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Effective Solutions

REMEDIATION SUMMARY &

SITE CLOSURE REQUEST

REGENCY FIELD SERVICES TRUNK "O" #5 HISTORICAL RELEASE SITE Lea County, New Mexico Unit Letter "K" (NE/SW), Section 34, Township 22 South, Range 36 East Latitude 32° 20.714' North, Longitude 103° 15.256' West NMOCD Reference # 1RP-1523

Prepared For:

Regency Field Services, LLC 801 S. Loop 464 Monahans, TX 79756

Prepared By: Basin Environmental Service Technologies, LLC 3100 Plains Highway Lovington, New Mexico 88260

October 2013

owrv Project Manager

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1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Regency Field Services (Regency), has prepared this *Remediation Summary & Site Closure Request* for the Trunk "O" #5 Historical Release Site (1RP-1523). The legal description of the release site is Unit Letter "K" (NE/SW), Section 34, Township 22 South, Range 36 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 20.714 North latitude and 103° 15.256' West longitude. The property affected by the release is owned by Beverly Jean Bull. Please reference Figure 1 for a "Site Location Map".

On July 23, 2007, Regency discovered a release had occurred on the Trunk "O" Pipeline. The "Release Notification and Corrective Action Form" (Form C-141) indicated failure of a section of thirty-inch (30") low-pressure pipeline resulted in the release of approximately five hundred and fifty barrels (550 bbls) of crude oil and nine hundred and forty-five (945) Mcf of natural gas, with five hundred barrels (500 bbls) being recovered. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on July 23, 2007, at 4:35 p.m. The release was attributed to excess fluid being delivered by a produce, r causing the line to "pressure up" and "leak fluid and natural gas". The Form C-141 indicated the release affected approximately six thousand, two hundred square feet (6,200 ft²) of pasture land and seven thousand, two hundred square feet (7,200 ft²) of caliche lease road. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix C.

Previous remediation activities were conducted on the Trunk "O" #5 release site by an environmental contractor that is no longer affiliated with the site. The nature and extent of the aforementioned activities remains unclear, as work records are not readily available. On June 22, 2012, at the request of Regency, Basin assumed remediation responsibilities at the Trunk "O" #5 Historical Release Site.

2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 34, Township 22 South, Range 36 East. An inferred depth to groundwater gradient map utilized by the NMOCD indicated groundwater should be encountered at approximately three hundred feet (300') below ground surface (bgs). Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within one thousand feet (1,000') of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

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

NMOCD guidelines indicate the Trunk "O" #5 Historical Release Site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene -10 mg/Kg (ppm)
- Benzene, toluene, ethylbenzene and xylene (BTEX) 50 mg/Kg (ppm)
- Total petroleum hydrocarbons (TPH) 5,000 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES

On November 7, 2012, Basin conducted an initial investigation at the Trunk "O" #5 Historical Release Site. During the initial investigation, four (4) test trenches (TT-1 through TT-4) were advanced within the inferred margins of the release site. During the advancement of the test trenches, soil samples were collected at approximate two-foot (2') intervals and field screened for concentrations of TPH and chloride. Field test results from soil samples collected from test trenches TT-1 though TT-3 suggested concentrations of TPH and chloride were not present above NMOCD Regulatory Standards. Test trench TT-4 was advanced within the middle of a widely used oil field access road. During the advancement of TT-4, soil exhibiting concentrations of chloride above NMOCD regulatory standards was encountered. Two (2) soil samples (TT-4 @ Surface and TT-4 @ 10') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the submitted soil samples. Analytical results indicated TPH concentrations ranged from 338 ppm for soil sample TT-4 @ Surface to 21.0 ppm for soil sample TT-4 @ 10'. Chloride concentrations ranged from 3,380 ppm for soil sample TT-4 @ Surface to 1,690 ppm for soil sample TT-4 @ 10'. Based on laboratory analytical results, it was determined that further delineation was required in the area characterized by TT-4.

On April 30, 2013, one (1) soil bore (SB-1) was advanced in the area of TT-4. During the advancement of the soil bore, five (5) soil samples (SB-1 @ 5', SB-1 @ 10', SB-1 @ 15', SB-1 @ 20' and SB-1 @ 25') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. Analytical results indicated TPH concentrations ranged from 393 ppm for soil sample SB-1 @ 5' to less than the laboratory MDL for soil sample SB-1 @ 25'. Chloride concentrations ranged from 722 ppm for soil sample SB-1 @ 5' to 59.5 ppm for soil sample SB-1 @ 20'. Based on laboratory analytical results, it was determined that soil impact did not exist above regulatory standards beyond fifteen feet (15') bgs in the area characterized by SB-1.

On August 20, 2013, excavation activities began at the historical release site. The excavation floor and sidewalls were advanced until field tests suggested concentrations of TPH and chloride were below NMOCD standards. The east wall was advanced to the maximum extent practicable given the presence of a widely used oil field access road.

On August 21, 2013, a test trench was advanced in the floor of the excavation within the most heavily impacted area. During the advancement of the test trench, four (4) soil samples (8-21 TT @ 6', 8-21 TT @ 6', 8-21 TT @ 13.5' and 8-21 TT North) were collected and

submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations ranged from 49.2 ppm for soil sample 8-21 TT (*a*) 8' to less than the laboratory MDL for soil sample 8-21 TT (*a*) 13.5'. Analytical results indicated TPH concentrations ranged from 11,890 ppm for soil sample 8-21 TT (*a*) 8' to 917 ppm for soil sample 8-21 TT (*a*) 13.5'. Chloride concentrations ranged from 1,020 ppm for soil sample 8-21 TT (*a*) 13.5' to 432 ppm for soil sample 8-21 TT North.

On September 3, 2013, eight (8) confirmation soil samples (North Floor, South Floor, North Wall, South Wall, East Wall #1, East Wall #2, West Wall #1 and West Wall #2) were collected from the excavation floor and sidewalls and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the appropriate laboratory MDL in each of the submitted soil samples. Analytical results indicated TPH concentrations ranged from 4,613 ppm for soil sample North Floor to less than the laboratory MDL for soil samples North Wall and South Wall. Chloride concentrations ranged from 608 ppm for soil sample East Wall #2 to 160 ppm for soil sample West Wall #1. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were less than NMOCD regulatory standards in each of the submitted soil samples. Based on laboratory analytical results, it was determined further delineation would be required in the areas represented by soil samples North Floor, North Wall, East Wall #2 and West Wall #2.

In addition, one (1) five-point composite soil sample (9/3 Stockpile) was collected from the stockpiled material and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated soil sample 9/3 Stockpile had a BTEX concentration of 6.13 ppm, a TPH concentration of 2,218 ppm and a chloride concentration of 256 ppm. Based on these laboratory analytical results, it was determined that the stockpiled material was deemed suitable for use as backfill.

On September 4, 2013, four (4) delineation soil samples (North Floor A @ 7', East Wall #2a, West Wall #2a and North Wall A) were collected from the excavation floor and sidewalls and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 192 ppm for soil sample North Floor A @ 7' to 80 ppm for soil sample East Wall #2a.

On September 5, 2013, the floor of the excavation was advanced to approximately fifteen feet (15') bgs in the area characterized by test trench 8-21 TT. Upon advancing the floor of the excavation, four (4) soil samples (North Wall @ 13', South Wall @ 13', East Wall @ 13' and West Wall @ 13') were collected from the excavation sidewalls and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX concentrations were less than the laboratory MDL in each of the submitted soil samples. Analytical results indicated TPH concentrations were less than the laboratory MDL in each of the submitted soil sampled, with the exceptions of North Wall @ 13' and East Wall @ 13', which had concentrations of 15.7 ppm and 24.7 ppm, respectively. Chloride concentrations ranged from 1,100 ppm for soil sample East Wall @ 13' to 304 ppm for soil sample North Wall @ 13'. Further excavation to the east was limited due to the presence of a widely used oilfield access road.

In addition, one (1) test trench (9/6 TT) was advanced within the floor of the excavation. During the advancement of the test trench, two (2) soil samples (9/6 TT @ 18' and 9/6 TT @ 20') were

collected for and submitted to the laboratory for analysis. Laboratory analytical results indicated BTEX and TPH concentrations were less than the appropriate laboratory MDL. Chloride concentrations ranged from 144 ppm for soil sample 9/6 TT @ 18' to 112 ppm for soil sample 9/6 TT @ 20'. Based on laboratory analytical results, vertical delineation had been achieved.

On September 18, 2013, at the request of the NMOCD, the east sidewall was advanced approximately two (2) additional feet. Excavated material was blended with the on-site stockpile. Upon advancing the east sidewall, two (2) soil sample (East SW #2a and 9/18 Stockpile) were collected and submitted to the laboratory for analysis. Laboratory analytical results indicated soil sample East SW #2a exhibited a BTEX concentration of less than the laboratory MDL, a TPH concentration of less than the laboratory MDL and a chloride concentration of 336 ppm. Soil sample 9/18 Stockpile exhibited a BTEX concentration of less than the laboratory MDL, a TPH concentration of 432 ppm and a chloride concentration of 128 ppm. The remaining portion of the excavation was backfilled immediately to minimize the risk to public safety.

Prior to backfilling, the final dimensions of the excavation were approximately ninety feet (90') in length, twelve feet (12') in width and seven (7) to fifteen feet (15') in depth. Excavation backfill was water-packed, compacted in lifts, and contoured to match the surrounding topography. The site will be reseeded in accordance with the landowner's requests.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to Xenco Laboratories, of Odessa, Texas, and/or Cardinal Laboratories of Hobbs, New Mexico, for BTEX, TPH, and/or chloride analyses using the methods described below:

- BTEX concentrations in accordance with EPA Method SW-846 8021b
- TPH concentrations in accordance with modified EPA Method SW-846 8015M
- Chloride concentrations in accordance with EPA Method 300/300.1 and/or 4500 Cl-b

4.2 Decontamination of Equipment

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

4.3 Laboratory Protocol

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

5.0 SITE CLOSURE REQUEST

Confirmation soil samples collected from floor the and sidewalls of the Trunk "O" #5 excavation were analyzed by an NMOCD-approved laboratory. Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels in each of the submitted soil samples. Visibly impacted material on the east sidewall was removed to the maximum extent practicable given the presence of a widely used oilfield access road. Based on these laboratory analytical results, Basin recommends Regency provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Site Closure Request* and request the NMOCD grant site closure to the Trunk "O" #5 Historical Release Site.

