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REMEDIATION SUMMARY & SITE CLOSURE REQUEST

SOUTHERN UNION GAS SERVICES

TRUNK "O" LINE (1RP-1541)

HISTORICAL RELEASE SITE

Lea County, New Mexico

Unit Letter "G" (SW/NE), Section 9, Township 22 South, Range 36 East

Latitude 32° 24.388' North, Longitude 103° 15.952' West

NMOCD Reference # 1RP-1541

Prepared For:

Southern Union Gas Services
801 S. Loop 464
Monahans, TX 79756

Prepared By:

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

October 2012

Joel W. Lowry
Project Manager

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1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this *Remediation Summary & Site Closure Request* for the Trunk “O” Line Historical Release Site (1RP-1541). The legal description of the release site is Unit Letter “G” (SW/NE), Section 9, Township 22 South, Range 36 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 24.388' North latitude and 103° 15.952' West longitude. The property affected by the release is owned by the State of New Mexico and administered by the New Mexico State Land Office (NMSLO). Please reference Figure 1 for a "Site Location Map".

On August 25, 2007, Southern Union 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 three hundred thirty barrels (330 bbls) of fluid and six hundred seventy-two (672) mcf of natural gas. During initial response activities, the pipeline was shut in and a vacuum truck was utilized to recover approximately two hundred thirty barrels (230 bbls) of free standing fluid. Temporary dikes were constructed and heavily saturated soil was pushed toward the release point to prevent further saturation. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on August 25, 2007. The C-141 indicated the release affected approximately fifteen thousand, three hundred forty-five square feet (15,345 ft²) of pasture land. 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 at the Trunk “O” Line Release Site by an environmental contractor that is no longer affiliated with Southern Union. The nature and extent of the aforementioned activities remains unclear, as environmental reports and work records are not readily available.

On June 22, 2012, at the request of Southern Union, Basin assumed remediation responsibilities at the Trunk “O” Line 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 9, Township 22 South, Range 36 East. An NMOCD representative indicated the depth to groundwater is approximately two hundred feet (200’) below ground surface (bgs) on the initial C-141. 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” Line 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 August 10, 2012, Basin responded to the Trunk “O” Historical Release Site. An initial investigation indicated previous remediation activities had been conducted at the release site. A series of test trenches were advanced in the disturbed areas around the release point in an effort to determine if impacted soil containing BTEX, TPH and chloride concentrations above NMOCD regulatory standards remained in-situ.

Test Trench #1 was advanced to approximately four feet (4’) bgs near the center of the inferred flowpath, within the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a photo-ionization detector (PID) and chloride field test kit. Two (2) soil samples (TT-1 @ Surface and TT-1 @ 4’) were collected and submitted to TraceAnalysis Inc., of Midland, Texas, for determination of BTEX, TPH and chloride concentrations in accordance with EPA Methods SW 846-8021B, SW 846-8015M and SM 4500 Cl-B, respectively. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the soil samples submitted. Analytical results indicated TPH concentrations were less than the laboratory MDL for each of the soil samples submitted. Chloride concentrations ranged from 62.6 mg/Kg for soil sample TT-1 @ 4’ to 96.4 mg/Kg in soil sample TT-1 @ Surface. Table 1 summarizes the “Concentrations of Benzene, BTEX, TPH & Chloride in Soil”. Soil sample locations are depicted in Figure 2, “Site & Sample Location Map”. Laboratory analytical reports are provided as Appendix B.

Test Trench #2 was advanced to approximately two feet (2’) bgs near the inferred release point, within the disturbed area. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. Two (2) soil samples (TT-2 @ Surface and TT-2 @ 2’) were collected and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL for each of the soil samples submitted. Analytical results indicated TPH concentrations were less than the laboratory MDL for each of the soil samples submitted. Chloride concentrations ranged from less than the laboratory MDL for soil sample TT-2 @ Surface to 57.8 mg/Kg in soil sample TT-2 @ 2’.

Test Trench #3 was advanced within the disturbed area approximately fifty feet (50’) south of the inferred release point, east of the Trunk “O” Line. Test Trench #3 was advanced to

approximately two feet (2') bgs. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. One (1) soil sample (TT-3 @ 2') was collected and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. Analytical results indicated the TPH and chloride concentrations were less than the appropriate laboratory MDL.

