]	12/03/12	12/03/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL20305 - General Preparation (GC)										
Blank (EL20305-BLK1)				Prepared & Analyzed: 12/03/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*64.4*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*61.4*		*"*	*60.0*		*102*	*75-125*			
LCS (EL20305-BS1)				Prepared & Analyzed: 12/03/12						
Benzene	0.0819	0.00100	mg/kg wet	0.100		81.9	80-120			
Toluene	0.100	0.00200	"	0.100		100	80-120			
Ethylbenzene	0.103	0.00100	"	0.100		103	80-120			
Xylene (p/m)	0.214	0.00200	"	0.200		107	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 1,4-Difluorobenzene	*66.9*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.2*		*"*	*60.0*		*117*	*75-125*			
LCS Dup (EL20305-BSD1)				Prepared & Analyzed: 12/03/12						
Benzene	0.0820	0.00100	mg/kg wet	0.100		82.0	80-120	0.0732	20	
Toluene	0.103	0.00200	"	0.100		103	80-120	2.48	20	
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120	1.98	20	
Xylene (p/m)	0.218	0.00200	"	0.200		109	80-120	2.03	20	
Xylene (o)	0.104	0.00100	"	0.100		104	80-120	1.88	20	
Surrogate: 1,4-Difluorobenzene	*67.2*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.3*		*"*	*60.0*		*117*	*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 EL20306 - * DEFAULT PREP *** **										
Blank (EL20306-BLK1)				Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL20306-BS1)				Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	11.3		mg/kg Wet	10.0		113	80-120			
LCS Dup (EL20306-BSD1)				Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	11.7		mg/kg Wet	10.0		117	80-120	3.41	20	
Duplicate (EL20306-DUP1)		**Source: 2L03001-01**		Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	189	1.04	mg/kg dry		189			0.121	20	
Matrix Spike (EL20306-MS1)		**Source: 2L03001-01**		Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	223	1.04	mg/kg dry	130	189	26.4	80-120			QM-05
Matrix Spike (EL20306-MS2)		**Source: 2L03002-03**		Prepared: 12/03/12 Analyzed: 12/04/12						
Chloride	763	1.01	mg/kg dry	126	135	498	80-120			QM-05
Batch EL20307 - * DEFAULT PREP *** **										
Blank (EL20307-BLK1)				Prepared & Analyzed: 12/03/12						
% Moisture	ND	0.1	%							
Duplicate (EL20307-DUP1)		**Source: 2L03001-01**		Prepared & Analyzed: 12/03/12						
% Moisture	5.0	0.1	%		4.0			22.2	20	R2

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 EL20304 - 8015M										
Blank (EL20304-BLK1)				Prepared & Analyzed: 12/03/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*88.7*		*"*	*100*		*88.7*	*70-130*			
Surrogate: o-Terphenyl	*48.0*		*"*	*50.0*		*96.1*	*70-130*			
LCS (EL20304-BS1)				Prepared & Analyzed: 12/03/12						
C6-C12	787	25.0	mg/kg wet	1000		78.7	75-125			
>C12-C28	781	25.0	"	1000		78.1	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*91.2*		*"*	*100*		*91.2*	*70-130*			
Surrogate: o-Terphenyl	*40.1*		*"*	*50.0*		*80.2*	*70-130*			
LCS Dup (EL20304-BSD1)				Prepared & Analyzed: 12/03/12						
C6-C12	845	25.0	mg/kg wet	1000		84.5	75-125	7.09	20	
>C12-C28	778	25.0	"	1000		77.8	75-125	0.364	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*107*		*"*	*100*		*107*	*70-130*			
Surrogate: o-Terphenyl	*48.4*		*"*	*50.0*		*96.9*	*70-130*			
Matrix Spike (EL20304-MS1)	**Source: 2L03002-03**			Prepared & Analyzed: 12/03/12						
C6-C12	962	25.3	mg/kg dry	1010	ND	95.2	75-125			
>C12-C28	889	25.3	"	1010	ND	88.0	75-125			
>C28-C35	ND	25.3	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*83.2*		*"*	*101*		*82.4*	*70-130*			
Surrogate: o-Terphenyl	*38.6*		*"*	*50.5*		*76.5*	*70-130*			
Matrix Spike Dup (EL20304-MSD1)	**Source: 2L03002-03**			Prepared & Analyzed: 12/03/12						
C6-C12	1010	25.3	mg/kg dry	1010	ND	100	75-125	4.85	20	
>C12-C28	863	25.3	"	1010	ND	85.5	75-125	2.95	20	
>C28-C35	ND	25.3	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*87.8*		*"*	*101*		*87.0*	*70-130*			
Surrogate: o-Terphenyl	*41.2*		*"*	*50.5*		*81.6*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

Notes and Definitions

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

Report Approved By:  Date: 12/10/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: Nova Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720
Fax No:
Sampler Signature: Camille Bryant
e-mail: cbryant@novatraining.cc

Project Name: SUG 12" Crossover
Project #: 1RP-1538
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 1203001

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: 8015B	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
-01	North Wall 1 @ 14'			11/30/2012	9:00		1	x								S	X									X			X				
-02	North Wall 2 @ 14'			11/30/2012	9:05		1	x								S	X									X			X				
-03	South Wall 1 @ 16'			11/30/2012	9:10		1	x								S	X									X			X				
-04	South Wall 2 @ 16'			11/30/2012	9:15		1	x								S	X									X			X				
-05	West Wall 1 @ 16'			11/30/2012	9:20		1	x								S	X									X			X				
-06	West Wall 2 @ 14'			11/30/2012	9:25		1	x								S	X									X			X				
-07	Pit Floor @ 4'			11/30/2012	9:30		1	x								S	X									X			X				

Special Instructions:
RUSH

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	12/3/12	7:55			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date: 12/3/12	Time: 7:55

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: 3.2 °C
Adjusted: °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 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Location: Lea County, New Mexico

Lab Order Number: 2L04004

NELAP/TCEQ # T104704156-12-1

Report Date: 12/07/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-12	2L04004-01	Soil	12/03/12 14:00	12-04-2012 13:15
SP-2	2L04004-02	Soil	12/03/12 14:05	12-04-2012 13:15
SP-3	2L04004-03	Soil	12/03/12 14:10	12-04-2012 13:15
SP-4	2L04004-04	Soil	12/03/12 14:15	12-04-2012 13:15
SP-5	2L04004-05	Soil	12/03/12 14:20	12-04-2012 13:15
SP-6	2L04004-06	Soil	12/03/12 14:25	12-04-2012 13:15
SP-7	2L04004-07	Soil	12/03/12 14:30	12-04-2012 13:15
SP-8	2L04004-08	Soil	12/03/12 14:35	12-04-2012 13:15
SP-9	2L04004-09	Soil	12/03/12 14:40	12-04-2012 13:15
SP-10	2L04004-10	Soil	12/03/12 14:45	12-04-2012 13:15
SP-11	2L04004-11	Soil	12/03/12 14:50	12-04-2012 13:15
Top Soil	2L04004-12	Soil	12/03/12 14:55	12-04-2012 13:15

SP-12

2L04004-01 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*113 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**154**	1.03	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*59.8 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*93.6 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

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2L04004-02 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**361**	2.55	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*58.7 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*95.9 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

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2L04004-03 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**356**	2.58	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*58.7 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*76.5 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-04 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**309**	2.60	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	26.0	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	26.0	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	26.0	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*62.5 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*82.6 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-05 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*87.0 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**243**	1.02	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*60.2 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*75.7 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-06 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**220**	1.01	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*125 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Surrogate: o-Terphenyl		*159 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
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2L04004-07 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*98.4 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**339**	2.53	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*62.0 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*80.3 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-08 (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	EL20603	12/05/12	12/05/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/05/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*75-125*		*EL20603*	*12/05/12*	*12/05/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**383**	2.53	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*56.0 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*71.0 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-09 (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	EL20603	12/05/12	12/06/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*76.7 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**194**	1.03	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.8	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Surrogate: o-Terphenyl		*133 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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2L04004-10 (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	EL20603	12/05/12	12/06/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**233**	1.02	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*63.5 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*81.9 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

SP-11

2L04004-11 (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	EL20603	12/05/12	12/06/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20603	12/05/12	12/06/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*75-125*		*EL20603*	*12/05/12*	*12/06/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**394**	2.55	mg/kg dry	2.5	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.5	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*93.8 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Surrogate: o-Terphenyl		*126 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

Top Soil

2L04004-12 (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	EL20702	12/06/12	12/06/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL20702	12/06/12	12/06/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL20702	12/06/12	12/06/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL20702	12/06/12	12/06/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL20702	12/06/12	12/06/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EL20702*	*12/06/12*	*12/06/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*111 %*	*75-125*		*EL20702*	*12/06/12*	*12/06/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**66.5**	1.01	mg/kg dry	1	EL20701	12/06/12	12/07/12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	EL20501	12/04/12	12/05/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005									
C6-C12	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C12-C28	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
>C28-C35	ND	25.3	mg/kg dry	1	EL20605	12/06/12	12/06/12	TX 1005	
Surrogate: 1-Chlorooctane		*59.0 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	*S-04*
Surrogate: o-Terphenyl		*77.0 %*	*70-130*		*EL20605*	*12/06/12*	*12/06/12*	*TX 1005*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/06/12	12/06/12	[CALC]	

