

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-14
Revised October 10, 200

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Southern Union Gas Services	Contact	Rose Slade
Address	801 S. Loop 464, Monahans, TX 79756	Telephone No.	432-940-5147
Facility Name	Line 4A	Facility Type	Natural Gas Pipeline
Surface Owner	Crawford Ranch	Lease No.	30-025-38822

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	30	24S	37E					Lea

Latitude 32 degrees 11.352' North Longitude 103 degrees 12.553' West

NATURE OF RELEASE

Type of Release	Natural Gas, Crude Oil and Produced Water	Volume of Release	20 BBLS	Volume Recovered	None
Source of Release	10 inch Natural Gas Pipeline	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	June 27, 2012 - 0830 hours
Was Immediate Notice Given?	☐ Yes ☐ No ☒ Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A ten (10)-inch low pressure natural gas pipeline developed a leak, resulting in a release of natural gas, crude oil and produced water. During initial response activities the pipeline was shut-in to mitigate the release. Following initial response activities, the affected pipeline segment will be replaced with 10 inch poly line and returned to service.

Describe Area Affected and Cleanup Action Taken.*

An area of pasture land measuring approximately 5,400 square feet was affected by airborne liquids. An area of pasture land measuring approximately 1,320 square feet was affected by liquids flowing from the release point. The release will be remediated according to NMOCD regulatory guidelines.

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

Signature: <i>Rose L. Slade</i>	OIL CONSERVATION DIVISION	
Printed Name: Rose L. Slade	ENV SPECIALIST: Approved by District Supervisor: <i>Jeff LeKing</i>	
Title: EHS Compliance Specialist	Approval Date: 7/2/12	Expiration Date: 9/2/12
E-mail Address: rose.slade@sug.com	Conditions of Approval: SUBMIT FINAL C-141 BY 9/2/12	Attached ☐ IRP-7-12-2835
Date: June 28, 2012	Phone: 432-940-5147	

* Attach Additional Sheets If Necessary

Basin Environmental Service Technologies, LLC

3100 Plains Highway
P. O. Box 301
Lovington, New Mexico 88260

jwlowry@basinenv.com

Office: (575) 396-2378

Fax: (575) 396-1429



REMEDIATION SUMMARY & SITE CLOSURE REQUEST

**SOUTHERN UNION GAS SERVICES
LINE 4A (South)**

Lea County, New Mexico

Unit Letter "M" (SW/SW), Section 30, Township 24 South, Range 37 East

Latitude 32° 11.352' North, Longitude 103° 12.553' West

NMOCD Reference # 1RP 7-12-2835

Prepared For:

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

HOBBS OCD

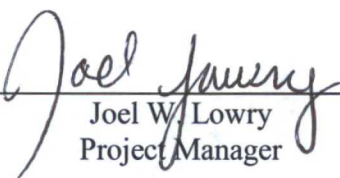
OCT 24 2012

Prepared By:

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

RECEIVED

September 2012


Joel W. Lowry
Project Manager

*approved.
Steve Leung
Env. Specialist
NMOCD - DIST 1
10/24/12*

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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 release site known as Line 4A (South). The legal description of the release site is Unit Letter "M" (SW/SW), Section 30, Township 24 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 32° 11.352' North latitude and 103° 12.553' West longitude. The property affected by the release is owned by the Crawford Ranch. Please reference Figure 1 for a "Site Location Map".

On June 27, 2012, Southern Union discovered a release had occurred on the Line 4A Pipeline. The "Release Notification and Corrective Action" (Form C-141) indicated failure of a section of ten-inch (10") low-pressure pipeline resulted in the release of approximately twenty barrels (20 bbls) of a mixture of crude oil, produced water and natural gas. During initial response activities the pipeline was shut-in to mitigate the release. Approximately one thousand, three hundred and twenty square feet (1,320 ft²) of pasture land was affected by liquids flowing from the release. Airborne liquids from the release affected approximately five thousand, four hundred square feet (5,400 ft²) of pasture land. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on July 2, 2012. General photographs of the release site are provided as Appendix A. The Form C-141 is provided as Appendix D.

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 30, Township 24 South, Range 37 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately seventy-five feet (75') below ground surface (bgs). Based on the NMOCD ranking system, ten (10) 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 Line 4A (South) release site has an initial ranking score of ten (10) points. The soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 1,000 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 July 25, 2012, Basin began delineation activities at the release site. A delineation trench (R.P. Trench) was excavated adjacent to the release point and to the west of Line 4A, to investigate the vertical extent of soil impact. During the excavation of the delineation trench, select soil samples were field screened using a photo-ionization detector (PID) and chloride field test strips. The delineation trench was excavated to a total depth of approximately six feet (6') bgs. On completion of the delineation trench, one (1) soil sample (R.P. Trench @ 6') was collected and submitted to TraceAnalysis Inc, of Midland, Texas for analysis of benzene, toluene, ethylbenzene and xylene (BTEX), total petroleum hydrocarbons (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 the benzene concentration was less than the laboratory method detection limit (MDL) of 1.00 mg/Kg. Analytical results indicated the BTEX concentration was 42.69 mg/Kg. Analytical results indicated the TPH concentration was 9,830 mg/Kg. The chloride concentration was 80.2 mg/Kg. 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.