Test Trench #4 was advanced within the disturbed area approximately seventy-five feet (75') north of the inferred release point, near the northern terminus of the inferred flowpath. Test Trench #4 was advanced to approximately two feet (2') bgs. During the advancement of the test trench, select soil samples were field-screened using a PID and chloride field test kit. One (1) soil sample (TT-4 @ 2') was collected and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. Analytical results indicated the TPH concentration was less than the laboratory MDL. The chloride concentration was 62.6 mg/Kg.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to TraceAnalysis, Inc., of Midland, Texas, 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 SM 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 the four (4) on-site test trenches indicated previous remediation activities at the Trunk “O” Line Release Site met the requirements of the NMOCD’s “Guidelines for Remediation of Leaks, Spills and Releases”. Laboratory analytical results indicated benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory standards in each of the submitted soil samples. Based on these laboratory analytical results, Basin recommends Southern Union 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” Line 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.

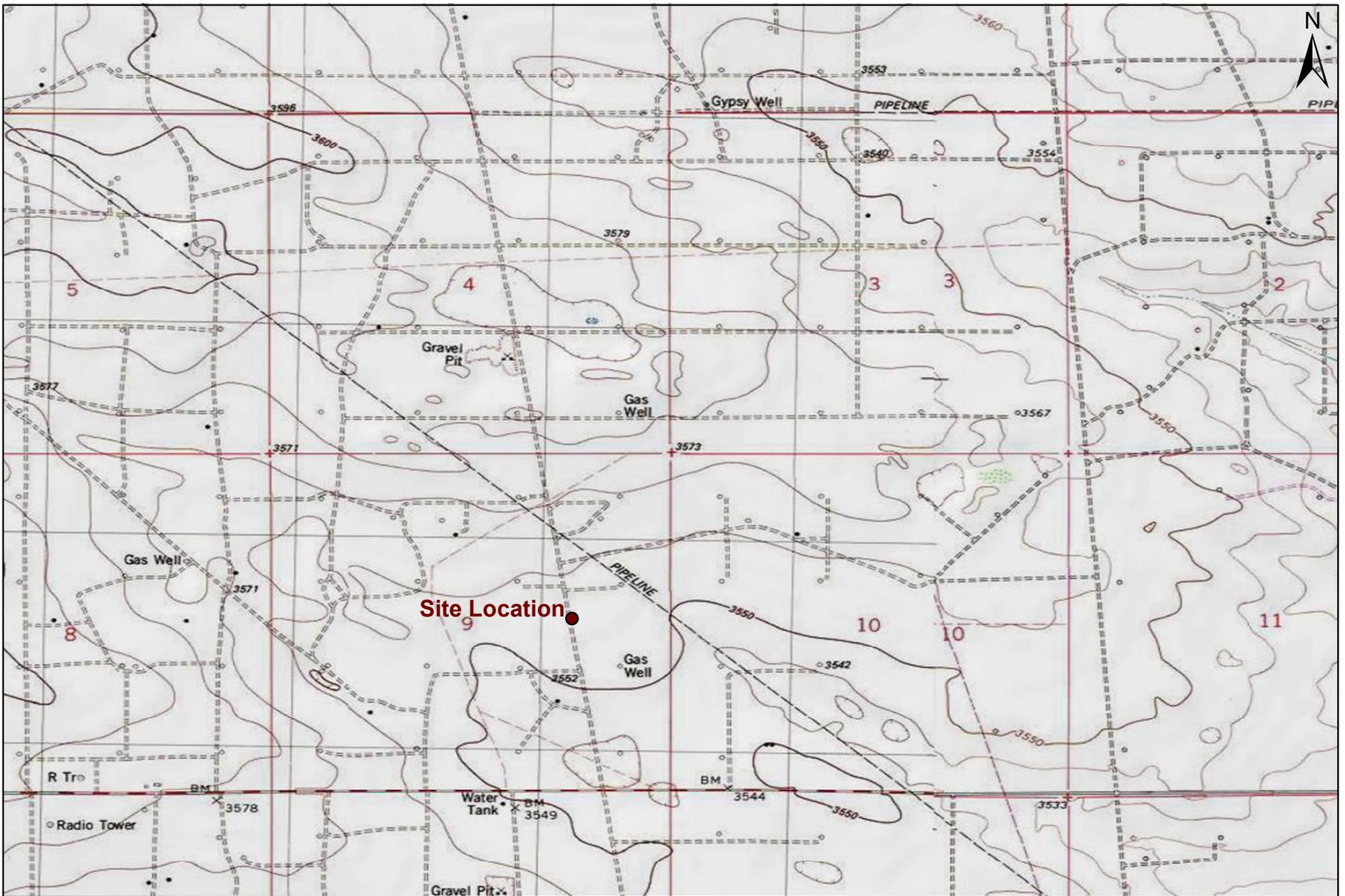
This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and/or Southern Union Gas Services.