6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

7.0 **DISTRIBUTION**

- Copy 1: Geoffrey Leking New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division (District 1) 1625 French Drive Hobbs, NM 88240 GeoffreyR.Leking@state.nm.us
- Copy 2: Rachel Johnson Regency Field Services 801 S. Loop 464 Monahans, Texas 79756 Rachel.johnson@regencygas.com
- Copy 3: Basin Environmental Service Technologies, LLC P.O. Box 301 Lovington, New Mexico 88260





TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES TRUNK "O" #5 HISTORICAL RELEASE SITE LEA COUNTY, NEW MEXICO NMOCD REF# 1RP-1523

					METHOD: EI	PA SW 846-80	21B, 5030		ME	THOD: 801	5M	TOTAL	EPA: 300
SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TPH C ₆ -C ₂₈ (mg/Kg)	CHLORIDE (mg/Kg)
TT-4 @ Surface	Surface	10/11/2012	In-Situ	<0.00109	<0.00217	<0.00109	<0.00217	<0.00217	<16.2	315.0	22.7	338.0	3,380
TT-4 @ 10'	10'	10/11/2012	In-Situ	<0.00110	< 0.00220	<0.00110	< 0.00220	< 0.00220	<16.6	21.0	<16.6	21.0	1,690
SB-1 @ 5'	5'	4/30/2013	In-Situ	<0.00105	<0.00210	<0.00105	<0.00210	< 0.00210	<15.8	348	44.7	393	722
SB-1 @ 10'	10'	4/30/2013	In-Situ	<0.00104	< 0.00209	<0.00104	< 0.00209	< 0.00209	<15.7	120	<15.7	120	351
SB-1 @ 15'	15'	4/30/2013	In-Situ	<0.00108	<0.00216	<0.00108	<0.00216	< 0.00216	<16.2	147	<16.2	147	101
SB-1 @ 20'	20'	4/30/2013	In-Situ	<0.00105	<0.00211	<0.00105	<0.00211	<0.00211	<15.8	18.3	<15.3	18.3	59.5
SB-1 @ 25'	25'	4/30/2013	In-Situ	<0.00104	<0.00208	<0.00104	<0.00208	<0.00208	<15.7	<15.7	<15.7	<15.7	64.9
0.04 TT @ 0	01	8/21/2013	E	4.05	5.13	45.4	00.0	45.4	856	0.000	4.000	9.096	600
<u>8-21 TT @ 6'</u> 8-21 TT @ 8'	6' 8'	8/21/2013	Excavated Excavated	1.25 0.976	6.71	15.4 13.5	23.6 28.0	45.4	1040	6,960 9,140	1,280 1710	9,096	608
8-21 TT @ 13.5'	8 13.5'	8/21/2013	In-Situ	<0.050	< 0.050	0.084	0.198	<.300	<1040	9,140 739	1710	917.0	1,020
	6'		In-Situ In-Situ				1.05				1.520		
8-21 TT North	0	8/21/2013	in-Situ	<0.050	0.111	0.561	1.05	1.72	57.3	5,720	1,520	7,297	432
North Floor	6.5'	9/3/2013	In-Situ	<0.200	<0.200	<0.200	<0.600	<1.20	<50.0	3,970	643	4,613	384
South Floor	6.5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	33.9	17.1	51.0	240
North Wall	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	416
South Wall	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	192
East Wall #1	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	244	52.5	297	240
East Wall #2	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	616	212	828	608
West Wall #1	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	13.5	25.6	39.1	160
West Wall #2	5'	9/3/2013	In-Situ	< 0.050	< 0.050	< 0.050	<0.150	< 0.300	<10.0	36.2	15.8	52.0	848
9/3 Stockpile	N/A	9/3/2013	In-Situ	<0.200	0.526	0.877	4.73	6.13	123	1,740	355	2,218	256
North Floor A @ 7'	7'	9/4/2013	In-Situ										192
East Wall #2A	5'	9/4/2013	In-Situ In-Situ	-	-	-	-	-	-	-	-	-	80
West Wall #2A	5'	9/4/2013	In-Situ In-Situ	-	-	-	-	-	-	-	-	-	96
North Wall A	5'	9/4/2013	In-Situ In-Situ	-	-	-	-	-	-	-	-	-	112
	0	3/4/2013	III-Situ	-			-	-	-	-		-	112
North Wall @ 13'	13'	9/6/2013	In-Situ	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	15.7	15.7	304
South Wall @ 13'	13'	9/6/2013	In-Situ	<0.050	< 0.050	<0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	464
East Wall @ 13'	13'	9/6/2013	In-Situ	<0.050	< 0.050	<0.050	<0.150	< 0.300	<10.0	24.7	<10.0	24.7	1,100
West Wall @ 13'	13'	9/6/2013	In-Situ	<0.050	< 0.050	<0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	832
9/6 TT @ 18'	18'	9/6/2013	In-Situ	<0.050	< 0.050	<0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	144
9/6 TT @ 20'	20'	9/6/2013	In-Situ	<0.050	< 0.050	<0.050	<0.150	< 0.300	<10.0	<10.0	<10.0	<10.0	112
Feet CW/#2e	01	0/40/2042	In City	<0.050	< 0.050	-0.050	-0.450	< 0.300	.10.0	<10.0	<10.0	.10.0	336
East SW #2a	8'	9/18/2013	In-Situ N/A			< 0.050	<0.150		<10.0	<10.0	<10.0	<10.0 432	336
9/18 Stockpile	N/A	9/18/2013	N/A	<0.050	< 0.050	<0.050	<0.150	<0.300	<10.0	329	103	432	128
NMOCD Standard				10				50				5,000	1,000



Photograph of surface staining at the Trunk "O" #5 Historical Release Site.



Photograph of the advancement of delineation trenches at the Trunk "O" #5 Historical Release Site.



Photograph of the advancement of soil bores at the Trunk "O" #5 Historical Release Site.



Photograph of hydrocarbon staining and excavation activities and hydrocarbon staining at the Trunk "O" #5 Historical Release Site.



Photograph of the advancement of test trenches at the Trunk "O" #5 Historical Release Site.



Photograph of the impacted east sidewall at the Trunk "O" #5 Historical Release Site.



Photograph of excavation activities at the Trunk "O" #5 Historical Release Site.



Photograph of excavation activities at the Trunk "O" #5 Historical Release Site.



Photograph of excavation activities at the Trunk "O" #5 Historical Release Site.



Photograph of backfilling activities and the compromised 6" pipeline at the Trunk "O" #5 Historical Release Site.



Photograph of the removal of additional soil from the compromised east sidewall at the Trunk "O" #5 Historical Release Site after to pipeline had been removed.



Photograph of the finished remediation site at the Trunk "O" #5 Historical Release Site.

Analytical Report 450843

for Southern Union Gas Services- Monahans

Project Manager: Joel Lowry

Trunk "O" #5 (1RP-1523)

SUG Historical Releases

22-OCT-12

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



22-OCT-12

TNI PACCREDUE

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

Reference: XENCO Report No: **450843 Trunk ''O'' #5 (1RP-1523)** Project Address: Lea County, New Mexico

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 450843. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 450843 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully

Nicholas Straccione Project Manager

> Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 450843



Southern Union Gas Services- Monahans, Monahans, TX

Trunk "O" #5 (1RP-1523)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-4 @ Surface	S	10-11-12 09:30		450843-001
TT-4 @ 10'	S	10-11-12 10:00		450843-002





Client Name: Southern Union Gas Services- Monahans Project Name: Trunk ''O'' #5 (1RP-1523)



Project ID:SUG Historical ReleasesWork Order Number:450843

Report Date: 22-OCT-12 Date Received: 10/16/2012

Sample receipt non conformances and comments: None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-899095 BTEX by EPA 8021B SW8021BM

Batch 899095, Benzene, Toluene recovered below QC limits in the Matrix Spike. Ethylbenzene, *m_p-Xylenes*, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 450843-001, -002.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits



Certificate of Analysis Summary 450843

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #5 (1RP-1523)

Project Id:SUG Historical ReleasesContact:Joel LowryProject Location:Lea County, New Mexico