Delineation trench (Flow Path Trench) was excavated in the flowpath of the release, approximately sixty feet (60') south of the release point. The delineation trench was excavated to a total depth of approximately four feet (4') bgs. During the excavation of the delineation trench, two (2) soil samples (Flow Path Surface and Flow Path @ 4') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples. Analytical results indicated BTEX concentrations ranged from less than the laboratory MDL of 0.0200 mg/Kg for soil sample Flow Path @ 4' to 3.029 mg/Kg for soil sample Flow Path Surface. Analytical results indicated TPH concentrations ranged from less than the laboratory MDL of 50.0 mg/Kg for soil sample Flow Path @ 4' to 6,807 mg/Kg for soil sample Flow Path Surface. Chloride concentrations ranged from less than the laboratory MDL of 20 mg/Kg for soil sample Flow Path @ 4' to 1,070 mg/Kg for soil sample Flow Path Surface.

Delineation trench (Pooling Area Trench) was excavated in a pooling area at the southern terminus of the release flowpath, approximately one hundred twenty (120') south of the release point. The delineation trench was excavated to a total depth of approximately six feet (6') bgs. During the excavation of the delineation trench, two (2) soil samples (Pooling Area @4' and Pooling Area @ 6') were collected and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL in each of the submitted soil samples. Analytical results indicated BTEX concentrations ranged from 0.636 mg/Kg for soil sample Pooling Area @ 6' to 72.8 mg/Kg for soil sample Pooling Area @ 4'. Analytical results indicated TPH concentrations ranged from 711 mg/Kg for soil sample Pooling Area @ 6' to 15,500 mg/Kg for

soil sample Pooling Area @ 4'. Chloride concentrations ranged from 66 mg/Kg for soil sample Pooling Area @ 4' to 274 mg/Kg for soil sample Pooling Area @ 6'.

On July 26, 2012, Basin began excavation activities at the release site. The excavation floor and sidewalls were advanced until field test suggested TPH and chloride concentrations were below NMOCD regulatory remediation action levels. Impacted soil was stockpiled on-site pending final disposition. The northern portion of the excavation was excavated to approximately eight feet (8') bgs in the area represented by soil sample R.P. Trench @ 6'. The release flow path was excavated to a total depth approximately five feet (5') bgs in the area represented by soil samples Flow Path Surface and Flow Path @ 4'. The southern portion of the excavation was excavated to a depth of approximately ten feet (10') bgs in the area represented by soil samples Pooling Area @ 4' and Pooling Area @ 6'.

On August 2, 2012, eleven (11) confirmation soil samples (West S.W #1, West S.W #2, West S.W #3, Floor #1, Floor #2, Floor #3, South S.W., East S.W. #1, East S.W. #2, East S.W. #3, and North S.W.) were collected from the floor and sidewalls of the Line 4A (South) excavation. Confirmation soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDLs for each of the submitted soil samples. Analytical results indicated TPH concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples, with the exception of soil sample Floor #3, which exhibited a concentration of 142.53 mg/Kg. Chloride concentrations were less than the appropriate laboratory MDL for each of the submitted soil samples, with the exception of soil sample Floor #1, which exhibited a concentration of 219.0 mg/Kg. Benzene, BTEX, TPH and chloride concentrations were less than NMOCD regulatory remediation action levels in each of the submitted soil samples.

On August 20, 2012, on receiving approval from an NMOCD representative, the excavation was backfilled with locally purchased, non-impacted material. Excavation backfill was compacted in twelve-inch (12") lifts and contoured to fit the surrounding topography. Prior to backfilling the excavation, the final dimensions were approximately one hundred eighty feet (180') in length, thirty feet (30') to forty feet (40') in width, and ranged in depth from approximately five feet (5') to ten feet (10') bgs. The site will be reseeded at the request of the landowner.

Between July 30, and August 3, 2012, approximately seven hundred ninety-two cubic yards (792 yd³) of impacted material was transported to Sundance Services, Inc. (NMOCD Permit # 01-0003) for disposal. Copies of disposal manifests are provided as Appendix C.

4.0 QA/QC PROCEDURES

4.1 Soil Sampling

Soil samples were delivered to TraceAnalysis, Inc., of Odessa, 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 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 floor and sidewalls of the Line 4A (South) excavation were analyzed by an NMOCD-approved laboratory, which determined concentrations of benzene, BTEX, TPH and chloride were less than the regulatory remediation action levels established for the site. 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 Line 4A (South) 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
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: Rose Slade & Curt Stanley
Southern Union Gas Services
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Monahans, Texas 79756
rose.slade@sug.com
curt.stanley@sug.com

Copy 3: Basin Environmental Service Technologies, LLC
P.O. Box 301
Lovington, New Mexico 88260