7.0 DISTRIBUTION

Copy 1: Geoffrey Leking
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Oil Conservation Division (District 1)
1625 French Drive
Hobbs, NM 88240
GeoffreyR.Leking@state.nm.us

Copy 2: Rose Slade
Southern Union Gas Services
801 S. Loop 464
Monahans, Texas 79756
rose.slade@sug.com

Copy 3: Basin Environmental Service Technologies, LLC
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Lovington, New Mexico 88260



Site Location

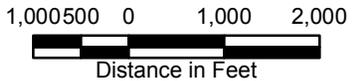


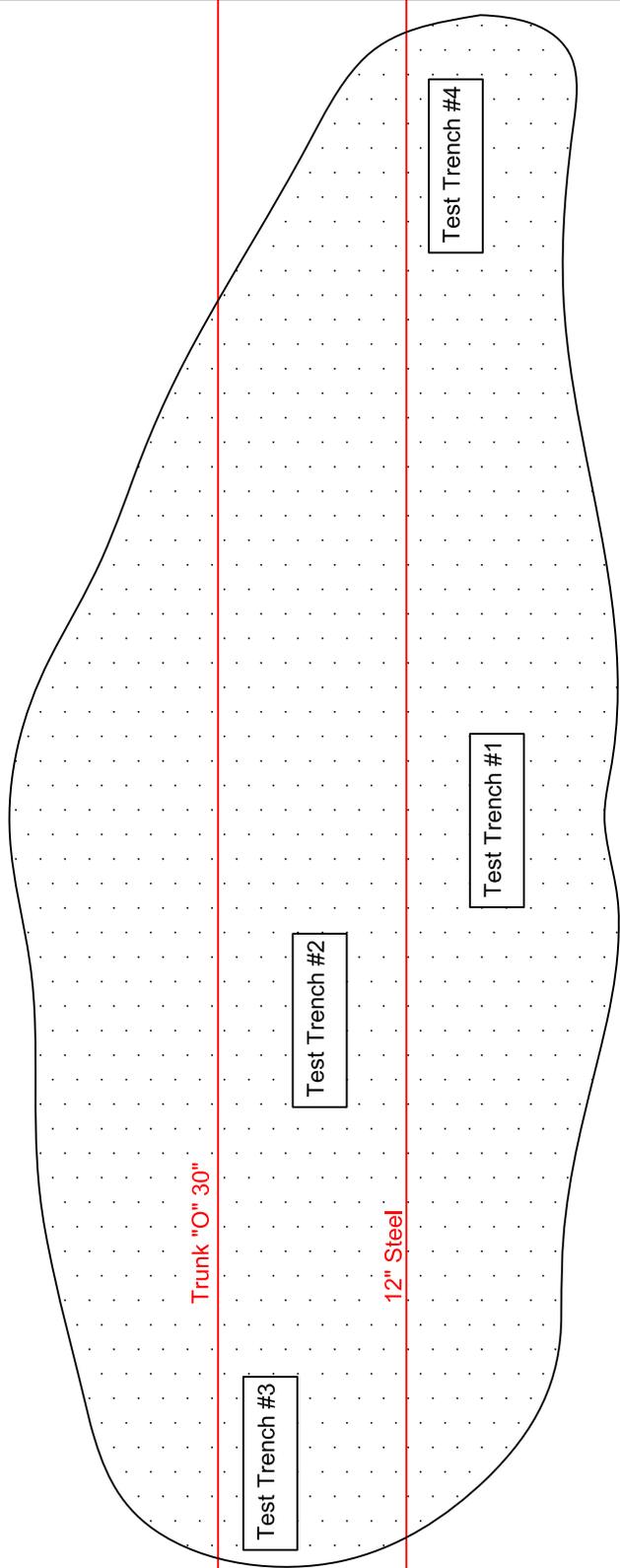
Figure 1
Site Location Map
 Southern Union Gas Services
 Trunk "O" Line
 Lea County, New Mexico
 NMOCD Reference #: 1RP-1541



Basin Environmental Service Technologies, LLC
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: JWL
August 6, 2012	Scale: 1" = 2000'