Date Received in Lab: Tue Oct-16-12 02:50 pm

Report Date: 22-OCT-12

Project Manager: Nicholas Straccione

343-001	450843-002	2				
@ Surface	TT-4 @ 10)'				
OIL	SOIL					
-12 09:30	Oct-11-12 10	:00				
2-12.09:00	Oct-18-12.09					
0						
ND 0.00109	-					
ND 0.00109						
ND 0.00109	ND 0	0.00110				
-12 23:45	Oct-18-12.00	:17				
	000 10 12 00					
-12 23:45	Oct-18-12 00					
7-12 23:45 g RL						
	Oct-18-12 00	:17				
g RL	Oct-18-12 00 mg/kg	r:17 RL				
g RL	Oct-18-12 00 mg/kg	P:17 RL 10.1				
g RL 80 10.5	Oct-18-12 00 mg/kg 1690	P:17 RL 10.1				
g RL 80 10.5 3-12 10:35	Oct-18-12 00 mg/kg 1690 Oct-18-12 10	:17 RL 10.1 :40				
g RL 80 10.5 3-12 10:35 RL	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 %	RL 10.1 ::40 RL 1.00				
g RL 80 10.5 3-12 10:35 RL 49 1.00	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 % 9.44	RL 10.1 2:40 RL 1.00 2:55				
g RL 80 10.5 3-12 10:35 RL 49 1.00 0-12 08:55	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 % 9.44 Oct-19-12 08	RL 10.1 2:40 RL 1.00 2:55				
g RL 80 10.5 3-12 10:35 RL 49 1.00 0-12 08:55 0-12 22:08	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 % 9.44 Oct-19-12 08 Oct-19-12 22	RL 10.1 ::40 RL 1.00 ::55 ::42				
g RL 80 10.5 3-12 10:35 RL 49 1.00 0-12 08:55 0-12 22:08 g RL	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 % 9.44 Oct-19-12 08 Oct-19-12 22 mg/kg	RL 10.1 ::40 RL 1.00 ::55 ::42 RL				
g RL 80 10.5 3-12 10:35 RL 49 1.00 0-12 08:55 0-12 22:08 g RL ND 16.2	Oct-18-12 00 mg/kg 1690 Oct-18-12 10 % 9.44 Oct-19-12 08 Oct-19-12 22 mg/kg ND	RL 10.1 ::40 RL 1.00 ::55 ::42 RL 16.6				
	OIL -12 09:30 -12 09:00 -12 10:38 g RL ND 0.00109 ND 0.00217 ND 0.00109 ND 0.00109 ND 0.00109 ND 0.00109 ND 0.00109 ND 0.00109	OIL SOIL -12 09:30 Oct-11-12 10 -12 09:00 Oct-18-12 09 -12 10:38 Oct-18-12 10 g RL mg/kg ND 0.00109 ND 0 ND 0.00109 ND 0	OIL SOIL -12 09:30 Oct-11-12 10:00 -12 09:00 Oct-18-12 09:00 -12 10:38 Oct-18-12 10:54 g RL mg/kg ND 0.00109 ND ND 0.00217 ND ND 0.00109 ND ND 0.001010 ND 0.00220 ND 0.00110 ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00110	OIL SOIL -12 09:30 Oct-11-12 10:00 6-12 09:00 Oct-18-12 09:00 -12 10:38 Oct-18-12 10:54 g RL mg/kg RL ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00120 ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00110	OIL SOIL -12 09:30 Oct-11-12 10:00 0-12 09:00 Oct-18-12 09:00 0-12 10:38 Oct-18-12 10:54 g RL mg/kg ND 0.00109 ND ND 0.00109 ND ND 0.00100 Implementation ND 0.00109 ND 0.00100 ND 0.00100 Implementation ND 0.00100 Implementation ND 0.00109 ND 0.00100 ND 0.00100 Implementation ND 0.00100 Implementation ND 0.00109 ND 0.00110 ND 0.00100 Implementation ND 0.00100 Implementation ND 0.00100 Implementation ND 0.00100 Implementation ND 0.00110 Implementation ND 0.00110 Implementation ND 0.00110 Implementation ND 0.00110 Implementation ND 0.00110<	OIL SOIL -12 09:30 Oct-11-12 10:00 -12 09:00 Oct-18-12 09:00 -12 10:38 Oct-18-12 10:54 g RL mg/kg RL ND 0.00109 ND 0.00110 ND 0.00127 ND 0.00220 ND 0.00109 ND 0.00110 ND 0.00109 ND 0.00110

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Nicholas Straccione Project Manager



Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit **SDL** Sample Detection Limit LOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit
- **DL** Method Detection Limit
- NC Non-Calculable
- NELAC certification not offered for this compound.
- (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Final 1.000



Form 2 - Surrogate Recoveries

Project Name: Trunk "O" #5 (1RP-1523)

ork Orders : 450843 Lab Batch #: ⁸⁹⁹⁰⁹⁵	, Sample: 450843-001 / SMP	Batch	0	D: SUG Histo :Soil	nicai ixelea	505
Units: mg/kg	Date Analyzed: 10/18/12 10:38	SU	RROGATE R	ECOVERY S	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
	Analytes			[D]		
1,4-Difluorobenzene		0.0277	0.0300	92	80-120	
4-Bromofluorobenzene		0.0255	0.0300	85	80-120	
Lab Batch #: 899095	Sample: 450843-002 / SMP	Batch	n: ¹ Matrix	:Soil		
Units: mg/kg	Date Analyzed: 10/18/12 10:54	SU	RROGATE R	ECOVERY S	STUDY	
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene	Anaryus	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene		0.0241	0.0300	80	80-120	
Lab Batch #: 899205	Sample: 450843-001 / SMP	Batch	n: 1 Matrix	:Soil	1	
Units: mg/kg	Date Analyzed: 10/19/12 22:08		RROGATE R	ECOVERY S	STUDY	
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1 Chlorocotono	Analytes	06.5	00.0		70.125	
1-Chlorooctane o-Terphenyl		96.5 49.2	99.9 50.0	97	70-135 70-135	
	a 150040.000 / CMD				70-135	
Lab Batch #: 899205	Sample: 450843-002 / SMP	Batch	h: 1 Matrix		STUDY	
Units: mg/kg	Date Analyzed: 10/19/12 22:42 By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	Analytes	02.9	100		70.125	
o-Terphenyl		93.8 45.6	100 50.0	94	70-135 70-135	
Lab Batch #: 899095	Sample: 628781-1-BLK / BL				,0155	
Lab Batch #: 899093 Units: mg/kg	Date Analyzed: 10/18/12 10:23		n: 1 Matrix		STUDY	
	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobenzene		0.0260	0.0300	87	80-120	
4-Bromofluorobenzene		0.0281	0.0300	94	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk "O" #5 (1RP-1523)

Lab Batch #: 899205	Sample: 628850-1-BLK / B		-			
Units: mg/kg	Date Analyzed: 10/19/12 12:26	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
	Analytes			[D]		
1-Chlorooctane		106	100	106	70-135	
o-Terphenyl		50.4	50.0	101	70-135	
Lab Batch #: 899095	Sample: 628781-1-BKS / BI					
Units: mg/kg	Date Analyzed: 10/18/12 09:53	SU	RROGATE R	ECOVERY	STUDY	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
14 Difluorohonzono	Analytes	0.0225	0.0200		00.120	
1,4-Difluorobenzene 4-Bromofluorobenzene		0.0335	0.0300	112	80-120 80-120	
				-	00-120	
Lab Batch #: 899205	Sample: 628850-1-BKS / B					
Units: mg/kg	Date Analyzed: 10/19/12 11:30	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooctane		102	100	102	70-135	
o-Terphenyl		54.0	50.0	102	70-135	
Lab Batch #: 899095	Semilar 628781 1 BSD / D					
	Sample: 628781-1-BSD / BS		RROGATE R		STUDV	
Units: mg/kg	Date Analyzed: 10/18/12 10:08	50	KROGATE K		1	
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
14 D'flere web	Analytes	0.0220	0.0200			
1,4-Difluorobenzene		0.0320	0.0300	107	80-120	
4-Bromofluorobenzene		0.0316	0.0300	105	80-120	
Lab Batch #: 899205	Sample: 628850-1-BSD / BS					
Units: mg/kg	Date Analyzed: 10/19/12 11:58	SU	RROGATE R	ECOVERY	STUDY	
ТРН	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
	Analytes			[D]		
1-Chlorooctane		103	100	103	70-135	
o-Terphenyl		54.3	50.1	108	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Trunk "O" #5 (1RP-1523)

7 ork Orders : 450843 Lab Batch #: 899095	, Sample: 450843-001 S / MS	S Batc	0	D: SUG Histo	orical Relea	ses
Units: mg/kg	Date Analyzed: 10/18/12 16:08		RROGATE R		STUDY	
	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0266	0.0300	89	80-120	
4-Bromofluorobenzene		0.0262	0.0300	87	80-120	
Lab Batch #: 899205	Sample: 450996-001 S / MS	S Batc	h: ¹ Matrix	:Soil	·	
Units: mg/kg	Date Analyzed: 10/19/12 23:48	SU	RROGATE R	ECOVERY S	STUDY	
TPH]	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		103	100	103	70-135	
o-Terphenyl		57.0	50.1	114	70-135	
Lab Batch #: 899095	Sample: 450843-001 SD / N	ASD Bate	h: ¹ Matrix	:Soil	· ·	
Units: mg/kg	Date Analyzed: 10/18/12 16:51	SU	RROGATE R	ECOVERY S	STUDY	
BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene		0.0285	0.0300	95	80-120	
4-Bromofluorobenzene		0.0282	0.0300	94	80-120	
Lab Batch #: 899205	Sample: 450996-001 SD / N	ASD Batc	h: 1 Matrix	:Soil		
Units: mg/kg	Date Analyzed: 10/20/12 00:17	SU	RROGATE R	ECOVERY S	STUDY	
TPH]	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		115	100	115	70-135	
o-Terphenyl		60.6	50.1	121	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.