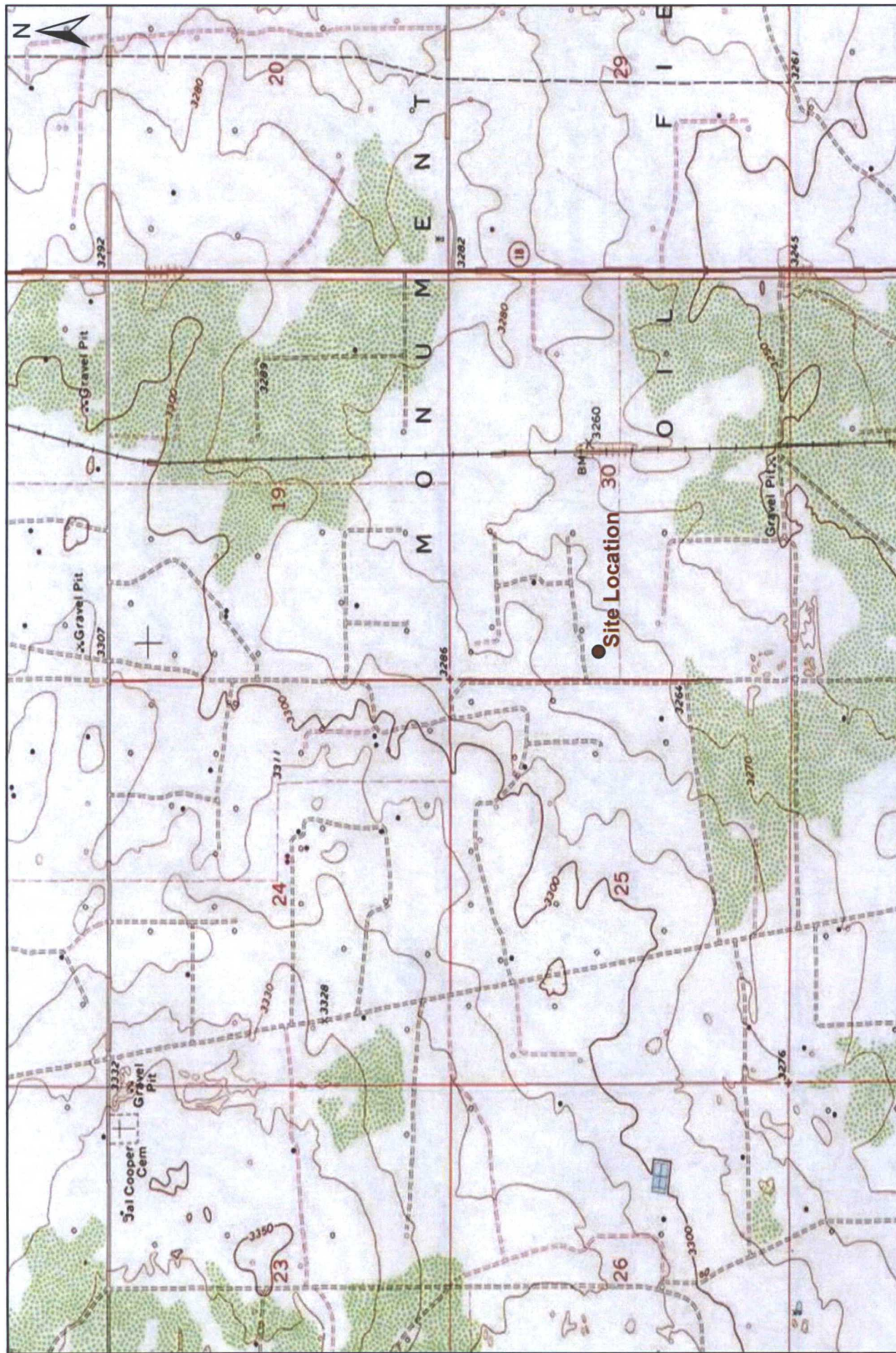


Figure 1
Site Location Map
Southern Union Gas Services
Line 4A (South)
Lea County, New Mexico
NMOCD Reference #: 1RP-7-12-2835



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

Drawn By: BJA	Checked By: JWL
August 23, 2012	
Scale: 1" = 2000'	

1,000 500 0 1,000 2,000



Distance in Feet

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

Drawn By: BJA	Checked By: JWL
August 23, 2012	
Scale: 1" = 2000'	