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 EL20603 - General Preparation (GC)										
Blank (EL20603-BLK1)				Prepared & Analyzed: 12/05/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*66.1*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*67.8*		*"*	*60.0*		*113*	*75-125*			
LCS (EL20603-BS1)				Prepared & Analyzed: 12/05/12						
Benzene	0.0163	0.00100	mg/kg wet	0.0150		109	80-120			
Toluene	0.0330	0.00200	"	0.0300		110	80-120			
Ethylbenzene	0.0487	0.00100	"	0.0500		97.4	80-120			
Xylene (p/m)	0.115	0.00200	"	0.110		105	80-120			
Xylene (o)	0.0613	0.00100	"	0.0600		102	80-120			
Surrogate: 1,4-Difluorobenzene	*64.3*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*67.2*		*"*	*60.0*		*112*	*75-125*			
LCS Dup (EL20603-BSD1)				Prepared & Analyzed: 12/05/12						
Benzene	0.0156	0.00100	mg/kg wet	0.0150		104	80-120	4.19	20	
Toluene	0.0352	0.00200	"	0.0300		117	80-120	6.25	20	
Ethylbenzene	0.0543	0.00100	"	0.0500		109	80-120	10.9	20	
Xylene (p/m)	0.121	0.00200	"	0.110		110	80-120	5.13	20	
Xylene (o)	0.0656	0.00100	"	0.0600		109	80-120	6.87	20	
Surrogate: 1,4-Difluorobenzene	*70.3*		*ug/kg*	*60.0*		*117*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*72.4*		*"*	*60.0*		*121*	*75-125*			
Matrix Spike (EL20603-MS1)		**Source: 2L05004-01**		Prepared: 12/05/12 Analyzed: 12/06/12						
Benzene	0.00852	0.00100	mg/kg dry	0.0155	ND	55.1	80-120			MS-1
Toluene	0.0249	0.00200	"	0.0309	0.00457	65.6	80-120			MS-1
Ethylbenzene	0.0487	0.00100	"	0.0515	0.0132	69.0	80-120			MS-1
Xylene (p/m)	0.242	0.00200	"	0.113	0.233	7.52	80-120			MS-1
Xylene (o)	0.0796	0.00100	"	0.0619	0.0675	19.5	80-120			MS-1
Surrogate: 1,4-Difluorobenzene	*62.2*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.1*		*"*	*60.0*		*115*	*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 EL20603 - General Preparation (GC)										
Matrix Spike Dup (EL20603-MSD1)	**Source: 2L05004-01**			Prepared: 12/05/12 Analyzed: 12/06/12						
Benzene	0.0105	0.00100	mg/kg dry	0.0155	ND	67.6	80-120	20.4	20	MS-1
Toluene	0.0271	0.00200	"	0.0309	0.00457	72.8	80-120	10.4	20	MS-1
Ethylbenzene	0.0537	0.00100	"	0.0515	0.0132	78.7	80-120	13.1	20	MS-1
Xylene (p/m)	0.254	0.00200	"	0.113	0.233	17.9	80-120	81.5	20	MS-1
Xylene (o)	0.105	0.00100	"	0.0619	0.0675	59.9	80-120	102	20	MS-1
Surrogate: 1,4-Difluorobenzene	*60.7*		*ug/kg*	*60.0*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*68.9*		*"*	*60.0*		*115*	*75-125*			
Batch EL20702 - General Preparation (GC)										
Blank (EL20702-BLK1)				Prepared & Analyzed: 12/06/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*65.6*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*66.1*		*"*	*60.0*		*110*	*75-125*			
LCS (EL20702-BS1)				Prepared & Analyzed: 12/06/12						
Benzene	0.0885	0.00100	mg/kg wet	0.100		88.5	80-120			
Toluene	0.116	0.00200	"	0.100		116	80-120			
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120			
Xylene (p/m)	0.245	0.00200	"	0.200		122	80-120			L
Xylene (o)	0.112	0.00100	"	0.100		112	80-120			
Surrogate: 1,4-Difluorobenzene	*66.0*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*72.5*		*"*	*60.0*		*121*	*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 EL20702 - General Preparation (GC)										
LCS Dup (EL20702-BSD1)				Prepared & Analyzed: 12/06/12						
Benzene	0.0821	0.00100	mg/kg wet	0.100		82.1	80-120	7.59	20	
Toluene	0.107	0.00200	"	0.100		107	80-120	8.47	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120	9.51	20	
Xylene (p/m)	0.223	0.00200	"	0.200		111	80-120	9.40	20	
Xylene (o)	0.104	0.00100	"	0.100		104	80-120	7.67	20	
Surrogate: 1,4-Difluorobenzene	*64.8*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.5*		*"*	*60.0*		*116*	*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 EL20501 - * DEFAULT PREP *** **										
Blank (EL20501-BLK1)				Prepared: 12/04/12 Analyzed: 12/05/12						
% Moisture	ND	0.1	%							
Duplicate (EL20501-DUP1)	**Source: 2L04001-01**			Prepared: 12/04/12 Analyzed: 12/05/12						
% Moisture	19.0	0.1	%		18.0			5.41	20	
Duplicate (EL20501-DUP2)	**Source: 2L04004-11**			Prepared: 12/04/12 Analyzed: 12/05/12						
% Moisture	1.0	0.1	%		2.0			66.7	20	
Batch EL20701 - * DEFAULT PREP *** **										
Blank (EL20701-BLK1)				Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL20701-BS1)				Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	9.51		mg/kg Wet	10.0		95.1	80-120			
LCS Dup (EL20701-BSD1)				Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	9.58		mg/kg Wet	10.0		95.8	80-120	0.702	20	
Duplicate (EL20701-DUP1)	**Source: 2L04001-01**			Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	83.2	1.22	mg/kg dry		83.2			0.0147	20	
Matrix Spike (EL20701-MS1)	**Source: 2L04001-01**			Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	187	1.22	mg/kg dry	122	83.2	84.8	80-120			
Matrix Spike (EL20701-MS2)	**Source: 2L04004-04**			Prepared: 12/06/12 Analyzed: 12/07/12						
Chloride	571	2.60	mg/kg dry	260	309	100	80-120			

Total Petroleum Hydrocarbons C6-C35 by TNRCC Method 1005 - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL20605 - TX 1005										
Blank (EL20605-BLK1)				Prepared & Analyzed: 12/06/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*71.4*		*"*	*100*		*71.4*	*70-130*			
Surrogate: o-Terphenyl	*44.7*		*"*	*50.0*		*89.3*	*70-130*			
LCS (EL20605-BS1)				Prepared & Analyzed: 12/06/12						
C6-C12	761	25.0	mg/kg wet	1000		76.1	75-125			
>C12-C28	774	25.0	"	1000		77.4	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*84.9*		*"*	*100*		*84.9*	*70-130*			
Surrogate: o-Terphenyl	*46.0*		*"*	*50.0*		*91.9*	*70-130*			
LCS Dup (EL20605-BSD1)				Prepared & Analyzed: 12/06/12						
C6-C12	778	25.0	mg/kg wet	1000		77.8	75-125	2.33	20	
>C12-C28	790	25.0	"	1000		79.0	75-125	2.12	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*78.5*		*"*	*100*		*78.5*	*70-130*			
Surrogate: o-Terphenyl	*41.9*		*"*	*50.0*		*83.8*	*70-130*			
Matrix Spike (EL20605-MS1)	**Source: 2L05004-01**			Prepared & Analyzed: 12/06/12						
C6-C12	705	25.8	mg/kg dry	515	123	113	75-125			
>C12-C28	771	25.8	"	515	219	107	75-125			
>C28-C35	ND	25.8	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*73.7*		*"*	*103*		*71.5*	*70-130*			
Surrogate: o-Terphenyl	*42.2*		*"*	*51.5*		*81.9*	*70-130*			
Matrix Spike Dup (EL20605-MSD1)	**Source: 2L05004-01**			Prepared & Analyzed: 12/06/12						
C6-C12	770	25.8	mg/kg dry	515	123	125	75-125	10.5	20	
>C12-C28	762	25.8	"	515	219	105	75-125	1.54	20	
>C28-C35	ND	25.8	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*69.9*		*"*	*103*		*67.8*	*70-130*			*S-04*
Surrogate: o-Terphenyl	*41.2*		*"*	*51.5*		*80.0*	*70-130*			

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
MS-1	Recovery of sample outside of historical limits due to matrix interference.
L	Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
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: 12/7/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432-520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12" Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 2L04004

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	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260 8015B	RCI	N.O.R.M.	C 30			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	SP-12			12/3/2012	14:00		1	X								Soil	X								X			X				X
-02	SP-2			12/3/2012	14:05		1	X								Soil	X								X			X				X
-03	SP-3			12/3/2012	14:10		1	X								Soil	X								X			X				X
-04	SP-4			12/3/2012	14:15		1	X								Soil	X								X			X				X
-05	SP-5			12/3/2012	14:20		1	X								Soil	X								X			X				X
-06	SP-6			12/3/2012	14:25		1	X								Soil	X								X			X				X
-07	SP-7			12/3/2012	14:30		1	X								Soil	X								X			X				X
-08	SP-8			12/3/2012	14:35		1	X								Soil	X								X			X				X
-09	SP-9			12/3/2012	14:40		1	X								Soil	X								X			X				X
-10	SP-10			12/3/2012	14:45		1	X								Soil	X								X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	12/4/12	13:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/4/12	13:15

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

Project Name: SUG Historical 12" Crossover 1RP-1538
Project #:
Project Loc: Lea County New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 2L04004