Project Name: Trunk "O" #5 (1RP-1523)

Work Order #: 450843							Proj	ect ID: S	UG Histor	ical Releas	ses
Analyst: KEB	Da	ate Prepar	ed: 10/18/201	2			Date Ar	nalyzed: 1	0/18/2012		
Lab Batch ID: 899095 Sample: 628781-1-B	SKS	Batch	n#: 1					Matrix: S	olid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	JCATE I	RECOVE	RY STUD	Y	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000992	0.0992	0.0884	89	0.0998	0.0884	89	0	70-130	35	
Toluene	<0.00198	0.0992	0.0895	90	0.0998	0.0898	90	0	70-130	35	
Ethylbenzene	<0.000992	0.0992	0.0884	89	0.0998	0.0879	88	1	71-129	35	
m_p-Xylenes	<0.00198	0.198	0.187	94	0.200	0.186	93	1	70-135	35	
o-Xylene	<0.000992	0.0992	0.0921	93	0.0998	0.0910	91	1	71-133	35	
Analyst: TTE	Da	ate Prepar	ed: 10/17/201	2			Date Ar	nalyzed: 1	0/17/2012		
Lab Batch ID: 899012 Sample: 628733-1-B	SKS	Batch	n#: 1					Matrix: S	olid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	JCATE I	RECOVE	RY STUD	Y	
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.977	97.7	96.7	99	97.1	97.7	101	1	80-120	20	

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes





Project Name: Trunk "O" #5 (1RP-1523)

Work Order #: 450843 Analyst: KEB	1	Date Prepared: 10/19/2012					Project ID: SUG Historical Releases Date Analyzed: 10/19/2012						
Lab Batch ID: 899205 Sa	ample: 628850-1-BKS	Bate	h #: 1			Matrix: Solid							
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
TPH By SW8015 M	lod Blank Sample Resul [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag		
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]						
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	1000	100	1000	1010	101	1	70-135	35			
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1010	101	1000	1010	101	0	70-135	35			

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries



Project Name: Trunk "O" #5 (1RP-1523)

Work Order #: 450843 Lab Batch #: 899012 Date Analyzed: 10/18/2012	Date Prepared: 10/18/2012		oject ID: Analyst: T	SUG Histo	rical Releases		
QC- Sample ID: 450843-001 S	Batch #: 1						
Reporting Units: mg/kg Inorganic Anions by EPA 300	Parent Sample Spik	Spiked Sample	1	Control Limits	Flag		
Analytes	Result Adde [A] [B]		[D]	%R			
Chloride	3380 105	0 4480	105	80-120			

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference $[E] = 200^{*}(C-A)/(C+B)$ All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Trunk "O" #5 (1RP-1523)



Work Order #: 450843						Project II	D: SUG H	listorical H	Releases		
Lab Batch ID: 899095	QC- Sample ID:	450843	-001 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed: 10/18/2012	Date Prepared:	10/18/2	012	An	alyst:	KEB					
Reporting Units: mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	< 0.00109	0.109	0.0748	69	0.108	0.0903	84	19	70-130	35	X
Toluene	< 0.00217	0.109	0.0651	60	0.108	0.0835	77	25	70-130	35	X
Ethylbenzene	<0.00109	0.109	0.0488	45	0.108	0.0593	55	19	71-129	35	Х
m_p-Xylenes	<0.00217	0.217	0.0920	42	0.217	0.116	53	23	70-135	35	X
o-Xylene	<0.00109	0.109	0.0501	46	0.108	0.0608	56	19	71-133	35	X
Lab Batch ID: 899205	QC- Sample ID:	450996	-001 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed: 10/19/2012	Date Prepared:	10/19/2	012	An	alyst:	KEB					
Reporting Units: mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
C6-C12 Gasoline Range Hydrocarbons	<17.0	1130	1100	97	1140	1220	107	10	70-135	35	
C12-C28 Diesel Range Hydrocarbons	182	1130	1330	102	1140	1440	110	8	70-135	35	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





Project Name: Trunk "O" #5 (1RP-1523)

Work Order #: 450843

Lab Batch #: 899093				Project I	D: SUG His	torical Rele
Date Analyzed: 10/18/2012 10:15	Date Prepar	ed: 10/18/2012	2 Ana	l yst: WRU		
QC- Sample ID: 450678-001 D	Batcl	n#: 1	Mat	rix: Soil		
Reporting Units: %	SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture		Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte			[B]			
Percent Moisture		7.60	7.76	2	20	
Lab Batch #: 899096						
Date Analyzed: 10/18/2012 10:40	Date Prepar	ed: 10/18/2012	2 Ana	yst:WRU		
QC- Sample ID: 450843-002 D	Batch	n#: 1	Mat	rix: Soil		
Reporting Units: %		SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Percent Moisture		Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte			נטן			
Percent Moisture		9.44	9.26	2	20	

Spike Relative Difference RPD 200 * $|\,(B\text{-}A)/(B\text{+}A)\,|$ All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

LAB Order ID #

450843

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of

ANALYSIS REQUEST Company Name: Phone #: **Basin Environmental Service Technologies** 575-396-2378 (Circle or Specify Method No.) P.O. 301 Fax #: Address: Lovington, NM, 88260 575-396-1429 6010B / 200.7 Contact Person: E-mail: Rose Slade (SUG) Joel Lowry (Basin) pm@basinenv.com rose.slade@sug.com Turn Around Time if different from standard Alkalinity Invoice to: **Southern Union Gas Services** otal Metals Ag As Ba Cd Cr Pb Se Hg 문 Cd Cr Pb Se CI, F, SO4, NO3-N, NO2-N, PO4-P, IPH 418.1 / TX1005 / DRO / TVHC Project #: Project Name: **SUG Historical Releases** Trunk "O" #5 (1RP-1523) 624 BTEX 8021B / 602 / 8260B / 624 GC/MS Semi. Vol. 8270C/625 8260B / Project Location: Sampler Bolly R Black wood A Ы (include state) Signature: GC/MS Vol. 8260B / 624 Lea County, New Mexico Pesticides 8081A / 608 Ba Na, Ca, Mg, K, TDS, PRESERVATIVE CONTAINERS / 602 / **CLP Semi Volatiles** Volume/Amount CLP Metals Ag As MATRIX SAMPLING Moisture Content METHOD PAH 8270C / 625 PCB's 8082 / 608 TCLP Pesticides 8021B / CLP Volatiles Ha 1012 FIELD CODE BOD, TSS, I LAB # SLUDGE WATER SOIL HNO₃ H₂SO₄ NaOH NONE DATE MTBE LAB USE TIME Hold AIR ЧЧ Ю ONLY ß X TT-4 @ Surface Х 930 XX Х 11-Oct Х х 11-Oct lx lx Х TT-4 @ 10' 1000 Relinguished by: Company: Date: Time: Received by: Company: Date: Time: REMARKS: INST LAB USE 0645 10.10.12.0645 COR °C Cyplin L Blackwork 10.15.52 ONLY °C. Company: Date: Time: Received by Company: Date: Dry Weight Basis Required Relinguished by Time: INST) JPROBS Y/N Intact °C 10151 1000 °C COR Headspace Y / N /NA TRRP Report Required Date: Date: Time Received by: Company. INST Relinguished by: Company Time: Saluna Xenco 101612/4:50 COR °C Check If Special Reporting Limits Are Needed °C Log-in Review Submittal of samples constitutes agreement to Terms and Conditions Carrier # **ORIGINAL COPY**

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Final 1.000



XENCO Laboratories



Comments

Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan	Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient		
Date/ Time Received: 10/16/2012 02:50:00 PM			
Work Order #: 450843	Temperature Measuring device used :		

Sample Receipt Checklist		(
#1 *Temperature of cooler(s)?	9.7	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6 *Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Sample instructions complete on Chain of Custody?	Yes	
#9 Any missing/extra samples?	No	
#10 Chain of Custody signed when relinquished/ received?	Yes	
#11 Chain of Custody agrees with sample label(s)?	Yes	
#12 Container label(s) legible and intact?	Yes	
#13 Sample matrix/ properties agree with Chain of Custody?	Yes	
#14 Samples in proper container/ bottle?	Yes	
#15 Samples properly preserved?	Yes	
#16 Sample container(s) intact?	Yes	
#17 Sufficient sample amount for indicated test(s)?	Yes	
#18 All samples received within hold time?	Yes	
#19 Subcontract of sample(s)?	Yes	
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes	
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes	
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes	

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: 10/16/2012

Checklist reviewed by:

Date: 10/16/2012

Analytical Report 462447

for Southern Union Gas Services- Monahans

Project Manager: Joel Lowry

Trunk ''O'' #5

(RP-1523)

09-MAY-13

Collected By: Client





12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

> Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900) Xenco-Lakeland: Florida (E84098) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



09-MAY-13

TNI PACCREDUE

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

Reference: XENCO Report No(s): 462447 Trunk "O" #5 Project Address: Lea County, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 462447. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 462447 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully.

Kelsey Brooks Project Manager

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Sample Cross Reference 462447



Southern Union Gas Services- Monahans, Monahans, TX

Trunk "O" #5

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 5'	S	04-30-13 16:30		462447-001
SB-1 @ 10'	S	04-30-13 16:40		462447-002
SB-1 @ 15'	S	04-30-13 16:50		462447-003
SB-1 @ 20'	S	04-30-13 17:00		462447-004
SB-1 @ 25'	S	04-30-13 17:10		462447-005


CASE NARRATIVE

Client Name: Southern Union Gas Services- Monahans Project Name: Trunk ''O'' #5



Project ID:(RP-1523)Work Order Number(s):462447

Report Date: 09-MAY-13 Date Received: 05/02/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Project Id: (RP-1523)