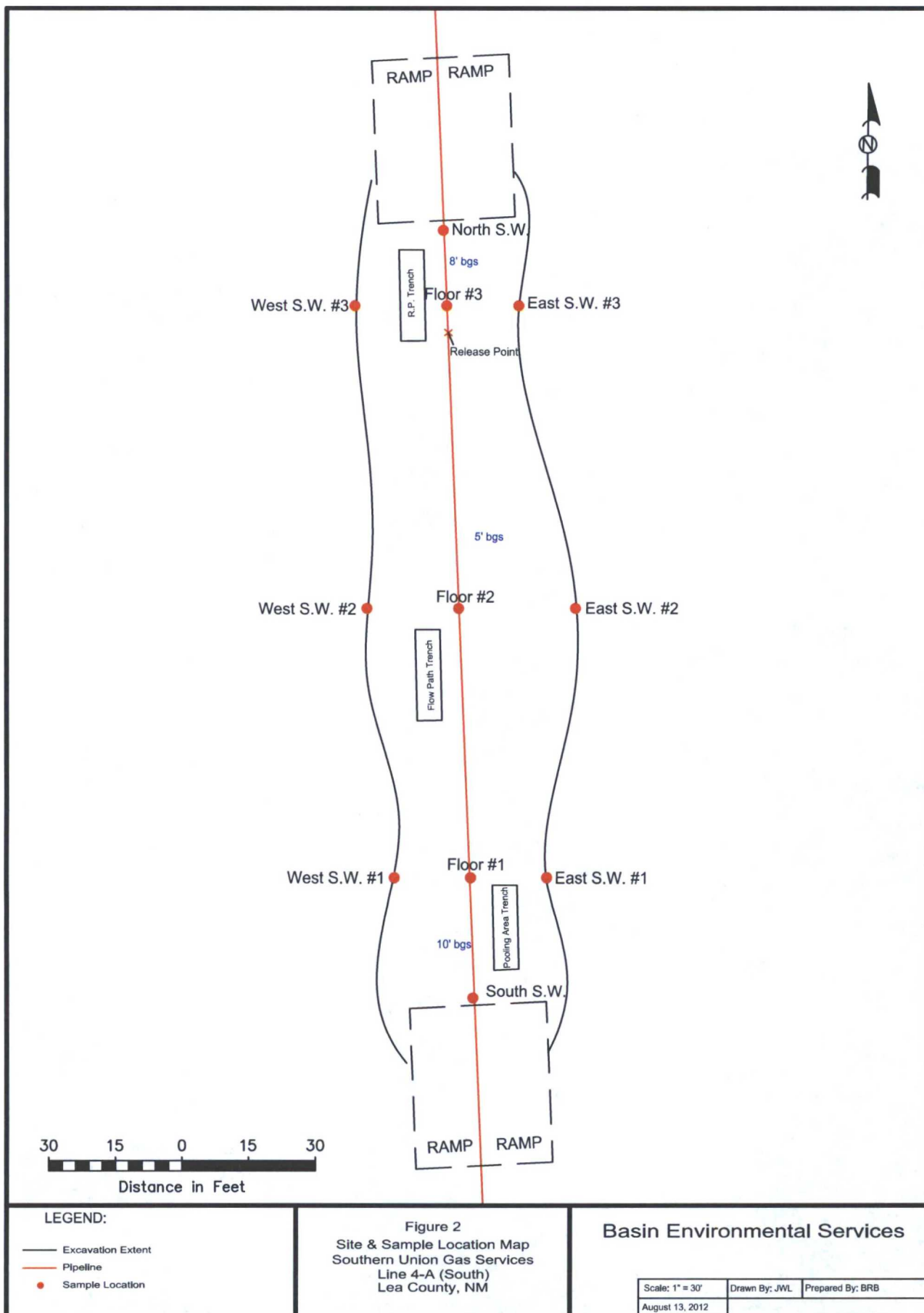


TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL
SOUTHERN UNION GAS SERVICES
LINE 4-A SOUTH
LEA COUNTY, NEW MEXICO

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-CL 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)		
R.P. Trench @ 6'	6'	7/25/2012	Excavated	<1.00	4.49	10.6	27.6	42.69	2.420	7.410	<250	9,830	80.2
Flow Path Surface	Surface	7/25/2012	Excavated	<0.200	<0.200	0.589	2.44	3.029	247	6,560	<250	6,807	1,070
Flow Path @ 4'	4'	7/25/2012	Excavated	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	<20.0
Pooling Area @ 4'	4'	7/25/2012	Excavated	<1.00	9.1	14.5	49.2	72.8	3,500	12,000	<250	15,500	66.0
Pooling Area @ 6'	6'	7/25/2012	Excavated	<0.0400	<0.0400	0.159	0.477	0.636	111	600	<50.0	711	274
West S.W. #1	5'	8/2/2012	In-Situ	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	<20.0
West S.W. #2	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
West S.W. #3	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
Floor #1	10'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	219.0
Floor #2	6'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
Floor #3	7'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	136	6.53	<50.0	142.53	<20.0
South S.W.	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
East S.W. #1	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
East S.W. #2	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
East S.W. #3	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
North S.W.	5'	8/2/2012	In-Situ	<0.0200	<0.002	<0.002	<0.002	<0.002	<4.00	<50.0	<50.0	<50.0	<20.0
NMOCD Standard				10				50				1,000	

- = Not analyzed.



Surface staining from initial release at the Line 4A Release Site. (Looking North)



Excavation activities at the Line 4A Release Site. (Looking South)



Excavation activities at the Line 4A Release Site. (Looking South)



Excavation activities at the Line 4A Release Site. (Looking North)



Backfilled excavation at the Line 4A Release Site. (Looking North)



Line 4A Release Site after remediation activities. (Looking East)



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 (Corrected Report)

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

Report Date: August 14, 2012

Work Order: 12072706



Project Location: Lea Co., NM
Project Name: Line 4-A
Project Number: Line 4-1 (South)

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
304927	R.P. Trench @ 6'	soil	2012-07-25	12:00	2012-07-27
304928	Flow Path Surface	soil	2012-07-25	12:20	2012-07-27
304929	Flow Path @ 4'	soil	2012-07-25	12:40	2012-07-27
304930	Pooling Area @ 4'	soil	2012-07-25	13:00	2012-07-27
304931	Pooling Area @ 6'	soil	2012-07-25	13:20	2012-07-27

Report Corrections (Work Order 12072706)

- Added TPH ORO 8/7/12.

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 27 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 Line 4-A were received by TraceAnalysis, Inc. on 2012-07-27 and assigned to work order 12072706. Samples for work order 12072706 were received intact at a temperature of 2.3 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	79391	2012-08-03 at 16:49	93651	2012-08-03 at 16:49
Chloride (Titration)	SM 4500-Cl B	79302	2012-08-01 at 09:04	93601	2012-08-03 at 16:05
TPH DRO - NEW	S 8015 D	79291	2012-07-31 at 08:00	93508	2012-08-01 at 08:41
TPH GRO	S 8015 D	79391	2012-08-03 at 16:49	93653	2012-08-03 at 16:49
TPH ORO	S 8015 D	79291	2012-07-31 at 08:00	93844	2012-08-13 at 13:35

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 12072706 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.

Report Date: August 14, 2012
Line 4-1 (South)

Work Order: 12072706
Line 4-A

Page Number: 6 of 27
Lea Co., NM

Analytical Report

Sample: 304927 - R.P. Trench @ 6'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93651
Prep Batch: 79391

Analytical Method: S 8021B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	1	1	<1.00	mg/Kg	50	0.0200
Toluene		1	4.49	mg/Kg	50	0.0200
Ethylbenzene		1	10.6	mg/Kg	50	0.0200
Xylene		1	27.6	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	50	2.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	3.17	mg/Kg	50	2.00	158	70 - 130

Sample: 304927 - R.P. Trench @ 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93601
Prep Batch: 79302

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-01

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			80.2	mg/Kg	5	4.00

Sample: 304927 - R.P. Trench @ 6'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 93508
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-01
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q _s	1	7410	mg/Kg	5	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	334	mg/Kg	5	100	334	75.4 - 130

Sample: 304927 - R.P. Trench @ 6'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 93653
Prep Batch: 79391