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.	Q 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-11	SP-11			12/3/2012	14:50		1	X								Soil	X								X			X		X
-12	Top Soil			12/3/2012	14:55		1	X								Soil	X								X			X		X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	12/4/12	13:15			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/4/12	13:15

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 & Environment
2057 Commerce
Midland, TX 79703

Project: SUG 12 In Crossover
Project Number: [none]
Location: Lea, Co. New Mexico

Lab Order Number: 2L10001

NELAP/TCEQ # T104704156-12-1

Report Date: 12/17/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
North S-W 1A @14 ft	2L10001-01	Soil	12/07/12 13:30	12-10-2012 09:10
East S-W 1 @14 ft	2L10001-02	Soil	12/07/12 14:00	12-10-2012 09:10
West S-W 3 @14 ft	2L10001-03	Soil	12/07/12 14:20	12-10-2012 09:10

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

North S-W 1A @14 ft

2L10001-01 (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	EL21003	12/10/12	12/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.7 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**230**	1.04	mg/kg dry	1	EL21005	12/10/12	12/10/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL21002	12/10/12	12/10/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
Surrogate: 1-Chlorooctane		*62.9 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*80.5 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/10/12	12/10/12	8015M	

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

East S-W 1 @14 ft

2L10001-02 (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	EL21003	12/10/12	12/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**197**	1.04	mg/kg dry	1	EL21005	12/10/12	12/10/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL21002	12/10/12	12/10/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
Surrogate: 1-Chlorooctane		*63.1 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*78.6 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/10/12	12/10/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

West S-W 3 @14 ft

2L10001-03 (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	EL21003	12/10/12	12/10/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL21003	12/10/12	12/10/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-125*		*EL21003*	*12/10/12*	*12/10/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**284**	1.05	mg/kg dry	1	EL21005	12/10/12	12/10/12	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	EL21002	12/10/12	12/10/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C12-C28	ND	26.3	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
>C28-C35	ND	26.3	mg/kg dry	1	EL21004	12/10/12	12/10/12	8015M	
Surrogate: 1-Chlorooctane		*64.0 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*79.5 %*	*70-130*		*EL21004*	*12/10/12*	*12/10/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/10/12	12/10/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL21003 - General Preparation (GC)										
Blank (EL21003-BLK1)				Prepared & Analyzed: 12/10/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*66.4*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.9*		*"*	*60.0*		*106*	*75-125*			
LCS (EL21003-BS1)				Prepared & Analyzed: 12/10/12						
Benzene	0.0942	0.00100	mg/kg wet	0.100		94.2	80-120			
Toluene	0.119	0.00200	"	0.100		119	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.240	0.00200	"	0.200		120	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	*67.5*		*ug/kg*	*60.0*		*112*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.3*		*"*	*60.0*		*115*	*75-125*			
LCS Dup (EL21003-BSD1)				Prepared & Analyzed: 12/10/12						
Benzene	0.0912	0.00100	mg/kg wet	0.100		91.2	80-120	3.22	20	
Toluene	0.120	0.00200	"	0.100		120	80-120	0.815	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	80-120	0.995	20	
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120	0.774	20	
Xylene (o)	0.114	0.00100	"	0.100		114	80-120	1.07	20	
Surrogate: 1,4-Difluorobenzene	*65.2*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.4*		*"*	*60.0*		*116*	*75-125*			
Matrix Spike (EL21003-MS1)		**Source: 2L10002-01**		Prepared & Analyzed: 12/10/12						
Benzene	0.0676	0.00100	mg/kg dry	0.101	ND	66.9	80-120			QM-05
Toluene	0.0876	0.00200	"	0.101	ND	86.8	80-120			
Ethylbenzene	0.0883	0.00100	"	0.101	0.00175	85.7	80-120			
Xylene (p/m)	0.183	0.00200	"	0.202	0.00342	89.1	80-120			
Xylene (o)	0.0850	0.00100	"	0.101	0.00172	82.5	80-120			
Surrogate: 1,4-Difluorobenzene	*64.5*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*72.6*		*"*	*60.0*		*121*	*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 EL21003 - General Preparation (GC)										
Matrix Spike Dup (EL21003-MSD1)		**Source: 2L10002-01**		Prepared & Analyzed: 12/10/12						
Benzene	0.0685	0.00100	mg/kg dry	0.101	ND	67.8	80-120	1.37	20	QM-05
Toluene	0.0882	0.00200	"	0.101	ND	87.3	80-120	0.655	20	
Ethylbenzene	0.0809	0.00100	"	0.101	0.00175	78.4	80-120	8.96	20	QM-05
Xylene (p/m)	0.160	0.00200	"	0.202	0.00342	77.3	80-120	14.1	20	QM-05
Xylene (o)	0.0784	0.00100	"	0.101	0.00172	76.0	80-120	8.23	20	QM-05
Surrogate: 1,4-Difluorobenzene	*62.3*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*56.4*		*"*	*60.0*		*93.9*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EL21002 - * DEFAULT PREP *** **										
Blank (EL21002-BLK1)				Prepared & Analyzed: 12/10/12						
% Moisture	ND	0.1	%							
Duplicate (EL21002-DUP1)	**Source: 2L10001-01**			Prepared & Analyzed: 12/10/12						
% Moisture	4.0	0.1	%		4.0			0.00	20	
Batch EL21005 - * DEFAULT PREP *** **										
Blank (EL21005-BLK1)				Prepared & Analyzed: 12/10/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL21005-BS1)				Prepared & Analyzed: 12/10/12						
Chloride	10.2		mg/kg Wet	10.0		102	80-120			
LCS Dup (EL21005-BSD1)				Prepared & Analyzed: 12/10/12						
Chloride	10.2		mg/kg Wet	10.0		102	80-120	0.295	20	
Duplicate (EL21005-DUP1)	**Source: 2L10001-01**			Prepared & Analyzed: 12/10/12						
Chloride	230	1.04	mg/kg dry		230			0.208	20	
Matrix Spike (EL21005-MS1)	**Source: 2L10001-01**			Prepared & Analyzed: 12/10/12						
Chloride	330	1.04	mg/kg dry	91.1	230	109	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 EL21004 - 8015M										
Blank (EL21004-BLK1)				Prepared & Analyzed: 12/10/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*70.7*		*"*	*100*		*70.7*	*70-130*			
Surrogate: o-Terphenyl	*42.9*		*"*	*50.0*		*85.8*	*70-130*			
LCS (EL21004-BS1)				Prepared & Analyzed: 12/10/12						
C6-C12	773	25.0	mg/kg wet	1000		77.3	75-125			
>C12-C28	773	25.0	"	1000		77.3	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*76.9*		*"*	*100*		*76.9*	*70-130*			
Surrogate: o-Terphenyl	*42.3*		*"*	*50.0*		*84.6*	*70-130*			
LCS Dup (EL21004-BSD1)				Prepared & Analyzed: 12/10/12						
C6-C12	803	25.0	mg/kg wet	1000		80.3	75-125	3.82	20	
>C12-C28	803	25.0	"	1000		80.3	75-125	3.80	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*74.5*		*"*	*100*		*74.5*	*70-130*			
Surrogate: o-Terphenyl	*40.1*		*"*	*50.0*		*80.3*	*70-130*			
Matrix Spike (EL21004-MS1)	**Source: 2L10001-01**			Prepared & Analyzed: 12/10/12						
C6-C12	903	26.0	mg/kg dry	1040	ND	86.7	75-125			
>C12-C28	836	26.0	"	1040	ND	80.3	75-125			
>C28-C35	ND	26.0	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*84.4*		*"*	*104*		*81.0*	*70-130*			
Surrogate: o-Terphenyl	*46.2*		*"*	*52.1*		*88.7*	*70-130*			
Matrix Spike Dup (EL21004-MSD1)	**Source: 2L10001-01**			Prepared & Analyzed: 12/10/12						
C6-C12	919	26.0	mg/kg dry	1040	ND	88.3	75-125	1.76	20	
>C12-C28	868	26.0	"	1040	ND	83.3	75-125	3.70	20	
>C28-C35	ND	26.0	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*86.0*		*"*	*104*		*82.5*	*70-130*			
Surrogate: o-Terphenyl	*47.4*		*"*	*52.1*		*91.0*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
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.
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: 12/17/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: Nova Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720
Fax No:
Sampler Signature:
e-mail: cbryant@novatraining.cc

Project Name: SUG 12" Crossover
Project #:
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 240001

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 / 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	North S-W 1A @14'			12/7/2012	13:30		1	x								S	X								X			X			x	
-02	East S-W 1 @ 14'			12/7/2012	14:00		1	x								S	X								X			X			x	
-03	West S-W 3 @ 14'			12/7/2012	14:20		1	x								S	X								X			X			x	

Special Instructions:
RUSH

Relinquished by:	Date	Time	Received by:	Date	Time
	12/10/12	9:10			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/10/12	9:10

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 by Sampler/Client Rep. ?	N
by Courier? UPS DHL FedEx Lone Star	

Temperature Upon Receipt:
Received: °C
Adjusted: 3.2 °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 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Location: Lea County, New Mexico

Lab Order Number: 2L14001

NELAP/TCEQ # T104704156-12-1

Report Date: 12/17/12

Nova Safety & Environment	Project: SUG Historical 12 in. Crossover 1RP-1538	Fax: (432) 520-7701
2057 Commerce	Project Number: 1RP-1538	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West Trench-2 @ 14'	2L14001-01	Soil	12/13/12 15:00	12-14-2012 08:08

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

West Trench-2 @ 14'