Project Location: Lea County, NM

Contact: Joel Lowry

Certificate of Analysis Summary 462447

Southern Union Gas Services- Monahans, Monahans, TX

Project Name: Trunk "O" #5



Date Received in Lab: Thu May-02-13 01:45 pm Report Date: 09-MAY-13

roject Location: Lea County, NM								перого	Dutt	07 101111 15		
	1 1							Project Ma	nager:	Kelsey Brook	S	
	Lab Id:	462447-0	001	462447-0	002	462447-	003	462447-0	004	462447-0	005	
Amalusia Degradad	Field Id:	SB-1 @	5'	SB-1 @	10'	SB-1 @	15'	SB-1 @	20'	SB-1 @	25'	
Analysis Requested	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	,	
	Sampled:	Apr-30-13	16:30	Apr-30-13	16:40	Apr-30-13	16:50	Apr-30-13	17:00	Apr-30-13	17:10	
BTEX by EPA 8021B	Extracted:	May-07-13	08:00	May-07-13	08:00	May-07-13	08:00	May-07-13	08:00	May-07-13	08:00	
	Analyzed:	May-07-13	16:38	May-07-13	18:33	May-07-13	15:33	May-07-13	15:49	May-07-13	16:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Benzene		ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00105	ND	0.00104	
Toluene		ND	0.00210	ND	0.00209	ND	0.00216	ND	0.00211	ND	0.00208	
Ethylbenzene		ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00105	ND	0.00104	
m_p-Xylenes		ND	0.00210	ND	0.00209	ND	0.00216	ND	0.00211	ND	0.00208	
o-Xylene		ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00105	ND	0.00104	
Total Xylenes		ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00105	ND	0.00104	
Total BTEX		ND	0.00105	ND	0.00104	ND	0.00108	ND	0.00105	ND	0.00104	
Inorganic Anions by EPA 300/300.1	Extracted:	May-07-13	11:00	May-07-13	11:00	May-07-13	11:00	May-07-13	11:00	May-07-13	11:00	
	Analyzed:	May-07-13	22:52	May-07-13	23:13	May-07-13	23:35	May-07-13	23:57	May-08-13	00:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		722	21.2	351	21.0	101	10.9	59.5	10.6	64.9	4.19	
Percent Moisture	Extracted:											
	Analyzed:	May-03-13	14:53	May-03-13	14:53	May-03-13	15:55	May-03-13	15:55	May-03-13	15:55	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	
Percent Moisture		5.60	1.00	4.77	1.00	7.89	1.00	5.23	1.00	4.43	1.00	
TPH By SW8015 Mod	Extracted:	May-08-13	13:00	May-08-13	13:00	May-08-13	13:00	May-08-13	13:00	May-08-13	13:00	
	Analyzed:	May-08-13	21:42	May-08-13	22:13	May-08-13	22:43	May-08-13	23:15	May-08-13	23:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
C6-C12 Gasoline Range Hydrocarbons		ND	15.8	ND	15.7	ND	16.2	ND	15.8	ND	15.7	
C12-C28 Diesel Range Hydrocarbons		348	15.8	120	15.7	147	16.2	18.3	15.8	ND	15.7	
C28-C35 Oil Range Hydrocarbons		44.7	15.8	ND	15.7	ND	16.2	ND	15.8	ND	15.7	
Total TPH		393	15.8	120	15.7	147	16.2	18.3	15.8	ND	15.7	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Huns Boah

Kelsey Brooks Project Manager

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Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- **E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- * Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit
- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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LOQ Limit of Quantitation

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 (210) 509-3335

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 (813) 620-2033

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 (432) 563-1713

 (770) 449-8800
 (770) 449-5477

 (602) 437-0330
 (210) 509-3335

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Project Name: Trunk "O" #5

'ork Orders : 462447 Lab Batch #: 913084	, Sample: 462447-003 / SMP	Project ID: (RP-1523) MP Batch: 1 Matrix: Soil										
Units: mg/kg	Date Analyzed: 05/07/13 15:33		RROGATE R		STUDY							
BTEZ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage						
	Analytes			[D]								
1,4-Difluorobenzene		0.0310	0.0300	103	80-120							
4-Bromofluorobenzene		0.0348	0.0300	116	80-120							
Lab Batch #: 913084	Sample: 462447-004 / SMP	Batc	h: ¹ Matrix	:Soil								
Units: mg/kg	Date Analyzed: 05/07/13 15:49	SU	RROGATE R	ECOVERY S	STUDY							
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene	Analytes	0.0278	0.0200		80.120							
4-Bromofluorobenzene		0.0278	0.0300	93	80-120 80-120							
		0.0326 0.0300 109 80-120										
Lab Batch #: 913084	Sample: 462447-005 / SMP	Batch										
Units: mg/kg	Date Analyzed: 05/07/13 16:05	50	RROGATE R	ECOVERYS	STUDY							
BTEZ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0262	0.0300	87	80-120							
4-Bromofluorobenzene		0.0263	0.0300	88	80-120							
Lab Batch #: 913084	Sample: 462447-001 / SMP	Batc	h: 1 Matrix	:Soil	1 1							
Units: mg/kg	Date Analyzed: 05/07/13 16:38	SU	RROGATE R	ECOVERY S	STUDY							
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
	Analytes			[D]								
1,4-Difluorobenzene		0.0256	0.0300	85	80-120							
4-Bromofluorobenzene		0.0259	0.0300	86	80-120							
Lab Batch #: 913084	Sample: 462447-002 / SMP	Bate										
Units: mg/kg	Date Analyzed: 05/07/13 18:33	SU	RROGATE R	ECOVERY S	STUDY							
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene		0.0277	0.0300	92	80-120							

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution



Project Name: Trunk "O" #5

7 ork Orders : 462447 Lab Batch #: 913249	', Sample: 462447-001 / SMP	Project ID: (RP-1523) MP Batch: 1 Matrix: Soil										
Units: mg/kg	Date Analyzed: 05/08/13 21:42		RROGATE R		STUDY							
	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
	Analytes			[D]								
1-Chlorooctane		111	99.7	111	70-135							
o-Terphenyl		53.0	49.9	106	70-135							
Lab Batch #: 913249	Sample: 462447-002 / SMP	Bato										
Units: mg/kg	Date Analyzed: 05/08/13 22:13	SU	RROGATE R	ECOVERY	STUDY							
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1 Chloropatona	Analytes	105	00.8		70.125							
1-Chlorooctane o-Terphenyl		105	99.8	105 99	70-135							
Lab Batch #: 913249	Sample: 462447-003 / SMP	Bato										
Units: mg/kg	Date Analyzed: 05/08/13 22:43	SU	RROGATE R	ECOVERY	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		108	99.5	109	70-135							
o-Terphenyl		51.6	49.8	104	70-135							
Lab Batch #: 913249	Sample: 462447-004 / SMP	Bato	h: 1 Matrix	v Soil								
Units: mg/kg	Date Analyzed: 05/08/13 23:15		RROGATE R	-	STUDY							
	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		108	99.7	108	70-135							
o-Terphenyl		50.7	49.9	102	70-135							
Lab Batch #: 913249	Sample: 462447-005 / SMP	Bato	h: 1 Matrix	:Soil								
Units: mg/kg	Date Analyzed: 05/08/13 23:44	SU	RROGATE R	ECOVERY	STUDY							
TPH]	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooctane		107	100	107	70-135							

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution



Project Name: Trunk "O" #5

Lab Batch #: 913084	Sample: 637682-1-BLK / B											
Units: mg/kg	Date Analyzed: 05/07/13 13:22	SU	RROGATE R	ECOVERY	STUDY							
BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
	Analytes											
1,4-Difluorobenzene 4-Bromofluorobenzene		0.0291	0.0300	97	80-120 80-120							
					80-120							
Lab Batch #: 913249	Sample: 637796-1-BLK / B											
Units: mg/kg	Date Analyzed: 05/08/13 15:08	50	RROGATE R	ECOVERY								
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage						
1-Chlorooctane		108	99.7	108	70-135							
o-Terphenyl		50.9	49.9	102	70-135							
Lab Batch #: 913084	Sample: 637682-1-BKS / B	KS Batc	h: ¹ Matrix	Solid								
Units: mg/kg	Date Analyzed: 05/07/13 12:49	SU	RROGATE R	ECOVERY	STUDY							
BTEZ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag						
	Analytes			[D]								
1,4-Difluorobenzene		0.0322	0.0300	107	80-120							
4-Bromofluorobenzene		0.0325	0.0300	108	80-120							
Lab Batch #: 913249	Sample: 637796-1-BKS / B											
Units: mg/kg	Date Analyzed: 05/08/13 14:06	SU	RROGATE R	ECOVERY	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage						
1-Chlorooctane		120	99.6	120	70-135							
o-Terphenyl		50.5	49.8	101	70-135							
	Sample: 637682-1-BSD / B				70-135							
	Sample: 637682-1-BSD / B Date Analyzed: 05/07/13 13:06	SD Bate		:Solid								
Lab Batch #: 913084 Units: mg/kg	Date Analyzed: 05/07/13 13:06 X by EPA 8021B	SD Bate	h: ¹ Matrix	Solid ECOVERY S Recovery %R		Flag						
Lab Batch #: 913084 Units: mg/kg	Date Analyzed: 05/07/13 13:06	SD Bate SU Amount Found	h: 1 Matrix RROGATE R True Amount	Solid ECOVERY S Recovery	STUDY Control Limits	Flag						

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution



Project Name: Trunk "O" #5

ork Orders: 462447 Lab Batch #: 913249	Sample: 637796-1-BSD / B	SD Bate		D: (RP-1523) c: Solid								
Units: mg/kg	Date Analyzed: 05/08/13 14:37	SU	RROGATE R	ECOVERY S	STUDY							
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags						
	Analytes			[D]								
1-Chlorooctane		120	100	120	70-135							
o-Terphenyl		48.0	50.0	96	70-135							
Lab Batch #: 913084	Sample: 462289-001 S / MS	S Bate	h: ¹ Matrix	: Soil								
Units: mg/kg	Date Analyzed: 05/07/13 14:44	SU	RROGATE R	ECOVERY S	STUDY							
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1,4-Difluorobenzene	1 mary tes	0.0339	0.0300	113	80-120							
4-Bromofluorobenzene		0.0354	0.0300	118	80-120							
Lab Batch #: 913249	Sample: 462447-005 S / MS	MS Batch: ¹ Matrix: Soil										
Units: mg/kg	Date Analyzed: 05/09/13 00:15		RROGATE R		STUDY							
TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage						
1-Chlorooctane	Analytes	110	00.7		70.125							
o-Terphenyl		45.5	99.7 49.9	91	70-135							
					70-135							
Lab Batch #: 913084	Sample: 462289-001 SD / N			-								
Units: mg/kg	Date Analyzed: 05/07/13 15:00	50	RROGATE R	ECOVERYS	STUDY							
BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage						
1,4-Difluorobenzene		0.0343	0.0300	114	80-120							
4-Bromofluorobenzene		0.0286	0.0300	95	80-120							
Lab Batch #: 913249	Sample: 462447-005 SD / N	ASD Bate	h: 1 Matrix	:Soil								
Units: mg/kg	Date Analyzed: 05/09/13 00:46	SU	RROGATE R	ECOVERY S	STUDY							
TPH	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage						
1-Chlorooctane	Anarytes	125	99.7	125	70-135							
1-CHIOLOOCIANE		123	99./	123	/0-133							