Analytical Method: S 8015 D
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q _s	1	2420	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Q _{sr}	Q _{sr}	0.960	mg/Kg	50	2.00	48	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	42.2	mg/Kg	50	2.00	2110	70 - 130

Sample: 304927 - R.P. Trench @ 6'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93844
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-13
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	U		<85.5	<250	<250	<250	mg/Kg	5	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	327	mg/Kg	5	100	327	61.5 - 159
n-Triacontane			153	mg/Kg	5	100	153	70 - 166

Sample: 304928 - Flow Path Surface

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93651
Prep Batch: 79391

Analytical Method: S 8021B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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Parameter	Flag	Cert	RL	Units	Dilution	RL	
			Result				
Benzene	2	U	1	<0.200	mg/Kg	10	0.0200
Toluene			1	<0.200	mg/Kg	10	0.0200
Ethylbenzene			1	0.589	mg/Kg	10	0.0200
Xylene			1	2.44	mg/Kg	10	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.41	mg/Kg	10	2.00	70	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	3.21	mg/Kg	10	2.00	160	70 - 130

Sample: 304928 - Flow Path Surface

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93601 Date Analyzed: 2012-08-03 Analyzed By: AR
Prep Batch: 79302 Sample Preparation: 2012-08-01 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			1070	mg/Kg	10	4.00

Sample: 304928 - Flow Path Surface

Laboratory: Lubbock
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 93508 Date Analyzed: 2012-08-01 Analyzed By: CM
Prep Batch: 79291 Sample Preparation: 2012-07-31 Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q _s	1	6560	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	303	mg/Kg	5	100	303	75.4 - 130

Sample: 304928 - Flow Path Surface

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 93653 Date Analyzed: 2012-08-03 Analyzed By: ZLM
Prep Batch: 79391 Sample Preparation: 2012-08-03 Prepared By: ZLM

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	247	mg/Kg	10	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	1.40	mg/Kg	10	2.00	70	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	5.12	mg/Kg	10	2.00	256	70 - 130

Sample: 304928 - Flow Path Surface

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93844
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-13
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	U		<85.5	<250	<250	<250	mg/Kg	5	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	293	mg/Kg	5	100	293	61.5 - 159
n-Triacontane			135	mg/Kg	5	100	135	70 - 166

Sample: 304929 - Flow Path @ 4'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93651
Prep Batch: 79391

Analytical Method: S 8021B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.72	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

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Sample: 304929 - Flow Path @ 4'

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93601 Date Analyzed: 2012-08-03 Analyzed By: AR
Prep Batch: 79302 Sample Preparation: 2012-08-01 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 304929 - Flow Path @ 4'

Laboratory: Lubbock
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 93508 Date Analyzed: 2012-08-01 Analyzed By: CM
Prep Batch: 79291 Sample Preparation: 2012-07-31 Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Jb, Qs	1	<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	75.4 - 130

Sample: 304929 - Flow Path @ 4'

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 93653 Date Analyzed: 2012-08-03 Analyzed By: ZLM
Prep Batch: 79391 Sample Preparation: 2012-08-03 Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs, U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.67	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

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Sample: 304929 - Flow Path @ 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93844
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-13
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	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	61.5 - 159
n-Triacontane			130	mg/Kg	1	100	130	70 - 166

Sample: 304930 - Pooling Area @ 4'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93651
Prep Batch: 79391

Analytical Method: S 8021B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	3	u	1	mg/Kg	50	0.0200
Toluene			1	mg/Kg	50	0.0200
Ethylbenzene			1	mg/Kg	50	0.0200
Xylene			1	mg/Kg	50	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	50	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3.86	mg/Kg	50	2.00	193	70 - 130

Sample: 304930 - Pooling Area @ 4'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93601
Prep Batch: 79302

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-01

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

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sample 304930 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			66.0	mg/Kg	5	4.00

Sample: 304930 - Pooling Area @ 4'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93508

Prep Batch: 79291

Analytical Method: S 8015 D

Date Analyzed: 2012-08-01

Sample Preparation: 2012-07-31

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	12000	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	406	mg/Kg	5	100	406	75.4 - 130

Sample: 304930 - Pooling Area @ 4'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93653

Prep Batch: 79391

Analytical Method: S 8015 D

Date Analyzed: 2012-08-03

Sample Preparation: 2012-08-03

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	3500	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	0.759	mg/Kg	50	2.00	38	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	61.2	mg/Kg	50	2.00	3060	70 - 130

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Sample: 304930 - Pooling Area @ 4'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93844
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-13
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	ML Result	PQL Result	RL Result	Units	Dilution	MDL	ML	PQL	RL
ORO	U		<85.5	<250	<250	<250	mg/Kg	5	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	406	mg/Kg	5	100	406	61.5 - 159
n-Triacontane			160	mg/Kg	5	100	160	70 - 166

Sample: 304931 - Pooling Area @ 6'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93651
Prep Batch: 79391

Analytical Method: S 8021B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-03

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	4 U	1	<0.0400	mg/Kg	2	0.0200
Toluene	U	1	<0.0400	mg/Kg	2	0.0200
Ethylbenzene		1	0.159	mg/Kg	2	0.0200
Xylene		1	0.477	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	2	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.72	mg/Kg	2	2.00	136	70 - 130

Sample: 304931 - Pooling Area @ 6'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93601
Prep Batch: 79302

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-03
Sample Preparation: 2012-08-01

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			274	mg/Kg	5	4.00

Sample: 304931 - Pooling Area @ 6'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93508

Prep Batch: 79291

Analytical Method: S 8015 D

Date Analyzed: 2012-08-01

Sample Preparation: 2012-07-31

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	600	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	75.4 - 130

Sample: 304931 - Pooling Area @ 6'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93653