ROAD



Test Trench #4	
Sample ID	Chloride (ppm)
TT-4 @ 2' bgs	Non-Detect*

Test Trench #1	
Sample ID	Chloride (ppm)
TT-1 @ Surface	Non-Detect*
TT-1 @ 1'	472*
TT-1 @ 4'	<112*

Test Trench #2	
Sample ID	Chloride (ppm)
TT-2 @ Surface	Non-Detect*
TT-2 @ 1'	136*
TT-2 @ 2'	<112*

Test Trench #3	
Sample ID	Chloride (ppm)
TT-3 @ 2'	112*



EI Paso

LEGEND:

- Excavation Extent
- Pipeline
- Sample Location
- ⋯ Disturbed Area
- * Chloride Field Test Result

Figure 2

Site & Sample Location Map
 Southern Union Gas Services
 Trunk "O" Line (RP-1541)
 Lea County, NM

Basin Environmental Services

Scale: 1" = 20'	Drawn By: JWL	Prepared By: BRB
August 13, 2012		

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL

SOUTHERN UNION GAS SERVICES
TRUNK "O"
HISTORICAL RELEASE SITE
LEA COUNTY, NEW MEXICO
NMOCD REF# 1RP-1541

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					METHOD: 8015M			TOTAL TPH C ₆ -C ₃₅ (mg/Kg)	SM 4500-CI B CHLORIDE (mg/Kg)
				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)		
TT-1 @ Surface	surface	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	96.4
TT-1 @ 4'	4'	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	62.6
TT-2 @ Surface	surface	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	<50.0
TT-2 @ 2'	2'	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	57.8
TT-3 @ 2'	2'	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	<50.0
TT-4 @ 2'	2'	8/10/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	62.6
NMOCD Standard				10				50				5,000	1,000

- = Not analyzed.



Photograph of initial release at the Trunk "O" Line Historical Release Site.



Photograph of initial release at the Trunk "O" Line Historical Release Site.



Photograph of initial release at the Trunk "O" Line Historical Release Site.



Photograph of the disturbed area at the Trunk "O" Line Historical Release Site.



Photograph of the disturbed area at the Trunk "O" Line Historical Release Site.



Photograph of the disturbed area at the Trunk "O" Line Historical Release Site.



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
 200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
 5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
 (BioAquatic) 2501 Mayes Rd., Suite 100 Carrollton, Texas 75006 972-242-7750
 E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Rose Slade
 Southern Union Gas Services, Ltd.-Monahans
 801 S. Loop 464
 Monahans, TX, 79756

Report Date: August 22, 2012

Work Order: 12081427



Project Location: Lea Co., NM
 Project Name: Trunk O Line (RP 1541)
 Project Number: SUG Historical Releases

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
306704	TT-1 @ Surface	soil	2012-08-10	08:00	2012-08-14
306705	TT-1 @ 4'	soil	2012-08-10	08:20	2012-08-14
306706	TT-2 @ Surface	soil	2012-08-10	09:00	2012-08-14
306707	TT-2 @ 2'	soil	2012-08-10	09:20	2012-08-14
306708	TT-3 @ 2'	soil	2012-08-10	10:00	2012-08-14
306709	TT-4 @ 2'	soil	2012-08-10	11:00	2012-08-14

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 28 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Abel

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project Trunk O Line (RP 1541) were received by TraceAnalysis, Inc. on 2012-08-14 and assigned to work order 12081427. Samples for work order 12081427 were received intact at a temperature of 1.5 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	79758	2012-08-20 at 10:27	94090	2012-08-20 at 10:27
Chloride (Titration)	SM 4500-Cl B	79658	2012-08-16 at 09:00	93965	2012-08-16 at 09:00
TPH DRO - NEW	S 8015 D	79657	2012-08-15 at 10:00	93964	2012-08-16 at 14:49
TPH GRO	S 8015 D	79758	2012-08-20 at 10:27	94091	2012-08-20 at 10:27
TPH ORO	S 8015 D	79680	2012-08-15 at 09:00	93981	2012-08-17 at 10:57

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 12081427 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 306704 - TT-1 @ Surface

Laboratory: Lubbock
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.99	mg/Kg	1	2.00	100	70 - 130

Sample: 306704 - TT-1 @ Surface

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			96.4	mg/Kg	10	5.00

Sample: 306704 - TT-1 @ Surface

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		2	<50.0	mg/Kg	1	50.0

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene		1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.76	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

Sample: 306705 - TT-1 @ 4'

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
Chloride			62.6	mg/Kg	10	5.00