2L14001-01 (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	EL21703	12/14/12	12/14/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL21703	12/14/12	12/14/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL21703	12/14/12	12/14/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL21703	12/14/12	12/14/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL21703	12/14/12	12/14/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*75-125*		*EL21703*	*12/14/12*	*12/14/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*126 %*	*75-125*		*EL21703*	*12/14/12*	*12/14/12*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**324**	1.02	mg/kg dry	1	EL21704	12/17/12	12/17/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL21701	12/14/12	12/17/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EL21702	12/14/12	12/14/12	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EL21702	12/14/12	12/14/12	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EL21702	12/14/12	12/14/12	8015M	
Surrogate: 1-Chlorooctane		*70.9 %*	*70-130*		*EL21702*	*12/14/12*	*12/14/12*	*8015M*	
Surrogate: o-Terphenyl		*91.6 %*	*70-130*		*EL21702*	*12/14/12*	*12/14/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/14/12	12/14/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL21703 - General Preparation (GC)										
Blank (EL21703-BLK1)				Prepared & Analyzed: 12/14/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*63.5*		*ug/kg*	*60.0*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*76.6*		*"*	*60.0*		*128*	*75-125*			*S-09*
LCS (EL21703-BS1)				Prepared & Analyzed: 12/14/12						
Benzene	0.0946	0.00100	mg/kg wet	0.100		94.6	80-120			
Toluene	0.0994	0.00200	"	0.100		99.4	80-120			
Ethylbenzene	0.0974	0.00100	"	0.100		97.4	80-120			
Xylene (p/m)	0.201	0.00200	"	0.200		100	80-120			
Xylene (o)	0.0920	0.00100	"	0.100		92.0	80-120			
Surrogate: 1,4-Difluorobenzene	*64.9*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*63.2*		*"*	*60.0*		*105*	*75-125*			
LCS Dup (EL21703-BSD1)				Prepared & Analyzed: 12/14/12						
Benzene	0.0962	0.00100	mg/kg wet	0.100		96.2	80-120	1.67	20	
Toluene	0.102	0.00200	"	0.100		102	80-120	2.72	20	
Ethylbenzene	0.0999	0.00100	"	0.100		99.9	80-120	2.59	20	
Xylene (p/m)	0.207	0.00200	"	0.200		103	80-120	2.90	20	
Xylene (o)	0.0949	0.00100	"	0.100		94.9	80-120	3.03	20	
Surrogate: 1,4-Difluorobenzene	*65.4*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*65.9*		*"*	*60.0*		*110*	*75-125*			
Matrix Spike (EL21703-MS1)		**Source: 2L14001-01**		Prepared & Analyzed: 12/14/12						
Benzene	0.0405	0.00100	mg/kg dry	0.102	ND	39.7	80-120			QM-05
Toluene	0.0533	0.00200	"	0.102	ND	52.3	80-120			QM-05
Ethylbenzene	0.0598	0.00100	"	0.102	ND	58.6	80-120			QM-05
Xylene (p/m)	0.122	0.00200	"	0.204	ND	59.7	80-120			QM-05
Xylene (o)	0.0596	0.00100	"	0.102	ND	58.4	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*62.4*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*69.1*		*"*	*60.0*		*115*	*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 EL21703 - General Preparation (GC)										
Matrix Spike Dup (EL21703-MSD1)	**Source: 2L14001-01**			Prepared & Analyzed: 12/14/12						
Benzene	0.0351	0.00100	mg/kg dry	0.102	ND	34.4	80-120	14.2	20	QM-05
Toluene	0.0466	0.00200	"	0.102	ND	45.7	80-120	13.5	20	QM-05
Ethylbenzene	0.0534	0.00100	"	0.102	ND	52.3	80-120	11.3	20	QM-05
Xylene (p/m)	0.108	0.00200	"	0.204	ND	53.0	80-120	11.9	20	QM-05
Xylene (o)	0.0538	0.00100	"	0.102	ND	52.7	80-120	10.3	20	QM-05
Surrogate: 1,4-Difluorobenzene	*62.6*		*ug/kg*	*60.0*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*68.8*		*"*	*60.0*		*115*	*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 EL21701 - * DEFAULT PREP *** **										
Blank (EL21701-BLK1)				Prepared: 12/14/12 Analyzed: 12/17/12						
% Moisture	ND	0.1	%							
Duplicate (EL21701-DUP1)	**Source: 2L13001-01**			Prepared: 12/14/12 Analyzed: 12/17/12						
% Moisture	10.0	0.1	%		11.0			9.52	20	
Batch EL21704 - * DEFAULT PREP *** **										
Blank (EL21704-BLK1)				Prepared & Analyzed: 12/17/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL21704-BS1)				Prepared & Analyzed: 12/17/12						
Chloride	10.1		mg/kg Wet	10.0		101	80-120			
LCS Dup (EL21704-BSD1)				Prepared & Analyzed: 12/17/12						
Chloride	10.1		mg/kg Wet	10.0		101	80-120	0.0593	20	
Duplicate (EL21704-DUP1)	**Source: 2L14001-01**			Prepared & Analyzed: 12/17/12						
Chloride	325	1.02	mg/kg dry		324			0.0723	20	
Matrix Spike (EL21704-MS1)	**Source: 2L14001-01**			Prepared & Analyzed: 12/17/12						
Chloride	436	1.02	mg/kg dry	115	324	97.6	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 EL21702 - 8015M										
Blank (EL21702-BLK1)				Prepared & Analyzed: 12/14/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*67.1*		*"*	*100*		*67.1*	*70-130*			*S-GC*
Surrogate: o-Terphenyl	*43.5*		*"*	*50.0*		*87.1*	*70-130*			
LCS (EL21702-BS1)				Prepared & Analyzed: 12/14/12						
C6-C12	842	25.0	mg/kg wet	1000		84.2	75-125			
>C12-C28	824	25.0	"	1000		82.4	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*70.8*		*"*	*100*		*70.8*	*70-130*			
Surrogate: o-Terphenyl	*40.2*		*"*	*50.0*		*80.3*	*70-130*			
LCS Dup (EL21702-BSD1)				Prepared & Analyzed: 12/14/12						
C6-C12	853	25.0	mg/kg wet	1000		85.3	75-125	1.38	20	
>C12-C28	823	25.0	"	1000		82.3	75-125	0.128	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*72.0*		*"*	*100*		*72.0*	*70-130*			
Surrogate: o-Terphenyl	*39.9*		*"*	*50.0*		*79.8*	*70-130*			
Matrix Spike (EL21702-MS1)	**Source: 2L14001-01**			Prepared & Analyzed: 12/14/12						
C6-C12	874	25.5	mg/kg dry	1020	ND	85.7	75-125			
>C12-C28	844	25.5	"	1020	ND	82.7	75-125			
>C28-C35	ND	25.5	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*61.4*		*"*	*51.0*		*120*	*70-130*			
Surrogate: o-Terphenyl	*34.9*		*"*	*25.5*		*137*	*70-130*			*S-GC*
Matrix Spike Dup (EL21702-MSD1)	**Source: 2L14001-01**			Prepared & Analyzed: 12/14/12						
C6-C12	853	25.5	mg/kg dry	1020	ND	83.6	75-125	2.50	20	
>C12-C28	884	25.5	"	1020	ND	86.6	75-125	4.62	20	
>C28-C35	ND	25.5	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*83.5*		*"*	*102*		*81.8*	*70-130*			
Surrogate: o-Terphenyl	*48.2*		*"*	*51.0*		*94.4*	*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.
S-09	Surrogate recovery limits have been exceeded.
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: 12/17/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12" Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only) ORDER #: 2L14001

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TOTAL: TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	C 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	West Trench 2 @ 14'			12/13/2012	15:00		1	X								Soil	X								X			X				X

Special Instructions:

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: 2.2	°C Factor	NCF

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	12/14/12	8:03			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/14/12	8:03

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 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Location: Lea County, New Mexico

Lab Order Number: 2L17001

NELAP/TCEQ # T104704156-12-1

Report Date: 12/19/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West Trench SW @ 14'	2L17001-01	Soil	12/14/12 11:00	12-17-2012 14:50

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

West Trench SW @ 14'