Prep Batch: 79391

Analytical Method: S 8015 D

Date Analyzed: 2012-08-03

Sample Preparation: 2012-08-03

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs	1	111	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.58	mg/Kg	2	2.00	79	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3.28	mg/Kg	2	2.00	164	70 - 130

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Sample: 304931 - Pooling Area @ 6'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93844
Prep Batch: 79291

Analytical Method: S 8015 D
Date Analyzed: 2012-08-13
Sample Preparation: 2012-07-31

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			126	mg/Kg	1	100	126	61.5 - 159
n-Triacontane			118	mg/Kg	1	100	118	70 - 166

Method Blanks

Method Blank (1) QC Batch: 93508

QC Batch: 93508
Prep Batch: 79291

Date Analyzed: 2012-08-01
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	8.78	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			124	mg/Kg	1	100	124	75.4 - 130

Method Blank (1) QC Batch: 93601

QC Batch: 93601
Prep Batch: 79302

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-01

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 93651

QC Batch: 93651
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

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)			1.84	mg/Kg	1	2.00	92	70 - 130

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

Method Blank (1) QC Batch: 93653

QC Batch: 93653
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	4

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)			1.81	mg/Kg	1	2.00	90	70 - 130

Method Blank (1) QC Batch: 93844

QC Batch: 93844
Prep Batch: 79291

Date Analyzed: 2012-08-13
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<17.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			124	mg/Kg	1	100	124	61.5 - 159
n-Triacontane			126	mg/Kg	1	100	126	70 - 166

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 93508
Prep Batch: 79291

Date Analyzed: 2012-08-01
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	248	mg/Kg	1	250	8.78	96	73.2 - 118

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	289	mg/Kg	1	250	8.78	112	73.2 - 118	15	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
n-Tricosane	108	117	mg/Kg	1	100	108	117	75.4 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93601
Prep Batch: 79302

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-01

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2740	mg/Kg	1	2500	<3.85	110	85 - 115

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2660	mg/Kg	1	2500	<3.85	106	85 - 115	3	20

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

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Laboratory Control Spike (LCS-1)

QC Batch: 93651
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.92	mg/Kg	1	2.00	<0.00365	96	75.4 - 120
Toluene		1	1.90	mg/Kg	1	2.00	<0.00816	95	74.9 - 120
Ethylbenzene		1	1.89	mg/Kg	1	2.00	<0.00560	94	78.1 - 120
Xylene		1	5.59	mg/Kg	1	6.00	<0.00460	93	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.92	mg/Kg	1	2.00	<0.00365	96	75.4 - 120	0	20
Toluene		1	1.89	mg/Kg	1	2.00	<0.00816	94	74.9 - 120	0	20
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00560	96	78.1 - 120	2	20
Xylene		1	5.68	mg/Kg	1	6.00	<0.00460	95	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
Trifluorotoluene (TFT)	1.69	1.82	mg/Kg	1	2.00	84	91	70 - 130
4-Bromofluorobenzene (4-BFB)	1.78	1.86	mg/Kg	1	2.00	89	93	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93653
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.4	mg/Kg	1	20.0	<0.359	82	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 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	2	20

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

continued ...

Report Date: August 14, 2012
Line 4-1 (South)

Work Order: 12072706
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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.90	1.93	mg/Kg	1	2.00	95	96	70 - 130
4-Bromofluorobenzene (4-BFB)	1.92	1.90	mg/Kg	1	2.00	96	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93844
Prep Batch: 79291

Date Analyzed: 2012-08-13
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	108	117	mg/Kg	1	100	108	117	61.5 - 159
n-Triacontane	111	119	mg/Kg	1	100	111	119	70 - 166

Matrix Spike (MS-1) Spiked Sample: 304927

QC Batch: 93508
Prep Batch: 79291

Date Analyzed: 2012-08-01
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Param			MS			Spike	Matrix		Rec.	
	F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	
DRO	Qs	Qs	1	9290	mg/Kg	5	250	7410	752	75.4 - 130

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

Param				MSD			Spike	Matrix		Rec.		RPD
		F	C	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	Q _s	Q _s	1	9580	mg/Kg	5	250	7410	868	75.4 - 130	3	20

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

			MS	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Q _{sr}	Q _{sr}	377	395	mg/Kg	5	100	377	395	38.4 - 143

Report Date: August 14, 2012
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Matrix Spike (MS-1) Spiked Sample: 305073

QC Batch: 93601
Prep Batch: 79302

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-01

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	5	2500	28.3	104	79.4 - 120.6

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			2690	mg/Kg	5	2500	28.3	106	79.4 - 120.6	2	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: 304928

QC Batch: 93651
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.79	mg/Kg	10	2.00	<0.0365	90	37.6 - 142
Toluene		1	2.02	mg/Kg	10	2.00	0.0874	97	38.6 - 153
Ethylbenzene		1	2.40	mg/Kg	10	2.00	0.589	90	36.7 - 172
Xylene		1	7.39	mg/Kg	10	6.00	2.44	82	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	1.79	mg/Kg	10	2.00	<0.0365	90	37.6 - 142	0	20
Toluene		1	2.07	mg/Kg	10	2.00	0.0874	99	38.6 - 153	2	20
Ethylbenzene		1	2.44	mg/Kg	10	2.00	0.589	92	36.7 - 172	2	20
Xylene		1	7.46	mg/Kg	10	6.00	2.44	84	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)	1.61	1.45	mg/Kg	10	2	80	72	70 - 130
4-Bromofluorobenzene (4-BFB)	1.70	1.64	mg/Kg	10	2	85	82	70 - 130

Report Date: August 14, 2012
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Matrix Spike (MS-1) Spiked Sample: 304928