Sample: 306705 - TT-1 @ 4'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	RL		Dilution	RL
			Result	Units		
DRO	u	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	156	mg/Kg	1	100	156	70 - 130

Sample: 306705 - TT-1 @ 4'

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 94091 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Jb	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.79	mg/Kg	1	2.00	90	70 - 130
4-Bromofluorobenzene (4-BFB)			2.21	mg/Kg	1	2.00	110	70 - 130

Sample: 306705 - TT-1 @ 4'

Laboratory: Midland
 Analysis: TPH ORO Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
 Prep Batch: 79680 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<14.5	<50.0	<50.0	<50.0	mg/Kg	1	14.5	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	158	mg/Kg	1	100	158	70 - 130
n-Triacontane			112	mg/Kg	1	100	112	70 - 130

Sample: 306706 - TT-2 @ Surface

Laboratory: Lubbock
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 306706 - TT-2 @ Surface

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<50.0	mg/Kg	10	5.00

Sample: 306706 - TT-2 @ Surface

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	131	mg/Kg	1	100	131	70 - 130

Sample: 306706 - TT-2 @ Surface

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 94091 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Jb	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.09	mg/Kg	1	2.00	104	70 - 130

Sample: 306706 - TT-2 @ Surface

Laboratory: Midland
 Analysis: TPH ORO Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
 Prep Batch: 79680 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<14.5	<50.0	<50.0	<50.0	mg/Kg	1	14.5	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			129	mg/Kg	1	100	129	70 - 130
n-Triacontane			92.9	mg/Kg	1	100	93	70 - 130

Sample: 306707 - TT-2 @ 2'

Laboratory: Lubbock
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	70 - 130

Sample: 306707 - TT-2 @ 2'

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

continued ...

sample 306707 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			57.8	mg/Kg	10	5.00

Sample: 306707 - TT-2 @ 2'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			121	mg/Kg	1	100	121	70 - 130

Sample: 306707 - TT-2 @ 2'

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 94091 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	jb	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			2.00	mg/Kg	1	2.00	100	70 - 130

Sample: 306707 - TT-2 @ 2'

Laboratory: Midland
 Analysis: TPH ORO Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
 Prep Batch: 79680 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<14.5	<50.0	<50.0	<50.0	mg/Kg	1	14.5	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			119	mg/Kg	1	100	119	70 - 130
n-Triacontane			90.0	mg/Kg	1	100	90	70 - 130

Sample: 306708 - TT-3 @ 2'

Laboratory: Lubbock
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	70 - 130
4-Bromofluorobenzene (4-BFB)			1.97	mg/Kg	1	2.00	98	70 - 130

Sample: 306708 - TT-3 @ 2'

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

continued ...

sample 306708 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			<50.0	mg/Kg	10	5.00

Sample: 306708 - TT-3 @ 2'

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: N/A
Analysis: TPH DRO - NEW	Date Analyzed: 2012-08-16	Analyzed By: CW
QC Batch: 93964	Sample Preparation: 2012-08-15	Prepared By: CW
Prep Batch: 79657		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			120	mg/Kg	1	100	120	70 - 130

Sample: 306708 - TT-3 @ 2'

Laboratory: Lubbock	Analytical Method: S 8015 D	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2012-08-20	Analyzed By: MT
QC Batch: 94091	Sample Preparation: 2012-08-20	Prepared By: MT
Prep Batch: 79758		

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	jb	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			2.12	mg/Kg	1	2.00	106	70 - 130

Sample: 306708 - TT-3 @ 2'

Laboratory: Midland
 Analysis: TPH ORO Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
 Prep Batch: 79680 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<14.5	<50.0	<50.0	<50.0	mg/Kg	1	14.5	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			120	mg/Kg	1	100	120	70 - 130
n-Triacontane			88.5	mg/Kg	1	100	88	70 - 130

Sample: 306709 - TT-4 @ 2'

Laboratory: Lubbock
 Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035
 QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	1	<0.0200	mg/Kg	1	0.0200
Toluene	u	1	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	u	1	<0.0200	mg/Kg	1	0.0200
Xylene	u	1	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.62	mg/Kg	1	2.00	81	70 - 130
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 306709 - TT-4 @ 2'

Laboratory: Lubbock
 Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
 QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 Sample Preparation: 2012-08-16 Prepared By: LM

continued ...

sample 306709 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			62.6	mg/Kg	10	5.00

Sample: 306709 - TT-4 @ 2'

Laboratory: Midland
 Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
 QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 Sample Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	u	2	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			124	mg/Kg	1	100	124	70 - 130