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution





Project Name: Trunk "O" #5

Work Order #: 462447							Pro	ject ID: (RP-1523)						
Analyst: DYV	Da	ate Prepar	ed: 05/07/201	3			Date A	nalyzed: ()	05/07/2013						
Lab Batch ID: 913084 Sample: 637682-1-B	SKS	Batch	n#: 1					Matrix: S	Solid						
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	/ BLANK SPIKE DUPLICATE RECOVERY STUDY										
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Benzene	<0.00100	0.100	0.108	108	0.0990	0.102	103	6	70-130	35					
Toluene	< 0.00200	0.100	0.110	110	0.0990	0.107	108	3	70-130	35					
Ethylbenzene	<0.00100	0.100	0.113	113	0.0990	0.114	115	1	71-129	35					
m_p-Xylenes	<0.00200	0.200	0.207	104	0.198	0.211	107	2	70-135	35					
o-Xylene	<0.00100	0.100	0.102	102	0.0990	0.111	112	8	71-133	35					
Analyst: AMB	Da	ate Prepar	ed: 05/07/201	3	Date Analyzed: 05/07/2013										
Lab Batch ID: 913131 Sample: 637720-1-E	SKS	Batch	n#: 1					Matrix: S	Solid						
Units: mg/kg		BLAN	K /BLANK S	SPIKE / E	BLANK S	PIKE DUPI	LICATE 1	RECOVE	ERY STUD	Y					
Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Chloride	<2.00	50.0	50.9	102	02 50.0 50.5 101 1 80-120 20										

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes





Project Name: Trunk "O" #5

Work Order #: 462447 Analyst: DYV		Da	ate Prepar	ed: 05/08/201	3	Project ID: (RP-1523) Date Analyzed: 05/08/2013										
Lab Batch ID: 913249	Sample: 637796-1-B	KS	Batc	h #: 1		Matrix: Solid										
Units: mg/kg			BLAN	K /BLANK S	SPIKE / E	BLANK S	K SPIKE DUPLICATE RECOVERY STUDY									
TPH By SW802	15 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag				
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]								
C6-C12 Gasoline Range Hydroca	rbons	<14.9	996	950	95	1000	948	95	0	70-135	35					
C12-C28 Diesel Range Hydrocar	bons	<14.9	996	1070	107	1000	1080	108	1	70-135	35					

Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100^{*}(C)/[B]$ Blank Spike Duplicate Recovery [G] = $100^{*}(F)/[E]$ All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Laboratories											
Project Name	: Trunk "O"	#5				498ORATOR					
Work Order #: 462447											
Lab Batch #: 913131			Pr	oject ID:	(RP-1523)						
Date Analyzed: 05/08/2013 Da	Date Prepared: 05/07/2013Analyst: AMB										
QC- Sample ID: 462447-005 S	Batch #: 1 Matrix: Soil										
Reporting Units: mg/kg	MATI	RIX / MA'	TRIX SPIKE	RECO	VERY STU	DY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag					
Analytes		[B]									
Chloride	64.9	105	182	112	80-120						
Lab Batch #: 913131											
Date Analyzed: 05/07/2013 Da	te Prepared: 05/0	7/2013	A	Analyst: A	MB						
QC- Sample ID: 462601-001 S	Batch #: 1			Matrix: So	oil						
Reporting Units: mg/kg	MATI	RIX / MA'	TRIX SPIKE	RECO	VERY STU	DY					
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag					
Chloride	161	500	708	109	80-120						

Matrix Spike Percent Recovery [D] = 100*(C-A)/BRelative Percent Difference [E] = 200*(C-A)/(C+B)All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries

Project Name: Trunk "O" #5



Work Order # : 462447						Project II	D: (RP-15	23)			
Lab Batch ID: 913084	QC- Sample ID:	462289	-001 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed: 05/07/2013	Date Prepared:	05/07/2	013	An	alyst:	DYV					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.00106	0.106	0.0937	88	0.107	0.0916	86	2	70-130	35	
Toluene	<0.00212	0.106	0.0962	91	0.107	0.0950	89	1	70-130	35	
Ethylbenzene	<0.00106	0.106	0.0962	91	0.107	0.0936	87	3	71-129	35	
m_p-Xylenes	<0.00212	0.212	0.174	82	0.213	0.177	83	2	70-135	35	
o-Xylene	<0.00106	0.106	0.0901	85	0.107	0.0882	82	2	71-133	35	
Lab Batch ID: 913249	QC- Sample ID:	462447	-005 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed: 05/09/2013	Date Prepared:	05/08/2	013	An	alyst:	DYV					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
C6-C12 Gasoline Range Hydrocarbons	<15.6	1040	989	95	1040	1000	96	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.6	1040	1150	111	1040	1180	113	3	70-135	35	

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E



Sample Duplicate Recovery



Project Name: Trunk "O" #5

Work Order #: 462447

	epared: 05/03/2013 Batch #: 1	3 Anal	Project I I lyst: WRU t rix: Soil	D: (RP-1523	3)
Reporting Units: %	SAMPLE	/ SAMPLE]	DUPLIC	ATE RECO	OVERY
Percent Moisture	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			l
Percent Moisture	3.80	3.68	3	20	
Lab Batch #: 912969					
Date Analyzed: 05/03/2013 15:55 Date Pre	epared: 05/03/2013	3 Anal	lyst: WRU		
QC- Sample ID: 462447-003 D B	Batch #: 1	Mat	rix: Soil		
Reporting Units: %	SAMPLE	/ SAMPLE]	DUPLIC	ATE RECO	OVERY
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	7.89	7.90	0	20	1

Spike Relative Difference RPD 200 * | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

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		me	<u>}</u>	<u> </u>						SB-1	SB	SB	SB	SE		Va II	ゴ甘らら		Sampler Signature:	1e No:	e/Zip:	Company Address:	y Name	lanager:		Xenco Laboratories
										-1 @ 25'	SB-1 @ 20'	SB-1 @ 15'	SB-1 @ 10'	SB-1 @ 5'			Ì		$\left(\right)_{rel}$	(575)396-2378		P.O. Box 301	Basin En	Joel Lowry		atori
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	ى	$\overline{\omega}^*$	13 13					Ì		Soil	Soil	Soil	Soil	Soil	GW = Groundwater S=Soil/So	13			cyndi.inskeep@sug.com,	Rep					· · ·	CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST
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					3	+						-			Cations (Ca, Mg, Na, K)	:	1		07.	at	PO #:	5	ect #	ame	· · · · · · · · · · · · · · · · · · ·	ß
•	mpe	Sample Hand Delivered by Sampler/Client Rep by Courier DUPS	Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)	Sample Containers Intact? VOCs Free of Headspace?	<u> </u>						•••	<u> </u>			Anions (Cl, SO4, Alkalinity)			. .: 	rose.slade@sug.com	×]	R	17		8 :::
	ratu	by Sampler/Client Rep.	on c ly se ly se	Free	ţ 🗌					÷					SAR / ESP / CEC		TOTAL	TC P	lade		Sol	a Co	P-1	Trunk "O" #5		AN
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	Temperature Upon Receipt		Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)	3		┢	-			×	×	×	×	×	BTEX 8021B/5030 or BTEX 82	200		- '			Bill Southern Union Gas				432-563-1800 432-563-1713	QU
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Page 16 of 17

Final 1.000



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Southern Union Gas Services- Monahan Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 05/02/2013 01:45:00 PM **Temperature Measuring device used :** Work Order #: 462447

Sample Receipt Check	list Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	Νο
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by: Mmg Moah Kelsey Brooks Checklist reviewed by: Mmg Moah Kelsey Brooks

Date: 05/03/2013

Date: 05/03/2013



August 23, 2013

JOEL LOWRY Basin Environmental Service P.O. Box 301 Lovington, NM 88260

RE: TRUNK 'O' #5

Enclosed are the results of analyses for samples received by the laboratory on 08/22/13 9:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	08/22/2013	Sampling Date:	08/21/2013
Reported:	08/23/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 8-21 TT @ 6' (H302011-01)

BTEX 8021B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.25	0.100	08/23/2013	ND	2.10	105	2.00	3.04	
Toluene*	5.13	0.100	08/23/2013	ND	2.14	107	2.00	1.21	
Ethylbenzene*	15.4	0.100	08/23/2013	ND	2.22	111	2.00	1.37	
Total Xylenes*	23.6	0.300	08/23/2013	ND	6.70	112	6.00	1.13	
Total BTEX	45.4	0.600	08/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result Reporting Limit		Analyzed	Analyzed Method Blank		% Recovery	True Value QC	RPD	Qualifie
Chloride	600	16.0	08/23/2013	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	211	10.0	08/22/2013	ND	214	107	200	7.90	
DRO >C10-C28	1350	10.0	08/22/2013	ND	221	111	200	7.69	
EXT DRO >C28-C35	210	10.0	08/22/2013	ND					
Surrogate: 1-Chlorooctane	96.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	94.1	% 63.6-15	1						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	08/22/2013	Sampling Date:	08/21/2013
Reported:	08/23/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 8-21 TT @ 8' (H302011-02)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.976	0.100	08/23/2013	ND	2.10	105	2.00	3.04	
Toluene*	6.71	0.100	08/23/2013	ND	2.14	107	2.00	1.21	
Ethylbenzene*	13.5	0.100	08/23/2013	ND	2.22	111	2.00	1.37	
Total Xylenes*	28.0	0.300	08/23/2013	ND	6.70	112	6.00	1.13	
Total BTEX	49.2	0.600	08/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	114	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	08/23/2013	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	302	10.0	08/22/2013	ND	214	107	200	7.90	
DRO >C10-C28	2480	10.0	08/22/2013	ND	221	111	200	7.69	
EXT DRO >C28-C35	445	10.0	08/22/2013	ND					
Surrogate: 1-Chlorooctane	104	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	117	63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	08/22/2013	Sampling Date:	08/21/2013
Reported:	08/23/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 8-21 TT @ 13.5' (H302011-03)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/23/2013	ND	2.10	105	2.00	3.04	
Toluene*	<0.050	0.050	08/23/2013	ND	2.14	107	2.00	1.21	
Ethylbenzene*	0.084	0.050	08/23/2013	ND	2.22	111	2.00	1.37	
Total Xylenes*	0.198	0.150	08/23/2013	ND	6.70	112	6.00	1.13	
Total BTEX	<0.300	0.300	08/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	112	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	08/23/2013	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/23/2013	ND	214	107	200	7.90	
DRO >C10-C28	739	10.0	08/23/2013	ND	221	111	200	7.69	
EXT DRO >C28-C35	178	10.0	08/23/2013	ND					
Surrogate: 1-Chlorooctane	84.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	92.9	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	08/22/2013	Sampling Date:	08/21/2013
Reported:	08/23/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 8-21 TT NORTH (H302011-04)