QC Batch: 93653
Prep Batch: 79391

Date Analyzed: 2012-08-03
QC Preparation: 2012-08-03

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	Q _s	Q _s	1	581	mg/Kg	10	20.0	247	1670 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	Q _s	Q _s	1	617	mg/Kg	10	20.0	247	1850 68.9 - 120	6	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)	1.54	1.51	mg/Kg	10	2	77	76	70 - 130
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	7.76	8.07	mg/Kg	10	2	388 404 70 - 130

Matrix Spike (MS-1) Spiked Sample: 304927

QC Batch: 93844
Prep Batch: 79291

Date Analyzed: 2012-08-13
QC Preparation: 2012-07-31

Analyzed By: CM
Prepared By: CM

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	Q _{sr}	Q _{sr}	360	377	mg/Kg	5	100	360 377 61.5 - 159
n-Triacontane	152	155	mg/Kg	5	100	152	155	70 - 166

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Calibration Standards

Standard (CCV-1)

QC Batch: 93508

Date Analyzed: 2012-08-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	258	103	80 - 120	2012-08-01

Standard (CCV-2)

QC Batch: 93508

Date Analyzed: 2012-08-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	263	105	80 - 120	2012-08-01

Standard (CCV-3)

QC Batch: 93508

Date Analyzed: 2012-08-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	289	116	80 - 120	2012-08-01

Standard (CCV-1)

QC Batch: 93601

Date Analyzed: 2012-08-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2012-08-03

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Standard (CCV-2)

QC Batch: 93601

Date Analyzed: 2012-08-03

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-08-03

Standard (CCV-1)

QC Batch: 93651

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0946	95	80 - 120	2012-08-03
Toluene		1	mg/kg	0.100	0.0940	94	80 - 120	2012-08-03
Ethylbenzene		1	mg/kg	0.100	0.0948	95	80 - 120	2012-08-03
Xylene		1	mg/kg	0.300	0.281	94	80 - 120	2012-08-03

Standard (CCV-2)

QC Batch: 93651

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0924	92	80 - 120	2012-08-03
Toluene		1	mg/kg	0.100	0.0906	91	80 - 120	2012-08-03
Ethylbenzene		1	mg/kg	0.100	0.0915	92	80 - 120	2012-08-03
Xylene		1	mg/kg	0.300	0.272	91	80 - 120	2012-08-03

Standard (CCV-3)

QC Batch: 93651

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0925	92	80 - 120	2012-08-03

continued ...

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Line 4-1 (South)

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standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Toluene		1	mg/kg	0.100	0.0897	90	80 - 120	2012-08-03
Ethylbenzene		1	mg/kg	0.100	0.0901	90	80 - 120	2012-08-03
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2012-08-03

Standard (CCV-1)

QC Batch: 93653

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.810	81	80 - 120	2012-08-03

Standard (CCV-2)

QC Batch: 93653

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.890	89	80 - 120	2012-08-03

Standard (CCV-3)

QC Batch: 93653

Date Analyzed: 2012-08-03

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.852	85	80 - 120	2012-08-03

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

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

Result Comments

- 1 Dilution due to excessive hydrocarbons.
- 2 Dilution due to excessive hydrocarbons.
- 3 Dilution due to excessive hydrocarbons.
- 4 Dilution due to excessive hydrocarbons.

Report Date: August 14, 2012
Line 4-1 (South)

Work Order: 12072706
Line 4-A

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Attachments

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

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

ORIGINAL COPY

LAB USE ONLY Intact <u>Y/N</u>	REMARKS: Neutral - dro/cr Rubber - BTEX / TPH - Gro/dro
	☐ Dry Weight Basis Required
Headspace <u>Y/N</u> <u>INA</u>	☐ TRRP Report Required
Log-In Review _____	☐ Check If Special Reporting Limits Are Needed

Garrett # 222-1100

LAB Order ID # 12072706

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Ave. Site 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
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El Paso, Texas 79922
Tel (915) 585-3443
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BioAquaic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name:	Basin Environmental Service Technologies, LLC	Phone #:	(575)396-2378
Address:	P.O. Box 301 Lovington, NM 88260	Fax #:	(575)396-1429
Contact Person:		E-mail:	pm@basinenv.com Curt.Stanley@SUG.com
Invoice to:	Southern Union Gas Services 801 South Loop 484 Monahans, TX 79756		(817)302-9717
Project #:	Line 4-A (South)	Project Name:	Line 4-A
Project Location:	Lea Co / NM	Sampler Signature:	<i>[Signature]</i>

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				DATE	TIME	SAMPLING
				WATER	SOIL	AIR	SLUDGE	HCL	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	
304927	R.P. Trench @ 6'	1			X						X	X	7/25	12:00
928	Flow Pattern Surface	1			X						X	X	7/25	12:00
929	Flow Pattern @ 4'	1			X						X	X	7/25	12:40
930	Pecching Area @ 4'	1			X						X	X	7/25	13:00
931	Pecching Area @ 6'	1			X						X	X	7/25	15:00

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
<i>[Signature]</i>	SUGS	7/26/12	4:20	<i>[Signature]</i>	SUGS	7/26/12	4:20
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
<i>[Signature]</i>	SUGS	7/27/12	8:09	<i>[Signature]</i>	TA	7/27/12	8:09
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
<i>[Signature]</i>	TA	7/27/12	10:15	<i>[Signature]</i>	Lucas	7/31/12	9:05

LAB USE ONLY		REMARKS:	
Intact	☒	Standard - DRO-1C1	
Headspace Y/N	☒	Labial - BTEX / TPH - GED DRO	
Log-in Review	☒	Dry Weight Basis Required ☐	
Carrier #	Carryon	TRAP Report Required ☐	
		Check if Special Reporting Limits Are Needed ☐	