Sample: 306709 - TT-4 @ 2'

Laboratory: Lubbock
 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
 QC Batch: 94091 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 Sample Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	jb	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

Sample: 306709 - TT-4 @ 2'

Laboratory: Midland	Analytical Method: S 8015 D	Prep Method: N/A
Analysis: TPH ORO	Date Analyzed: 2012-08-17	Analyzed By: CW
QC Batch: 93981	Sample Preparation: 2012-08-15	Prepared By: CW
Prep Batch: 79680		

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<14.5	<50.0	<50.0	<50.0	mg/Kg	1	14.5	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			124	mg/Kg	1	100	124	70 - 130
n-Triacontane			89.9	mg/Kg	1	100	90	70 - 130

Method Blanks

Method Blank (1) QC Batch: 93964

QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
Prep Batch: 79657 QC Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		2	<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			110	mg/Kg	1	100	110	70 - 130

Method Blank (1) QC Batch: 93965

QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
Prep Batch: 79658 QC Preparation: 2012-08-16 Prepared By: LM

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 93981

QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
Prep Batch: 79680 QC Preparation: 2012-08-15 Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<14.5	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	70 - 130
n-Triacontane			81.5	mg/Kg	1	100	82	70 - 130

Method Blank (1) QC Batch: 94090

QC Batch: 94090 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 QC Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1	<0.00365	mg/Kg	0.02
Toluene		1	<0.00816	mg/Kg	0.02
Ethylbenzene		1	<0.00560	mg/Kg	0.02
Xylene		1	<0.00460	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)			1.82	mg/Kg	1	2.00	91	70 - 130

Method Blank (1) QC Batch: 94091

QC Batch: 94091 Date Analyzed: 2012-08-20 Analyzed By: MT
 Prep Batch: 79758 QC Preparation: 2012-08-20 Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	0.984	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			1.97	mg/Kg	1	2.00	98	70 - 130

Param	F	C	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
			Result	Units					
Benzene		1	1.88	mg/Kg	1	2.00	<0.00365	94	75.4 - 120
Toluene		1	1.81	mg/Kg	1	2.00	<0.00816	90	74.9 - 120
Ethylbenzene		1	1.84	mg/Kg	1	2.00	<0.00560	92	78.1 - 120
Xylene		1	5.54	mg/Kg	1	6.00	<0.00460	92	77.3 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
			Result	Units							
Benzene		1	1.89	mg/Kg	1	2.00	<0.00365	94	75.4 - 120	0	20
Toluene		1	1.85	mg/Kg	1	2.00	<0.00816	92	74.9 - 120	2	20
Ethylbenzene		1	1.88	mg/Kg	1	2.00	<0.00560	94	78.1 - 120	2	20
Xylene		1	5.65	mg/Kg	1	6.00	<0.00460	94	77.3 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.84	1.88	mg/Kg	1	2.00	92	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 94091
Prep Batch: 79758

Date Analyzed: 2012-08-20
QC Preparation: 2012-08-20

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
			Result	Units					
GRO		1	19.5	mg/Kg	1	20.0	0.984	92	68.9 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD		Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
			Result	Units							
GRO		1	20.0	mg/Kg	1	20.0	0.984	95	68.9 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.80	2.07	mg/Kg	1	2.00	90	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 306704

QC Batch: 93964 Date Analyzed: 2012-08-16 Analyzed By: CW
 Prep Batch: 79657 QC Preparation: 2012-08-15 Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		2	299	mg/Kg	1	250	15.5	113	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		2	306	mg/Kg	1	250	15.5	116	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane <small>Q_{sr}</small> <small>Q_{sr}</small>	131	128	mg/Kg	1	100	131	128	70 - 130

Matrix Spike (MS-1) Spiked Sample: 306713

QC Batch: 93965 Date Analyzed: 2012-08-16 Analyzed By: LM
 Prep Batch: 79658 QC Preparation: 2012-08-16 Prepared By: LM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			607	mg/Kg	10	500	<30.5	121	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			607	mg/Kg	10	500	<30.5	121	80 - 120	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 306704

QC Batch: 93981 Date Analyzed: 2012-08-17 Analyzed By: CW
 Prep Batch: 79680 QC Preparation: 2012-08-15 Prepared By: CW

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Q _{sr}	Q _{sr}	134	127	mg/Kg	1	100	134	127	70 - 130
n-Triacontane			91.2	88.9	mg/Kg	1	100	91	89	70 - 130