BTEX 8021B	mg	/kg	Analyze	d By: DW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/23/2013	ND	2.10	105	2.00	3.04		
Toluene*	0.111	0.050	08/23/2013	ND	2.14	107	2.00	1.21		
Ethylbenzene*	0.561	0.050	08/23/2013	ND	2.22	111	2.00	1.37		
Total Xylenes*	1.05	0.150	08/23/2013	ND	6.70	112	6.00	1.13		
Total BTEX	1.72	0.300	08/23/2013	ND						
Surrogate: 4-Bromofluorobenzene (PID	178	% 89.4-12	6							
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	432	16.0	08/23/2013	ND	432	108	400	3.77		
TPH 8015M	mg	/kg	Analyze	d By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	57.3	10.0	08/23/2013	ND	214	107	200	7.90		
DRO >C10-C28	5720	10.0	08/23/2013	ND	221	111	200	7.69		
EXT DRO >C28-C35	1520	10.0	08/23/2013	ND						
Surrogate: 1-Chlorooctane	94.4	% 65.2-14	0							
Surrogate: 1-Chlorooctadecane	199	% 63.6-15	4							

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

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Submittal of samples constitutes agreement to Terms and Conditions		ny: Date:	14 8/22/139										「 North	8-21 TT @ 13.5'	「@ 8'	ſ@6'	SAMPLE ID		Lea Co., NM		ld Services	Joel Lowry	P.O. Box 301 Lovington, NM 88260	Basin Environmental Service Technologies, LLC	Cardinal Laboratories	H 303011
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Page 7 of 7



September 05, 2013

JOEL LOWRY Basin Environmental Service P.O. Box 301 Lovington, NM 88260

RE: TRUNK 'O' #5

Enclosed are the results of analyses for samples received by the laboratory on 09/03/13 14:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: NORTH FLOOR (H302107-01)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.200	0.200	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.200	0.200	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.600	0.600	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<1.20	1.20	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	110	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: DW/					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	3970	50.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	643	50.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	113	65.2-14	0						
Surrogate: 1-Chlorooctadecane	177	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SOUTH FLOOR (H302107-02)

BTEX 8021B	mg/	′kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	33.9	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	17.1	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	104 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	112 9	63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: NORTH WALL (H302107-03)

BTEX 8021B	mg,	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	<10.0	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	<10.0	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	107	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	111 9	63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: SOUTH WALL (H302107-04)

BTEX 8021B	mg/	′kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	<10.0	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	<10.0	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	109 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	113 9	63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: EAST WALL #1 (H302107-05)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 89.4-12	6						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	244	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	52.5	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	107	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	119 9	% 63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: EAST WALL #2 (H302107-06)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	616	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	212	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	112	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	145	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: WEST WALL #1 (H302107-07)

BTEX 8021B	mg	/kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	103	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	13.5	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	25.6	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	104	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	111 9	63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: WEST WALL #2 (H302107-08)

BTEX 8021B	mg/	kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	<0.050	0.050	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	<0.050	0.050	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	<0.150	0.150	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	<0.300	0.300	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	36.2	10.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	15.8	10.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	109 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	117 9	63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 9/3 STOCKPILE (H302107-09)

BTEX 8021B	mg/kg		Analyzed By: DW					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	0.526	0.200	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	0.877	0.200	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	4.73	0.600	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	6.13	1.20	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	130	% 89.4-12	6						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: DW/					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	123	50.0	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	1740	50.0	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	355	50.0	09/04/2013	ND					
Surrogate: 1-Chlorooctane	112	65.2-14	0						
Surrogate: 1-Chlorooctadecane	133	63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

LAB Order ID # H302107 nvoice to: Contact Person: Address: Company Name: include state) roject #: Submittal of samples constitutes agreement to Terms and Conditions Relinquished by: Relinquished by: Relinquished by: roject Location LAB USE and your LAB ID ONLY Q 1 S W A N 0 **Cardinal Laboratories** Regency Field Services 4/3 West would #2 North way Basin Environmental Service Technologies, LLC West would South way South North tast wall H tast would be 2 Balin Company: Company: Company: Stockpile floor F1001 SAMPLE ID Lovington, NM 88260 9/3/2 Date: Date: Date: P.O. Box 301 Lea Co., NM Joel Lowry 7:45 Time: Time: Time: Received by: Received by: Received by: 0 0 (G)RAB or (C)OMP 0 5 0 5 0 B # CONTAINERS • 1 WATER Sampler Signature: E-mail: Fax #: Phone #: SOIL Project Name: < 5 MATRIX > < wor Company: Company Company: AIR Hobbs, NM 88240 Tel (575) 393-2326 Fax (575) 393-2476 pm@basinenv.com,phillip.little@sug.com, cyndi.inskeep@regencygas.com, 101 East Marland SLUDGE rachel.johnson@regencygas.com HCL 2 Date: Date Date: HNO₂ PRESERVATIVE S 202 H₂SO₄ METHOD (575)396-1429 3 (575)396-2378 NaOH I Ime: l ime: Time: Frunk "O" 2:45 COR 2. 6 ICE 5 5 < × × NONE OBS COR INST INST 54 OBS INST COR 费 93 6/2 9/3 2/2 9/3 913 0/3 9/3 413 DATE SAMPLING 12:45 12:30 12:10 12:15 12:05 12:25 12:28 12:3 12:00 TIME ດໍດໍ ດ່ດໍ ່ດໍ ဂိ Chloride × Intact Carrier # og-in Review leadspace Y / N /NA TPH 8015M × LAB USE ONLY **BTEX 8021B** × YIN **Circle or Specify Method** ANALYSIS REQUEST REMARKS **TRRP Report Required** Dry Weight Basis Required Check If Special Reporting Limits Are Needed Page No 91413 RUSH as Hold For BTEX, if TPH <100 ppm Run BTEX Turn Around Time if different from standard Hold

-

ORIGINAL COPY

q



September 05, 2013

JOEL LOWRY Basin Environmental Service P.O. Box 301 Lovington, NM 88260

RE: TRUNK 'O' #5

Enclosed are the results of analyses for samples received by the laboratory on 09/03/13 14:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/03/2013	Sampling Date:	09/03/2013
Reported:	09/05/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: DCP STAIN (H302108-01)

BTEX 8021B	mg	/kg	Analyze	d By: DW					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.20	1.00	09/04/2013	ND	2.17	108	2.00	0.229	
Toluene*	16.5	1.00	09/04/2013	ND	2.29	114	2.00	0.178	
Ethylbenzene*	20.2	1.00	09/04/2013	ND	2.39	120	2.00	0.625	
Total Xylenes*	48.5	3.00	09/04/2013	ND	7.18	120	6.00	0.734	
Total BTEX	86.5	6.00	09/04/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	128	% 89.4-12	6						
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	09/05/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: DW/					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	1330	100	09/04/2013	ND	193	96.3	200	2.38	
DRO >C10-C28	9530	100	09/04/2013	ND	189	94.6	200	2.64	
EXT DRO >C28-C35	1540	100	09/04/2013	ND					
Surrogate: 1-Chlorooctane	209	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	237	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager
Submittal of sampl	-	Relinquished by:	PRelinquished by	Jmr. June	Nullin.	Relinguished by:								(ONLY)	/ LAB USE /	LABID			Project Location: (include state)	Project #:	Invoice to:		Contact Person:	Address:	Company Name:	0	LAB Order ID #
Submittal of samples constitutes agreement to Terms and Conditions		: Company:	Company:		Busin	Company:							bep Stain			SAM					Regency Field Services			Lov	Basin Environmental Service Technologies, LLC	Cardinal Laboratories	# H302108
nt to Terms and	-	Date: Ti	Laie.		alsin 2:45	Date: Ti						 -				SAMPLE ID			Lea Co., NM		Ces	Joel Lowry		P.O. Box 301 Lovington, NM 88260	ental Service	Labo	8
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September 11, 2013

JOEL LOWRY Basin Environmental Service P.O. Box 301 Lovington, NM 88260

RE: TRUNK 'O' #5

Enclosed are the results of analyses for samples received by the laboratory on 09/06/13 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: N WALL @ 13' (H302161-01)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	<10.0	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	15.7	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	76.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	82.8	% 63.6-15	1						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: S WALL @ 13' (H302161-02)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	<10.0	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	<10.0	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	77.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	85.6	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: E WALL @ 13' (H302161-03)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	24.7	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	<10.0	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	81.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	94.4	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: W WALL @ 13' (H302161-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	<10.0	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	<10.0	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	82.6	65.2-14	0						
Surrogate: 1-Chlorooctadecane	90.2	63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 9/6 TT @ 18' (H302161-05)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	<10.0	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	<10.0	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	79.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	88.6	% 63.6-15	4						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/06/2013	Sampling Date:	09/06/2013
Reported:	09/11/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 9/6 TT @ 20' (H302161-06)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/10/2013	ND	1.85	92.6	2.00	6.48	
Toluene*	<0.050	0.050	09/10/2013	ND	1.87	93.3	2.00	7.38	
Ethylbenzene*	<0.050	0.050	09/10/2013	ND	1.93	96.4	2.00	7.53	
Total Xylenes*	<0.150	0.150	09/10/2013	ND	5.78	96.3	6.00	8.29	
Total BTEX	<0.300	0.300	09/10/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	09/10/2013	ND	400	100	400	3.92	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/09/2013	ND	208	104	200	0.475	
DRO >C10-C28	<10.0	10.0	09/09/2013	ND	192	96.1	200	3.54	
EXT DRO >C28-C35	<10.0	10.0	09/09/2013	ND					
Surrogate: 1-Chlorooctane	76.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	85.7	% 63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