2L17001-01 (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	EL21903	12/18/12	12/18/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL21903	12/18/12	12/18/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL21903	12/18/12	12/18/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL21903	12/18/12	12/18/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL21903	12/18/12	12/18/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*105 %*	*75-125*		*EL21903*	*12/18/12*	*12/18/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*130 %*	*75-125*		*EL21903*	*12/18/12*	*12/18/12*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**205**	1.04	mg/kg dry	1	EL21902	12/19/12	12/19/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL21901	12/18/12	12/19/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL21904	12/18/12	12/18/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL21904	12/18/12	12/18/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL21904	12/18/12	12/18/12	8015M	
Surrogate: 1-Chlorooctane		*62.9 %*	*70-130*		*EL21904*	*12/18/12*	*12/18/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*89.1 %*	*70-130*		*EL21904*	*12/18/12*	*12/18/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/18/12	12/18/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL21903 - General Preparation (GC)										
Blank (EL21903-BLK1)				Prepared & Analyzed: 12/18/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*63.7*		*ug/kg*	*60.0*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*80.3*		*"*	*60.0*		*134*	*75-125*			*S-GC*
LCS (EL21903-BS1)				Prepared & Analyzed: 12/18/12						
Benzene	0.0988	0.00100	mg/kg wet	0.100		98.8	80-120			
Toluene	0.106	0.00200	"	0.100		106	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.222	0.00200	"	0.200		111	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*66.7*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*74.8*		*"*	*60.0*		*125*	*75-125*			
LCS Dup (EL21903-BSD1)				Prepared & Analyzed: 12/18/12						
Benzene	0.0971	0.00100	mg/kg wet	0.100		97.1	80-120	1.72	20	
Toluene	0.108	0.00200	"	0.100		108	80-120	1.35	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120	0.780	20	
Xylene (p/m)	0.224	0.00200	"	0.200		112	80-120	0.866	20	
Xylene (o)	0.106	0.00100	"	0.100		106	80-120	0.755	20	
Surrogate: 1,4-Difluorobenzene	*66.5*		*ug/kg*	*60.0*		*111*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*75.8*		*"*	*60.0*		*126*	*75-125*			*S-GC*
Matrix Spike (EL21903-MS1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/18/12						
Benzene	0.0774	0.00100	mg/kg dry	0.104	ND	74.3	80-120			QM-05
Toluene	0.0828	0.00200	"	0.104	ND	79.5	80-120			QM-05
Ethylbenzene	0.0843	0.00100	"	0.104	ND	80.9	80-120			
Xylene (p/m)	0.173	0.00200	"	0.208	ND	82.9	80-120			
Xylene (o)	0.0814	0.00100	"	0.104	ND	78.1	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*61.7*		*ug/kg*	*60.0*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*73.0*		*"*	*60.0*		*122*	*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 EL21903 - General Preparation (GC)										
Matrix Spike Dup (EL21903-MSD1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/18/12						
Benzene	0.0708	0.00100	mg/kg dry	0.104	ND	68.0	80-120	8.94	20	QM-05
Toluene	0.0784	0.00200	"	0.104	ND	75.2	80-120	5.47	20	QM-05
Ethylbenzene	0.0804	0.00100	"	0.104	ND	77.2	80-120	4.68	20	QM-05
Xylene (p/m)	0.167	0.00200	"	0.208	ND	80.0	80-120	3.52	20	
Xylene (o)	0.0786	0.00100	"	0.104	ND	75.4	80-120	3.52	20	QM-05
Surrogate: 1,4-Difluorobenzene	*64.8*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*75.9*		*"*	*60.0*		*127*	*75-125*			*S-GC*

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EL21901 - * DEFAULT PREP *** **										
Blank (EL21901-BLK1)				Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	ND	0.1	%							
Duplicate (EL21901-DUP1)	**Source: 2L18001-01**			Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Batch EL21902 - * DEFAULT PREP *** **										
Blank (EL21902-BLK1)				Prepared & Analyzed: 12/19/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL21902-BS1)				Prepared & Analyzed: 12/19/12						
Chloride	10.5		mg/kg Wet	10.0		105	80-120			
LCS Dup (EL21902-BSD1)				Prepared & Analyzed: 12/19/12						
Chloride	10.4		mg/kg Wet	10.0		104	80-120	0.700	20	
Duplicate (EL21902-DUP1)	**Source: 2L17001-01**			Prepared & Analyzed: 12/19/12						
Chloride	205	1.04	mg/kg dry		205			0.254	20	
Matrix Spike (EL21902-MS1)	**Source: 2L17001-01**			Prepared & Analyzed: 12/19/12						
Chloride	276	1.04	mg/kg dry	65.1	205	109	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 EL21904 - 8015M										
Blank (EL21904-BLK1)				Prepared: 12/18/12 Analyzed: 12/19/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*72.7*		*"*	*100*		*72.7*	*70-130*			
Surrogate: o-Terphenyl	*49.4*		*"*	*50.0*		*98.7*	*70-130*			
LCS (EL21904-BS1)				Prepared: 12/18/12 Analyzed: 12/19/12						
C6-C12	782	25.0	mg/kg wet	1000		78.2	75-125			
>C12-C28	769	25.0	"	1000		76.9	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*71.6*		*"*	*100*		*71.6*	*70-130*			
Surrogate: o-Terphenyl	*42.8*		*"*	*50.0*		*85.7*	*70-130*			
LCS Dup (EL21904-BSD1)				Prepared & Analyzed: 12/18/12						
C6-C12	773	25.0	mg/kg wet	1000		77.3	75-125	1.06	20	
>C12-C28	780	25.0	"	1000		78.0	75-125	1.38	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*75.8*		*"*	*100*		*75.8*	*70-130*			
Surrogate: o-Terphenyl	*43.7*		*"*	*50.0*		*87.4*	*70-130*			
Matrix Spike (EL21904-MS1)	**Source: 2L17001-01**			Prepared & Analyzed: 12/18/12						
C6-C12	806	26.0	mg/kg dry	1040	ND	77.3	75-125			
>C12-C28	811	26.0	"	1040	ND	77.9	75-125			
>C28-C35	ND	26.0	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*76.7*		*"*	*104*		*73.6*	*70-130*			
Surrogate: o-Terphenyl	*44.8*		*"*	*52.1*		*86.1*	*70-130*			
Matrix Spike Dup (EL21904-MSD1)	**Source: 2L17001-01**			Prepared & Analyzed: 12/18/12						
C6-C12	814	26.0	mg/kg dry	1040	ND	78.1	75-125	0.983	20	
>C12-C28	815	26.0	"	1040	ND	78.2	75-125	0.411	20	
>C28-C35	ND	26.0	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*82.4*		*"*	*104*		*79.1*	*70-130*			
Surrogate: o-Terphenyl	*45.4*		*"*	*52.1*		*87.2*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
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.
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: 12/19/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant

Company Name: NOVA Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, Texas 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

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

rose.slade@sug.com

Project Name: SUG Historical 12" Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only) ORDER #: 217009

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 418.1 / 8015M	TOTAL: TPH: 8015B	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 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	West Trench SW @ 14'			12/14/2012	11:00		1	X								Soil	X									X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	12/17/12	13:21			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/17/12	14:50

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: 4.0 °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 12 In Crossover
Project Number: [none]
Location: Lea Co., New Mexico

Lab Order Number: 2L18002

NELAP/TCEQ # T104704156-12-1

Report Date: 12/19/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
South Trench @ 16 ft	2L18002-01	Soil	12/17/12 10:00	12-18-2012 11:08
West Trench @ 16 ft	2L18002-02	Soil	12/17/12 11:00	12-18-2012 11:08

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

South Trench @ 16 ft

2L18002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**113**	1.03	mg/kg dry	1	EL21902	12/19/12	12/19/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL21901	12/18/12	12/19/12	% calculation	

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

West Trench @ 16 ft

2L18002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**124**	1.04	mg/kg dry	1	EL21902	12/19/12	12/19/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL21901	12/18/12	12/19/12	% calculation	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EL21901 - * DEFAULT PREP *** **										
Blank (EL21901-BLK1)				Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	ND	0.1	%							
Duplicate (EL21901-DUP1)		**Source: 2L18001-01**		Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Batch EL21902 - * DEFAULT PREP *** **										
Blank (EL21902-BLK1)				Prepared & Analyzed: 12/19/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL21902-BS1)				Prepared & Analyzed: 12/19/12						
Chloride	10.5		mg/kg Wet	10.0		105	80-120			
LCS Dup (EL21902-BSD1)				Prepared & Analyzed: 12/19/12						
Chloride	10.4		mg/kg Wet	10.0		104	80-120	0.700	20	
Duplicate (EL21902-DUP1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/19/12						
Chloride	205	1.04	mg/kg dry		205			0.254	20	
Matrix Spike (EL21902-MS1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/19/12						
Chloride	276	1.04	mg/kg dry	65.1	205	109	80-120			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
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:  Date: 12/19/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: Nova Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720 Fax No:
Sampler Signature: Rick Pena
e-mail: cbryant@novatraining.cc
rose.slade@SUG,com

Project Name: SUG 12" Crossover
Project #:
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 2L18002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 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	South Trench @ 16'			12/17/2012	10:00		1	x								S															X	x	
-02	West Trench @ 16'			12/17/2012	11:00		1	x								S															X	x	

Special Instructions:
RUSH

Relinquished by:	Date	Time	Received by:	Date	Time
Rebecca Haskell	12/18/12	8:10			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/18/12	11:08

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: 6.0 °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 12 In Crossover
Project Number: [none]
Location: Lea Co., New Mexico

Lab Order Number: 2L18002

NELAP/TCEQ # T104704156-12-1

Report Date: 12/19/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
South Trench @ 16 ft	2L18002-01	Soil	12/17/12 10:00	12-18-2012 11:08
West Trench @ 16 ft	2L18002-02	Soil	12/17/12 11:00	12-18-2012 11:08

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

South Trench @ 16 ft

2L18002-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**113**	1.03	mg/kg dry	1	EL21902	12/19/12	12/19/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL21901	12/18/12	12/19/12	% calculation	