Matrix Spike (MS-1) Spiked Sample: 306704

QC Batch: 94090
Prep Batch: 79758

Date Analyzed: 2012-08-20
QC Preparation: 2012-08-20

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.83	mg/Kg	1	2.00	<0.00365	92	37.6 - 142
Toluene		1	1.94	mg/Kg	1	2.00	<0.00816	97	38.6 - 153
Ethylbenzene		1	2.03	mg/Kg	1	2.00	<0.00560	102	36.7 - 172
Xylene		1	6.06	mg/Kg	1	6.00	<0.00460	101	36.7 - 173

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.81	mg/Kg	1	2.00	<0.00365	90	37.6 - 142	1	20
Toluene		1	1.93	mg/Kg	1	2.00	<0.00816	96	38.6 - 153	0	20
Ethylbenzene		1	2.05	mg/Kg	1	2.00	<0.00560	102	36.7 - 172	1	20
Xylene		1	6.14	mg/Kg	1	6.00	<0.00460	102	36.7 - 173	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate			MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)			1.98	1.98	mg/Kg	1	2	99	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	1.91	mg/Kg	1	2	96	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 306704

QC Batch: 94091
Prep Batch: 79758

Date Analyzed: 2012-08-20
QC Preparation: 2012-08-20

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.0	mg/Kg	1	20.0	<0.359	80	68.9 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	16.8	mg/Kg	1	20.0	<0.359	84	68.9 - 120	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.82	1.82	mg/Kg	1	2	91	91	70 - 130
4-Bromofluorobenzene (4-BFB)	2.13	2.17	mg/Kg	1	2	106	108	70 - 130

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-12-8	Lubbock
2	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less than ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

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Phone #: 575-396-2378
Fax #: 575-396-1429
E-mail: pm@basinenrv.com
 rose.slade@sug.com

Invoice to: Southern Union Gas Services
Project #: SUG Historical Releases
Project Location: (Include state)
 Lea County, New Mexico
Project Name: Trunk "O" Line (RP 1541)
Sampler Signature: *Bobby R. Shadkowsky*

ANALYSIS REQUEST
 (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	X
BTEX 8021B / 602 / 8260B / 624	X
TPH 418.1 / TX1005 / DRO / TVHC	X
PAH 8270C / 625	X
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	X
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	X
TCLP Volatiles	X
TCLP Semi Volatiles	X
TCLP Pesticides	X
RCI	X
GC/MS Vol. 8260B / 624	X
GC/MS Semi. Vol. 8270C/625	X
PCBs 8082 / 608	X
Pesticides 8081A / 608	X
BOD, TSS, pH	X
Moisture Content	X
Cl ⁻ , SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	X
Na, Ca, Mg, K, TDS, EC	X

Turn Around Time if different from standard

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX			PRESERVATIVE METHOD				SAMPLING			
				WATER	SOIL	AIR	SLUDGE	HCL	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE
706	TT-1 @ Surface	1		X						X			8/10	8:00
705	TT-1 @ 4'	1		X						X			8/10	8:20
706	TT-2 @ Surface	1		X						X			8/10	9:00
707	TT-2 @ 2'	1		X						X			8/10	9:20
708	TT-3 @ 2'	1		X						X			8/10	10:00
709	TT-4 @ 2'	1		X						X			8/10	11:00

Relinquished by: *Bobby R. Shadkowsky* Date: 8/14/12 Time: 9:00
Received by: *Joe Lowry* Date: 8/14/12 Time: 9:00
Relinquished by: *Joe Lowry* Date: 8/14/12 Time: 12:45
Received by: *Joe Lowry* Date: 8/14/12 Time: 13:45
Relinquished by: *Joe Lowry* Date: 8/14/12 Time: 13:45
Received by: *Joe Lowry* Date: 8/14/12 Time: 13:45

LAB USE ONLY

Intact Y/N

Headspace Y/N N/A

Log-in Review AH

Carrier # *carry in 33: 2018AD*

REMARKS:
 4 oz c.g. w/ seals intact
 Dry Weight Basis Required
 TESP Report Required
 Check if Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions
A. Hernandez TA 8/14/12 2:30 ORIGINAL
A. Hernandez TA 8/15/12 9:00 ORIGINAL
 31/3A

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-141
Revised October 10, 2003

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

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

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

Surface Owner: State of New Mexico	Mineral Owner: State	Lease No.
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LOCATION OF RELEASE