- ND
 Analyte NOT DETECTED at or above the reporting limit

 RPD
 Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

Submittal of samp		-	Relinquished by:		Relinquished by:	Juny Jun	Relinquished by:					0	2	N	£	3	2		LAB ID LAB USE ONLY		Project Location: (include state)	Project #:	Invoice to:		Contact Person:	Address:	Company Name:		LAB Order ID #
Submittal of samples constitutes agreement to remuse and community			: Company: Date: Time:		: Company: Date: Time:		: Company: Date: Time:		-		-		-	9/10 77 014			Some want (= 13'	North Walle13	SAMPLE ID		Lea Co., NM		Regency Field Services	Joel Lowry		P.O. Box 301 Lovington, NM 88260	Basin Environmental Service Technologies, LLC	Cardinal Laboratories	# H30 2161
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			Date:		Date:	9/6/1	Date:	┝─											HCL HNO₃ H₂SO₄ NaOH ICE	METHOD	and form			rachel.johnson@regencygas.com	pm@basinenv.com.phillip.little@sug.com. cyndi.inskeep@regencygas.com.	(575)39	(575);	101 East Martand Hobbs, NM 88240 Tel (575) 393-2326 Fax (575) 393-2476	
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Page 9 of 9



September 25, 2013

JOEL LOWRY Basin Environmental Service P.O. Box 301 Lovington, NM 88260

RE: TRUNK 'O' #5

Enclosed are the results of analyses for samples received by the laboratory on 09/20/13 9:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/20/2013	Sampling Date:	09/18/2013
Reported:	09/25/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: EAST SW #2A (H302294-01)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					A-01a
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	09/23/2013	ND	1.90	95.0	2.00	8.98	
Toluene*	<0.050	0.050	09/23/2013	ND	2.01	100	2.00	8.85	
Ethylbenzene*	<0.050	0.050	09/23/2013	ND	2.11	105	2.00	8.63	
Total Xylenes*	<0.150	0.150	09/23/2013	ND	6.35	106	6.00	8.10	
Total BTEX	<0.300	0.300	09/23/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	128	% 89.4-12	6						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	336	16.0	09/24/2013	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	09/21/2013	ND	200	100	200	0.330	
DRO >C10-C28	<10.0	10.0	09/21/2013	ND	193	96.4	200	1.85	
EXT DRO >C28-C35	<10.0	10.0	09/21/2013	ND					
Surrogate: 1-Chlorooctane	110 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	119 9	63.6-15	1						

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Basin Environmental Service JOEL LOWRY P.O. Box 301 Lovington NM, 88260 Fax To: (575) 396-1429

Received:	09/20/2013	Sampling Date:	09/18/2013
Reported:	09/25/2013	Sampling Type:	Soil
Project Name:	TRUNK 'O' #5	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

Sample ID: 9/18 STOCKPILE (H302294-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					A-01a	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	09/23/2013	ND	1.90	95.0	2.00	8.98		
Toluene*	<0.050	0.050	09/23/2013	ND	2.01	100	2.00	8.85		
Ethylbenzene*	<0.050	0.050	09/23/2013	ND	2.11	105	2.00	8.63		
Total Xylenes*	<0.150	0.150	09/23/2013	ND	6.35	106	6.00	8.10		
Total BTEX	<0.300	0.300	09/23/2013	ND						
Surrogate: 4-Bromofluorobenzene (PID	133 9	% 89.4-12	6							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	09/24/2013	ND	416	104	400	3.77		
TPH 8015M	mg/	'kg	Analyze	d By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	09/25/2013	ND	200	100	200	0.330		
DRO >C10-C28	329	10.0	09/25/2013	ND	193	96.4	200	1.85		
EXT DRO >C28-C35	103	10.0	09/25/2013	ND						
Surrogate: 1-Chlorooctane	88.1	% 65.2-14	0							
Surrogate: 1-Chlorooctadecane	90.7	% 63.6-15	4							

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

A-01a	Surrogates failed QC limits, High. No target compounds detected above PQL.
A-01	BFB surrogate failed high. No target compounds detected in associated samples.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

Submittal of samples			Relinquished by:		Relinquished by:	file the	Religituished by:										2			LAB ID		Project Location: (include state)	Project #:	Invoice to:	Contact Person:		Address:	Company Name:		0	LAB Order ID #
Submittal of samples constitutes agreement to Terms and Conditions			Company: Date: Time:		Company: Date: Time:	Basin 4-20-13 4:00	y: Date:							· · · · ·				East SW #2		SAMPLE ID		Lea Co., NM		Regency Field Services	Joel Lowry		P.O. Box 301	Basin Environmental Service Technologies, LLC		Cardinal Laboratories	H202294
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Page 5 of 5

State of New Mexico 6789707773 District | Energy Minerals and Natural Resources 1625 N. French Dr., Hobbs, NM 88240 Form C-141 District II Revised October 10, 2003 1301 W. Grand Avenue, Artesia, NM 88210 Submit 2 Copies to appropriate District Office in accordance District III Oil Conservation/Division 1220 South St. Francis Di 9 Rio Brazos Road, Aztec, NM 87410 Santa Fe, NM 87505 Received ict IV with Rule 116 on back 220 S. St. Francis Dr., Santa Fe, NM 87505 side of form Release Notification and Gorrective Action **OPERATOR** \boxtimes Initial Report **Final Report** 232425 Southern Union Gas Services, Ltd. Name of Company Contact Tony Savoie P.O. Box 1226 Jal, N.M. 88252 Telephone No. 505-395-2116 Address Lea County Field Dept. Facility Name Facility Type Natural Gas Gathering Surface Owner: Beverly Jean Bull Mineral Owner: Fee Lease No. LOCATION OF RELEASE North/South Line Feet from the Unit Letter Section Township Range Feet from the East/West Line County 34 36E Κ 22S Lea Latitude N32 20.714 Longitude W103 15.256 NATURE OF RELEASE Type of Release : Crude Oil, Produced water, and Natural Gas Volume of Release: 550 Bbls Volume Recovered 500 Bbls crude Fluid and 945 MCF Nat. Gas Oil and produced water Source of Release : 30" Natural Gas Pipeline Date and Hour of Occurrence Date and Hour of Discovery 7/23/07 not known 7/23/07 4:15 p.m. Time: 4:15 p.m. Was Immediate Notice Given? If YES, To Whom? Gary Wink the NMOCD on call representative Yes No Not Required By Whom? Tony Savoie Date and Hour: 7/23/07 4:35 p.m. Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. Yes No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* A 30" Natural Gas gathering line developed a leak due to excess fluid delivered by a producer caused the line to pressure up and leak fluid and natural gas. Crews were repairing a section of line in this area when the leak occurred; a vacuum truck was on hand and started removing fluid within 15 minutes of the pipe failure. Most of the fluid was contained to the bell-hole in the lease road and a large depression in the lease road 0 Describe Area Affected and Cleanup Action Taken. Approximately 6200 Square feet of pasture land and approximately 7200 square feet of caliche lease road were impacted by the release. Approximately 500 bbls of mostly produced water and crude oil were recovered during the temporary clamping event. The final remediation will follow the NMOCD guidelines for the remediation of leaks and spills. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION 0 Signature: mul ENVICOENER Approved by District Supervisor. Printed Name: John A. Savoie Title: Remediation Supervisor Approval Date: 8.8.07 Expiration Date: 10-8.07 E-mail Address: tony.savoie@sug.com Conditions of Approval: Attached 🗌 "nte: 8/7/07 Phone: 505-395-2116 ich Additional Sheets If Necessary SUPPORTING DA

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

Release Notification and Corrective Action															
						OPERATOR Initial Report Final									
		uthern Unio					ystal D. Callawa								
		00p 464, Mor		X, 79756			No. (817) 302-9								
Facility Nan	ne: I runk	"O" #5 (RP-	1523)			Facility Typ	e Natural Gas C	Jathering							
Surface Own	ner: Bever	rly Jean Bull		Mineral O	wner F	r Fee API No.									
			-	LOCA	TION	OF REI	LEASE								
Unit Letter K	Section 34	Township 22S	Range 36E	Feet from the	North/3	th/South Line Feet from the East/West Line County Lea									
						-	-103 15.256								
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Type of Relea	ase: Crude	Oil, Produced	water, and	l Natural Gas			Release: 550 bbl 45 Mcf Nat. Gas		Recovered: 5 luced water	500 bbls	s crude oil				
Source of Rel	lease: 30" 1	Natural Gas Pij	peline				lour of Occurrenc	e: Date an	l Hour of Dis	covery:	7/23/07				
Was Immedia	Am Manter of					7/23/07 4:1		Time: 4	15 p.m.						
was immedia	te Notice (Yes 🗌	No 🗌 Not Rec	quired	If YES, To Gary Wink	the NMOCD on	call representativ	e						
By Whom? T							lour 7/23/07 4:35								
Was a Watero	course Read		Yes 🛛	No		If YES, Vo	lume Impacting t	he Watercourse.							
If a Watercou	rse was Im	pacted, Descri	he Fully *	:											
A 30" Natura Crews were r	l Gas gathe epairing a s	section of line	oped a lea in this are	n Taken ak due to excess flu a when the leak oc he bell-hole in the	curred;	a vacuum tru	ick was on hand a	and started remov							
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Printed Name	Printed Name: Crystal D. Callaway Approved by Environmental Specialist:														
Title: Senio	r Environn	iental Remedia	tion Spec	ialist	$\angle $	Approval Dat	e:	Expiration	Date:						
E-mail Addre Date: 10/08/2		l.Callaway@F Pl		s.com 7) 302-9407		Conditions of	Approval:		Attached						