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

West Trench @ 16 ft

2L18002-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab									
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**124**	1.04	mg/kg dry	1	EL21902	12/19/12	12/19/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL21901	12/18/12	12/19/12	% calculation	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EL21901 - * DEFAULT PREP *** **										
Blank (EL21901-BLK1)				Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	ND	0.1	%							
Duplicate (EL21901-DUP1)		**Source: 2L18001-01**		Prepared: 12/18/12 Analyzed: 12/19/12						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Batch EL21902 - * DEFAULT PREP *** **										
Blank (EL21902-BLK1)				Prepared & Analyzed: 12/19/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL21902-BS1)				Prepared & Analyzed: 12/19/12						
Chloride	10.5		mg/kg Wet	10.0		105	80-120			
LCS Dup (EL21902-BSD1)				Prepared & Analyzed: 12/19/12						
Chloride	10.4		mg/kg Wet	10.0		104	80-120	0.700	20	
Duplicate (EL21902-DUP1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/19/12						
Chloride	205	1.04	mg/kg dry		205			0.254	20	
Matrix Spike (EL21902-MS1)		**Source: 2L17001-01**		Prepared & Analyzed: 12/19/12						
Chloride	276	1.04	mg/kg dry	65.1	205	109	80-120			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
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:  Date: 12/19/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: Nova Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720 Fax No:
Sampler Signature: Rick Pena
e-mail: cbryant@novatraining.cc
rose.slade@SUG,com

Project Name: SUG 12" Crossover
Project #:
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 2L18002

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 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	South Trench @ 16'			12/17/2012	10:00		1	x								S															X	x	
-02	West Trench @ 16'			12/17/2012	11:00		1	x								S															X	x	

Special Instructions:
RUSH

Relinquished by:	Date	Time	Received by:	Date	Time
Rebecca Haskell	12/18/12	8:10			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/18/12	11:08

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: 6.0 °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 12 In Crossover
Project Number: [none]
Location: Lea County, New Mexico

Lab Order Number: 2L21003

NELAP/TCEQ # T104704156-12-1

Report Date: 12/28/12

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-13	2L21003-01	Soil	12/20/12 15:00	12-21-2012 08:07
SP-14	2L21003-02	Soil	12/20/12 15:30	12-21-2012 08:07
SP-15	2L21003-03	Soil	12/20/12 15:40	12-21-2012 08:07
SP-16	2L21003-04	Soil	12/20/12 15:50	12-21-2012 08:07

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

SP-13

2L21003-01 (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	EL22808	12/21/12	12/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*123 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**498**	2.58	mg/kg dry	2.5	EL22803	12/28/12	12/28/12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EL22701	12/21/12	12/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
Surrogate: 1-Chlorooctane		*65.7 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*92.0 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/21/12	12/21/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

SP-14

2L21003-02 (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	EL22808	12/21/12	12/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*123 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**474**	2.55	mg/kg dry	2.5	EL22803	12/28/12	12/28/12	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	EL22701	12/21/12	12/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C12-C28	ND	25.5	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C28-C35	ND	25.5	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
Surrogate: 1-Chlorooctane		*64.2 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*89.9 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/21/12	12/21/12	8015M	

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

SP-15

2L21003-03 (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	EL22808	12/21/12	12/22/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/22/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/22/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/22/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/22/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*75-125*		*EL22808*	*12/21/12*	*12/22/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*124 %*	*75-125*		*EL22808*	*12/21/12*	*12/22/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**500**	2.60	mg/kg dry	2.5	EL22803	12/28/12	12/28/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL22701	12/21/12	12/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
Surrogate: 1-Chlorooctane		*67.5 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*91.6 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/21/12	12/21/12	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

SP-16

2L21003-04 (Soil)

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EL22808	12/21/12	12/21/12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*124 %*	*75-125*		*EL22808*	*12/21/12*	*12/21/12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**495**	2.60	mg/kg dry	2.5	EL22803	12/28/12	12/28/12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	EL22701	12/21/12	12/26/12	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C12-C28	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
>C28-C35	ND	26.0	mg/kg dry	1	EL22703	12/21/12	12/21/12	8015M	
Surrogate: 1-Chlorooctane		*64.9 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	*S-GC*
Surrogate: o-Terphenyl		*88.5 %*	*70-130*		*EL22703*	*12/21/12*	*12/21/12*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	12/21/12	12/21/12	8015M	

Organics by GC - Quality Control

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL22808 - General Preparation (GC)										
Blank (EL22808-BLK1)				Prepared & Analyzed: 12/21/12						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*63.3*		*ug/kg*	*60.0*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*70.3*		*"*	*60.0*		*117*	*75-125*			
LCS (EL22808-BS1)				Prepared & Analyzed: 12/21/12						
Benzene	0.104	0.00100	mg/kg wet	0.100		104	80-120			
Toluene	0.113	0.00200	"	0.100		113	80-120			
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120			
Xylene (p/m)	0.226	0.00200	"	0.200		113	80-120			
Xylene (o)	0.104	0.00100	"	0.100		104	80-120			
Surrogate: 1,4-Difluorobenzene	*63.9*		*ug/kg*	*60.0*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*65.9*		*"*	*60.0*		*110*	*75-125*			
LCS Dup (EL22808-BSD1)				Prepared & Analyzed: 12/21/12						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	80-120	1.10	20	
Toluene	0.110	0.00200	"	0.100		110	80-120	2.19	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120	2.19	20	
Xylene (p/m)	0.221	0.00200	"	0.200		110	80-120	2.53	20	
Xylene (o)	0.102	0.00100	"	0.100		102	80-120	1.75	20	
Surrogate: 1,4-Difluorobenzene	*65.0*		*ug/kg*	*60.0*		*108*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*64.4*		*"*	*60.0*		*107*	*75-125*			
Matrix Spike (EL22808-MS1)		**Source: 2L21003-02**		Prepared & Analyzed: 12/21/12						
Benzene	0.0665	0.00100	mg/kg dry	0.102	ND	65.2	80-120			QM-05
Toluene	0.0748	0.00200	"	0.102	ND	73.3	80-120			QM-05
Ethylbenzene	0.0733	0.00100	"	0.102	ND	71.9	80-120			QM-05
Xylene (p/m)	0.151	0.00200	"	0.204	ND	73.8	80-120			QM-05
Xylene (o)	0.0699	0.00100	"	0.102	ND	68.5	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*66.0*		*ug/kg*	*60.0*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*73.4*		*"*	*60.0*		*122*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EL22808 - General Preparation (GC)										
Matrix Spike Dup (EL22808-MSD1)		**Source: 2L21003-02**		Prepared & Analyzed: 12/21/12						
Benzene	0.0802	0.00100	mg/kg dry	0.102	ND	78.6	80-120	18.7	20	QM-05
Toluene	0.0914	0.00200	"	0.102	ND	89.6	80-120	20.1	20	QM-05
Ethylbenzene	0.0886	0.00100	"	0.102	ND	86.8	80-120	18.8	20	
Xylene (p/m)	0.182	0.00200	"	0.204	ND	89.2	80-120	18.9	20	
Xylene (o)	0.0837	0.00100	"	0.102	ND	82.0	80-120	17.9	20	
Surrogate: 1,4-Difluorobenzene	*65.7*		*ug/kg*	*60.0*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*72.0*		*"*	*60.0*		*120*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

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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 EL22701 - * DEFAULT PREP *** **										
Blank (EL22701-BLK1)				Prepared: 12/21/12 Analyzed: 12/26/12						
% Moisture	ND	0.1	%							
Duplicate (EL22701-DUP1)	**Source: 2L21002-01**			Prepared: 12/21/12 Analyzed: 12/26/12						
% Moisture	8.0	0.1	%		8.0			0.00	20	
Batch EL22803 - * DEFAULT PREP *** **										
Blank (EL22803-BLK1)				Prepared & Analyzed: 12/28/12						
Chloride	ND	1.00	mg/kg wet							
LCS (EL22803-BS1)				Prepared & Analyzed: 12/28/12						
Chloride	10.5		mg/kg Wet	10.0		105	80-120			
LCS Dup (EL22803-BSD1)				Prepared & Analyzed: 12/28/12						
Chloride	10.3		mg/kg Wet	10.0		103	80-120	2.51	20	
Duplicate (EL22803-DUP1)	**Source: 2L21002-01**			Prepared & Analyzed: 12/28/12						
Chloride	100	1.09	mg/kg dry		100			0.0217	20	
Matrix Spike (EL22803-MS1)	**Source: 2L21002-01**			Prepared & Analyzed: 12/28/12						
Chloride	185	1.09	mg/kg dry	95.1	100	88.9	80-120			
Matrix Spike (EL22803-MS2)	**Source: 2L21003-03**			Prepared & Analyzed: 12/28/12						
Chloride	760	2.60	mg/kg dry	221	500	117	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 EL22703 - 8015M										
Blank (EL22703-BLK1)				Prepared: 12/21/12 Analyzed: 12/22/12						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*70.6*		*"*	*100*		*70.6*	*70-130*			
Surrogate: o-Terphenyl	*47.0*		*"*	*50.0*		*94.1*	*70-130*			
LCS (EL22703-BS1)				Prepared & Analyzed: 12/21/12						
C6-C12	752	25.0	mg/kg wet	1000		75.2	75-125			
>C12-C28	770	25.0	"	1000		77.0	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*71.9*		*"*	*100*		*71.9*	*70-130*			
Surrogate: o-Terphenyl	*39.6*		*"*	*50.0*		*79.1*	*70-130*			
LCS Dup (EL22703-BSD1)				Prepared: 12/21/12 Analyzed: 12/22/12						
C6-C12	757	25.0	mg/kg wet	1000		75.7	75-125	0.628	20	
>C12-C28	768	25.0	"	1000		76.8	75-125	0.143	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*76.4*		*"*	*100*		*76.4*	*70-130*			
Surrogate: o-Terphenyl	*40.2*		*"*	*50.0*		*80.3*	*70-130*			
Matrix Spike (EL22703-MS1)	**Source: 2L21003-02**			Prepared & Analyzed: 12/21/12						
C6-C12	578	25.5	mg/kg dry	510	ND	113	75-125			
>C12-C28	537	25.5	"	510	ND	105	75-125			
>C28-C35	ND	25.5	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*64.3*		*"*	*51.0*		*126*	*70-130*			
Surrogate: o-Terphenyl	*33.5*		*"*	*25.5*		*131*	*70-130*			*S-GC*
Matrix Spike Dup (EL22703-MSD1)	**Source: 2L21003-02**			Prepared & Analyzed: 12/21/12						
C6-C12	587	25.5	mg/kg dry	510	ND	115	75-125	1.55	20	
>C12-C28	551	25.5	"	510	ND	108	75-125	2.68	20	
>C28-C35	ND	25.5	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*63.4*		*"*	*51.0*		*124*	*70-130*			
Surrogate: o-Terphenyl	*33.5*		*"*	*25.5*		*131*	*70-130*			*S-GC*