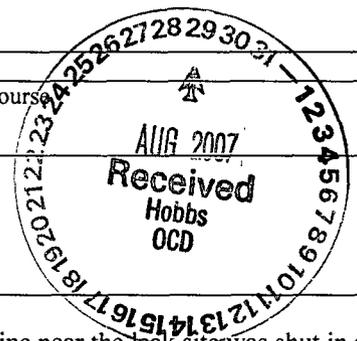
Unit Letter G	Section 9	Township 22S	Range 36E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude N32 24.388 Longitude W103 15.952

NATURE OF RELEASE

WTR ~ 200'

Type of Release : Crude Oil, Produced water, and Natural Gas	Volume of Release: 330 Bbbls Fluid and 672 MCF Nat. Gas	Volume Recovered 230 Bbbls
Source of Release : 30" Natural Gas Pipeline	Date and Hour of Occurrence not known	Date and Hour of Discovery 8/25/07 Time: 10:16 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Buddy Hill NMOCD	
By Whom? Will Green	Date and Hour: 8/25/07 11:20 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	



If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 30" Natural Gas gathering line operating at approximately 30 p.s.i. developed a leak. The section of line near the leak site was shut in and allowed to blow-down. A vacuum truck was dispatched to the site and the repair crew started constructing dikes to contain the fluid being released. Approximately 230 Bbbls of fluid was recovered while the line was blowing down. Permanent repairs will be made 8/29/07.

Describe Area Affected and Cleanup Action Taken. Approximately 15,345 sq.ft. of pasture land was affected by the leak and temporary repair. The heavily saturated soil was pushed toward the release point to prevent further saturation. Final remediation will follow the NMOCD recommended guidelines for leaks and spills.

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

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: John A. Savoie	<i>J. Johnson</i>	
Title: Remediation Supervisor	Approved by District Supervisor:	ENVIRONMENTAL ENGINEER
E-mail Address: tony.savoie@sug.com	Approval Date: <i>7.31.07</i>	Expiration Date: <i>10-1-07</i>
Date: 8/28/07 Phone: 505-395-2116	Conditions of Approval:	Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary

RP# 1541

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State of New Mexico
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Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	Southern Union Gas Services, Ltd.	Contact	Crystal Callaway
Address	801 S. Loop 464, Monahans, TX, 79756	Telephone No.	(817) 302-9407
Facility Name	Lea County Field Dept.	Facility Type	Natural Gas Gathering

Surface Owner	State of New Mexico	Mineral Owner: State	Lease No.
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	9	22S	36E					Lea

Latitude N32 24.388

Longitude W103 15.952

NATURE OF RELEASE

Type of Release	Crude Oil, Produced water and Natural Gas	Volume of Release	330 Bbls Fluid and 672 MCF Nat. Gas	Volume Recovered	230 Bbls
Source of Release	30" Natural Gas Pipeline	Date and Hour of Occurrence	not known	Date and Hour of Discovery	8/25/07 Time: 10:16 a.m.
Was Immediate Notice Given?	X Yes No Not Required	If YES, To Whom?	Buddy Hill NMOCD		
By Whom?	Will Green	Date and Hour:	8/25/07 11:20 a.m.		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken:

A 30" Natural Gas gathering line operating at approximately 30 p.s.i. developed a leak. The section of line near the leak site was shut in and allowed to blow-down. A vacuum truck was dispatched to the site and the repair crew started constructing dikes to contain the fluid being released. Approximately 230 bbls of fluid was recovered while the line was blowing down. The pipeline has since been repaired.

Describe Area Affected and Cleanup Action Taken. Approximately 15,345 sq. ft. of pasture land was affected by the leak and temporary repair. Heavily saturated soil was pushed toward the release point to prevent further saturation.

Prior to June 22, 2012, remediation activities were conducted at the Trunk "O" Line Release Site by an environmental contractor that is no longer affiliated with the site. On August 10, 2012, the site was revisited in an effort to determine if soil exhibiting benzene, BTEX, TPH and chloride concentrations above NMOCD regulatory standards remained in-situ and collect confirmation soil samples. Laboratory analytical reports from the confirmation soil samples indicated previous remediation activities met the requirements of the NMOCD.

Please see the attached Basin Environmental Services Technologies Remediation Summary and Site Closure Request for details of remedial activities and the site investigation.

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Crystal Callaway	Approved by District Supervisor:		
Title: Senior Environmental Remediation Specialist	Approval Date:	Expiration Date:	
E-mail Address: Crystal.Callaway@Regencygas.com	Conditions of Approval:		
Date: 10/31/14	Phone: (817) 302-9407		