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
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.
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: 12/28/2012

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Phone: 432-661-4184

Project Manager: Camille Bryant
Company Name: Nova Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720
Fax No:
Sampler Signature: Rebecca Haskell
e-mail: cbryant@novatraining.cc
rose.slade@SUG.com

Project Name: SUG 12" Crossover
Project #:
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 2L21003

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	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides E 300	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
	SP-13			12/20/2012	15:00		1	x								S	X									X			X			x
	SP-14			12/20/2012	15:30		1	x								S	X									X			X			x
	SP-15			12/20/2012	15:40		1	x								S	X									X			X			x
	SP-16			12/20/2012	15:50		1	x								S	X									X			X			x

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Rebecca Haskell	12/21/12	8:07			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	Date	Time
				12/21/12	8:07

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

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 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Location: Lea County, New Mexico

Lab Order Number: 3A23003

NELAP/TCEQ # T104704156-12-1

Report Date: 01/24/13

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
South S/W 2A @ 16'	3A23003-01	Soil	01/21/13 11:00	01-23-2013 13:32
North S/W 2A @ 14'	3A23003-02	Soil	01/21/13 14:00	01-23-2013 13:32

South S/W 2A @ 16'

3A23003-01 (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	EA32407	01/24/13	01/24/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*75-125*		*EA32407*	*01/24/13*	*01/24/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*82.5 %*	*75-125*		*EA32407*	*01/24/13*	*01/24/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**144**	1.03	mg/kg dry	1	EA32406	01/24/13	01/24/13	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EA32402	01/23/13	01/24/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
Surrogate: 1-Chlorooctane		*95.0 %*	*70-130*		*EA32404*	*01/23/13*	*01/23/13*	*8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*EA32404*	*01/23/13*	*01/23/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/23/13	01/23/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG Historical 12 in. Crossover 1RP-1538
Project Number: 1RP-1538
Project Manager: Camille Bryant

Fax: (432) 520-7701

North S/W 2A @ 14'

3A23003-02 (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	EA32407	01/24/13	01/24/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EA32407	01/24/13	01/24/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*75-125*		*EA32407*	*01/24/13*	*01/24/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*70.8 %*	*75-125*		*EA32407*	*01/24/13*	*01/24/13*	*EPA 8021B*	*S-GC*
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**245**	1.03	mg/kg dry	1	EA32406	01/24/13	01/24/13	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	EA32402	01/23/13	01/24/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
>C12-C28	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
>C28-C35	ND	25.8	mg/kg dry	1	EA32404	01/23/13	01/23/13	8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*EA32404*	*01/23/13*	*01/23/13*	*8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*EA32404*	*01/23/13*	*01/23/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	01/23/13	01/23/13	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 EA32407 - General Preparation (GC)										
Blank (EA32407-BLK1)				Prepared & Analyzed: 01/24/13						
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	*68.6*		*ug/kg*	*60.0*		*114*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*43.0*		*"*	*60.0*		*71.7*	*75-125*			*S-GC*
LCS (EA32407-BS1)				Prepared & Analyzed: 01/24/13						
Benzene	0.0858	0.00100	mg/kg wet	0.100		85.8	80-120			
Toluene	0.111	0.00200	"	0.100		111	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.217	0.00200	"	0.200		108	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 1,4-Difluorobenzene	*57.9*		*ug/kg*	*60.0*		*96.5*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*51.2*		*"*	*60.0*		*85.4*	*75-125*			
LCS Dup (EA32407-BSD1)				Prepared & Analyzed: 01/24/13						
Benzene	0.0840	0.00100	mg/kg wet	0.100		84.0	80-120	2.07	20	
Toluene	0.111	0.00200	"	0.100		111	80-120	0.279	20	
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120	1.35	20	
Xylene (p/m)	0.213	0.00200	"	0.200		107	80-120	1.66	20	
Xylene (o)	0.101	0.00100	"	0.100		101	80-120	1.78	20	
Surrogate: 1,4-Difluorobenzene	*63.6*		*ug/kg*	*60.0*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*54.5*		*"*	*60.0*		*90.9*	*75-125*			
Matrix Spike (EA32407-MS1)		**Source: 3A23003-01**		Prepared & Analyzed: 01/24/13						
Benzene	0.0411	0.00100	mg/kg dry	0.103	ND	39.9	80-120			QM-05
Toluene	0.0553	0.00200	"	0.103	ND	53.6	80-120			QM-05
Ethylbenzene	0.0551	0.00100	"	0.103	ND	53.4	80-120			QM-05
Xylene (p/m)	0.113	0.00200	"	0.206	ND	54.9	80-120			QM-05
Xylene (o)	0.0562	0.00100	"	0.103	ND	54.5	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*68.0*		*ug/kg*	*60.0*		*113*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*57.0*		*"*	*60.0*		*95.0*	*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 EA32407 - General Preparation (GC)										
Matrix Spike Dup (EA32407-MSD1)		**Source: 3A23003-01**		Prepared & Analyzed: 01/24/13						
Benzene	0.0389	0.00100	mg/kg dry	0.103	ND	37.8	80-120	5.36	20	QM-05
Toluene	0.0515	0.00200	"	0.103	ND	50.0	80-120	7.07	20	QM-05
Ethylbenzene	0.0513	0.00100	"	0.103	ND	49.8	80-120	7.00	20	QM-05
Xylene (p/m)	0.105	0.00200	"	0.206	ND	50.9	80-120	7.60	20	QM-05
Xylene (o)	0.0528	0.00100	"	0.103	ND	51.3	80-120	6.09	20	QM-05
Surrogate: 1,4-Difluorobenzene	*68.4*		*ug/kg*	*60.0*		*114*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*54.6*		*"*	*60.0*		*91.0*	*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 EA32402 - * DEFAULT PREP *** **										
Blank (EA32402-BLK1)				Prepared: 01/23/13 Analyzed: 01/24/13						
% Moisture	ND	0.1	%							
Duplicate (EA32402-DUP1)		**Source: 3A23001-01**		Prepared: 01/23/13 Analyzed: 01/24/13						
% Moisture	5.2	0.1	%		4.9			5.94	20	
Batch EA32406 - * DEFAULT PREP *** **										
Blank (EA32406-BLK1)				Prepared & Analyzed: 01/24/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EA32406-BS1)				Prepared & Analyzed: 01/24/13						
Chloride	10.3		mg/kg Wet	10.0		103	80-120			
LCS Dup (EA32406-BSD1)				Prepared & Analyzed: 01/24/13						
Chloride	9.86		mg/kg Wet	10.0		98.6	80-120	4.09	20	
Duplicate (EA32406-DUP1)		**Source: 3A23003-01**		Prepared & Analyzed: 01/24/13						
Chloride	128	1.03	mg/kg dry		144			11.5	20	
Matrix Spike (EA32406-MS1)		**Source: 3A23003-01**		Prepared & Analyzed: 01/24/13						
Chloride	230	1.03	mg/kg dry	90.2	144	95.7	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 EA32404 - 8015M										
Blank (EA32404-BLK1)				Prepared & Analyzed: 01/23/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*80.4*		*"*	*100*		*80.4*	*70-130*			
Surrogate: o-Terphenyl	*43.6*		*"*	*50.0*		*87.1*	*70-130*			
LCS (EA32404-BS1)				Prepared & Analyzed: 01/23/13						
C6-C12	974	25.0	mg/kg wet	1000		97.4	75-125			
>C12-C28	973	25.0	"	1000		97.3	75-125			
>C28-C35	ND	25.0	"	0.00			75-125			
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*48.2*		*"*	*50.0*		*96.5*	*70-130*			
LCS Dup (EA32404-BSD1)				Prepared & Analyzed: 01/23/13						
C6-C12	989	25.0	mg/kg wet	1000		98.9	75-125	1.53	20	
>C12-C28	967	25.0	"	1000		96.7	75-125	0.574	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*46.6*		*"*	*50.0*		*93.2*	*70-130*			
Matrix Spike (EA32404-MS1)	**Source: 3A23003-01**			Prepared & Analyzed: 01/23/13						
C6-C12	1010	25.8	mg/kg dry	1030	ND	97.6	75-125			
>C12-C28	990	25.8	"	1030	ND	96.0	75-125			
>C28-C35	ND	25.8	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*105*		*"*	*103*		*102*	*70-130*			
Surrogate: o-Terphenyl	*51.5*		*"*	*51.5*		*100*	*70-130*			
Matrix Spike Dup (EA32404-MSD1)	**Source: 3A23003-01**			Prepared & Analyzed: 01/23/13						
C6-C12	1010	25.8	mg/kg dry	1030	ND	98.1	75-125	0.519	20	
>C12-C28	1010	25.8	"	1030	ND	98.0	75-125	2.04	20	
>C28-C35	ND	25.8	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*113*		*"*	*103*		*110*	*70-130*			
Surrogate: o-Terphenyl	*55.9*		*"*	*51.5*		*108*	*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: 1/24/2013

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 12 Inch Crossover 1RP-1538

Project #:

Project Loc: Lea County New Mexico

PO #:

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

(lab use only) ORDER #: 3A23003

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	TOTAL: BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Cl 300			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
-01	South S/W 2A @ 16'			1/21/2013	11:00		1	X								Soil	X							X			X				X
-02	North S/W 2A @ 14'			1/22/2013	14:00		1	X								Soil	X							X			X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	1/23/13	1332			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	1/23/13	1332

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 by Sampler/Client Rep. ?	N
by Courier? UPS DHL FedEx Lone Star	
Temperature Upon Receipt:	
Received: °C	
Adjusted: 4.2 °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 12 In Crossover
Project Number: [none]
Location: Lea, Co. New Mexico

Lab Order Number: 3B01001

NELAP/TCEQ # T104704156-12-1

Report Date: 02/04/13

Nova Safety & Environment	Project: SUG 12 In Crossover	Fax: (432) 520-7701
2057 Commerce	Project Number: [none]	
Midland TX, 79703	Project Manager: Camille Bryant	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West S/W-4 @14'	3B01001-01	Soil	01/31/13 00:00	02-01-2013 14:19

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

West S/W-4 @14'

3B01001-01 (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	EB30402	02/01/13	02/01/13	EPA 8021B	
Toluene	ND	0.00200	mg/kg dry	1	EB30402	02/01/13	02/01/13	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	EB30402	02/01/13	02/01/13	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	EB30402	02/01/13	02/01/13	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	EB30402	02/01/13	02/01/13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*119 %*	*75-125*		*EB30402*	*02/01/13*	*02/01/13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*79.0 %*	*75-125*		*EB30402*	*02/01/13*	*02/01/13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**979**	2.66	mg/kg dry	2.5	EB30401	02/04/13	02/04/13	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	EB30404	02/01/13	02/04/13	% calculation	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	EB30403	02/01/13	02/01/13	8015M	
>C12-C28	ND	26.6	mg/kg dry	1	EB30403	02/01/13	02/01/13	8015M	
>C28-C35	ND	26.6	mg/kg dry	1	EB30403	02/01/13	02/01/13	8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*EB30403*	*02/01/13*	*02/01/13*	*8015M*	
Surrogate: o-Terphenyl		*125 %*	*70-130*		*EB30403*	*02/01/13*	*02/01/13*	*8015M*	
Total Hydrocarbon nC6-nC35	ND	25.0	mg/kg dry	1	[CALC]	02/01/13	02/01/13	8015M	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EB30402 - General Preparation (GC)										
Blank (EB30402-BLK1)				Prepared & Analyzed: 02/01/13						
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	*70.5*		*ug/kg*	*60.0*		*117*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*45.6*		*"*	*60.0*		*76.0*	*75-125*			
LCS (EB30402-BS1)				Prepared & Analyzed: 02/01/13						
Benzene	0.0807	0.00100	mg/kg wet	0.100		80.7	80-120			
Toluene	0.114	0.00200	"	0.100		114	80-120			
Ethylbenzene	0.116	0.00100	"	0.100		116	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		120	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	*61.8*		*ug/kg*	*60.0*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*54.2*		*"*	*60.0*		*90.3*	*75-125*			
LCS Dup (EB30402-BSD1)				Prepared & Analyzed: 02/01/13						
Benzene	0.0807	0.00100	mg/kg wet	0.100		80.7	80-120	0.00124	20	
Toluene	0.0903	0.00200	"	0.100		90.3	80-120	23.3	20	R
Ethylbenzene	0.0910	0.00100	"	0.100		91.0	80-120	24.5	20	R
Xylene (p/m)	0.186	0.00200	"	0.200		93.0	80-120	25.0	20	R
Xylene (o)	0.0868	0.00100	"	0.100		86.8	80-120	22.0	20	R
Surrogate: 1,4-Difluorobenzene	*72.0*		*ug/kg*	*60.0*		*120*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*60.9*		*"*	*60.0*		*102*	*75-125*			
Matrix Spike (EB30402-MS1)		**Source: 3A31001-02**		Prepared & Analyzed: 02/01/13						
Benzene	0.0802	0.00100	mg/kg dry	0.104	ND	77.0	80-120			QM-05
Toluene	0.102	0.00200	"	0.104	ND	98.0	80-120			
Ethylbenzene	0.0932	0.00100	"	0.104	ND	89.4	80-120			
Xylene (p/m)	0.182	0.00200	"	0.208	ND	87.4	80-120			
Xylene (o)	0.0889	0.00100	"	0.104	ND	85.3	80-120			
Surrogate: 1,4-Difluorobenzene	*69.4*		*ug/kg*	*60.0*		*116*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*49.0*		*"*	*60.0*		*81.7*	*75-125*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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 EB30401 - * DEFAULT PREP *** **										
Blank (EB30401-BLK1)				Prepared & Analyzed: 02/04/13						
Chloride	ND	1.00	mg/kg wet							
LCS (EB30401-BS1)				Prepared & Analyzed: 02/04/13						
Chloride	10.2		mg/kg Wet	10.0		102	80-120			
LCS Dup (EB30401-BSD1)				Prepared & Analyzed: 02/04/13						
Chloride	10.2		mg/kg Wet	10.0		102	80-120	0.167	20	
Duplicate (EB30401-DUP1)		**Source: 3A31001-01**		Prepared & Analyzed: 02/04/13						
Chloride	4.13	1.01	mg/kg dry		4.38			5.93	20	
Batch EB30404 - * DEFAULT PREP *** **										
Blank (EB30404-BLK1)				Prepared: 02/01/13 Analyzed: 02/04/13						
% Moisture	ND	0.1	%							
Duplicate (EB30404-DUP1)		**Source: 3B01001-01**		Prepared: 02/01/13 Analyzed: 02/04/13						
% Moisture	6.0	0.1	%		6.0			0.00	20	

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

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

Permian Basin Environmental Lab

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB30403 - 8015M										
Blank (EB30403-BLK1)				Prepared & Analyzed: 02/01/13						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*143*		*"*	*200*		*71.4*	*70-130*			
Surrogate: o-Terphenyl	*80.9*		*"*	*100*		*80.9*	*70-130*			
LCS (EB30403-BS1)				Prepared & Analyzed: 02/01/13						
C6-C12	1040	25.0	mg/kg wet	1000		104	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	*61.2*		*"*	*50.0*		*122*	*70-130*			
LCS Dup (EB30403-BSD1)				Prepared & Analyzed: 02/01/13						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125	1.04	20	
>C12-C28	1080	25.0	"	1000		108	75-125	1.41	20	
>C28-C35	ND	25.0	"	0.00			75-125		20	
Surrogate: 1-Chlorooctane	*128*		*"*	*100*		*128*	*70-130*			
Surrogate: o-Terphenyl	*63.6*		*"*	*50.0*		*127*	*70-130*			
Matrix Spike (EB30403-MS1)	**Source: 3A31001-02**			Prepared & Analyzed: 02/01/13						
C6-C12	843	26.0	mg/kg dry	1040	ND	80.9	75-125			
>C12-C28	868	26.0	"	1040	ND	83.3	75-125			
>C28-C35	ND	26.0	"	0.00	ND		75-125			
Surrogate: 1-Chlorooctane	*105*		*"*	*104*		*101*	*70-130*			
Surrogate: o-Terphenyl	*50.0*		*"*	*52.1*		*96.0*	*70-130*			
Matrix Spike Dup (EB30403-MSD1)	**Source: 3A31001-02**			Prepared & Analyzed: 02/01/13						
C6-C12	895	26.0	mg/kg dry	1040	ND	85.9	75-125	5.97	20	
>C12-C28	945	26.0	"	1040	ND	90.7	75-125	8.52	20	
>C28-C35	ND	26.0	"	0.00	ND		75-125		20	
Surrogate: 1-Chlorooctane	*113*		*"*	*104*		*109*	*70-130*			
Surrogate: o-Terphenyl	*56.3*		*"*	*52.1*		*108*	*70-130*			

Nova Safety & Environment
2057 Commerce
Midland TX, 79703

Project: SUG 12 In Crossover
Project Number: [none]
Project Manager: Camille Bryant

Fax: (432) 520-7701

Notes and Definitions

R	The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits.
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: 2/4/2013

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 Environmental
Company Address: 2057 Commerce Dr.
City/State/Zip: Midland/TX/79703
Telephone No: (432)5207720
Fax No:
Sampler Signature: Camille Bryant
e-mail: cbryant@novatraining.cc
rose.slade@SUG,com

Project Name: SUG 12" Crossover
Project #:
Project Loc: Lea, Co., New Mexico
PO #:
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 3B01001

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TPH: 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
-01	West S/W-4 @ 14'			1/31/2013	0:00		1	x								S	X									X			X				x	

Special Instructions:

Laboratory Comments:

	Y	N
Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	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: 5.5 °C
Adjusted: °C Factor NCF

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	1/31/13	1630	Rebecca Haskell	1/31/13	1630
Rebecca Haskell	2/1/13	1419	Received by:	Date	Time
Relinquished by:	Date	Time	Received by PBEL:	2/1/13	1419