Submittal of samples constitutes agreement to Terms and Conditions



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
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(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 10, 2012

Work Order: 12080601



Project Location: Lea Co., NM
Project Name: Line 4A South
Project Number: Line 4A South

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
305937	West S.W. #1	soil	2012-08-02	11:40	2012-08-03
305938	West S.W. #2	soil	2012-08-02	11:45	2012-08-03
305939	West S.W. #3	soil	2012-08-02	11:50	2012-08-03
305940	Floor #1	soil	2012-08-02	12:40	2012-08-03
305941	Floor #2	soil	2012-08-02	12:50	2012-08-03
305942	Floor #3	soil	2012-08-02	13:00	2012-08-03
305943	South S.W.	soil	2012-08-02	13:10	2012-08-03
305944	East S.W. #1	soil	2012-08-02	13:20	2012-08-03
305945	East S.W. #2	soil	2012-08-02	13:30	2012-08-03
305946	East S.W. #3	soil	2012-08-02	13:40	2012-08-03
305947	North S.W.	soil	2012-08-02	13:50	2012-08-03

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 41 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 Line 4A South were received by TraceAnalysis, Inc. on 2012-08-03 and assigned to work order 12080601. Samples for work order 12080601 were received intact at a temperature of 5.3 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	79441	2012-08-07 at 15:57	93714	2012-08-07 at 15:57
Chloride (Titration)	SM 4500-Cl B	79442	2012-08-07 at 10:06	93742	2012-08-09 at 09:54
Chloride (Titration)	SM 4500-Cl B	79442	2012-08-07 at 10:06	93743	2012-08-09 at 09:55
TPH DRO - NEW	S 8015 D	79515	2012-08-10 at 08:00	93797	2012-08-10 at 13:40
TPH GRO	S 8015 D	79441	2012-08-07 at 15:57	93715	2012-08-07 at 15:57
TPH ORO	S 8015 D	79515	2012-08-10 at 08:00	93798	2012-08-10 at 13:41

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 12080601 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.

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Analytical Report

Sample: 305937 - West S.W. #1

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			2.07	mg/Kg	1	2.00	104	70 - 130
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	70 - 130

Sample: 305937 - West S.W. #1

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 305937 - West S.W. #1

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 93797
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			120	mg/Kg	1	100	120	59.9 - 168

Sample: 305937 - West S.W. #1

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 93715
Prep Batch: 79441

Analytical Method: S 8015 D
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.04	mg/Kg	1	2.00	102	70 - 130
4-Bromofluorobenzene (4-BFB)			2.07	mg/Kg	1	2.00	104	70 - 130

Sample: 305937 - West S.W. #1

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	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	61.5 - 159
n-Triacontane			124	mg/Kg	1	100	124	70 - 166

Sample: 305938 - West S.W. #2

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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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)			1.88	mg/Kg	1	2.00	94	70 - 130

Sample: 305938 - West S.W. #2

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 93742 Date Analyzed: 2012-08-09 Analyzed By: AR
Prep Batch: 79442 Sample Preparation: 2012-08-07 Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 305938 - West S.W. #2

Laboratory: Lubbock
Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A
QC Batch: 93797 Date Analyzed: 2012-08-10 Analyzed By: CM
Prep Batch: 79515 Sample Preparation: 2012-08-10 Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			109	mg/Kg	1	100	109	59.9 - 168

Sample: 305938 - West S.W. #2

Laboratory: Lubbock
Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035
QC Batch: 93715 Date Analyzed: 2012-08-07 Analyzed By: ZLM
Prep Batch: 79441 Sample Preparation: 2012-08-07 Prepared By: ZLM

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs, U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.84	mg/Kg	1	2.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			1.84	mg/Kg	1	2.00	92	70 - 130

Sample: 305938 - West S.W. #2

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	U		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			109	mg/Kg	1	100	109	61.5 - 159
n-Triacontane			112	mg/Kg	1	100	112	70 - 166

Sample: 305939 - West S.W. #3

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

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Sample: 305939 - West S.W. #3

Laboratory: Midland

Analysis: Chloride (Titration)

QC Batch: 93742

Prep Batch: 79442

Analytical Method: SM 4500-Cl B

Date Analyzed: 2012-08-09

Sample Preparation: 2012-08-07

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305939 - West S.W. #3

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	59.9 - 168

Sample: 305939 - West S.W. #3

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	qs,u	1	<4.00	mg/Kg	1	4.00

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)			1.88	mg/Kg	1	2.00	94	70 - 130

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Sample: 305939 - West S.W. #3

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	61.5 - 159
n-Triacontane			115	mg/Kg	1	100	115	70 - 166

Sample: 305940 - Floor #1

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	70 - 130

Sample: 305940 - Floor #1

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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sample 305940 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			219	mg/Kg	5	4.00

Sample: 305940 - Floor #1

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	59.9 - 168

Sample: 305940 - Floor #1

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q*,U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.89	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

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Sample: 305940 - Floor #1

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	61.5 - 159
n-Triacontane			116	mg/Kg	1	100	116	70 - 166

Sample: 305941 - Floor #2

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

Sample: 305941 - Floor #2

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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sample 305941 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 305941 - Floor #2

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	59.9 - 168

Sample: 305941 - Floor #2

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

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

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)			1.89	mg/Kg	1	2.00	94	70 - 130

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Sample: 305941 - Floor #2

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	61.5 - 159
n-Triacontane			118	mg/Kg	1	100	118	70 - 166

Sample: 305942 - Floor #3

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	70 - 130

Sample: 305942 - Floor #3

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

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sample 305942 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305942 - Floor #3

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Q*	1	136	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	59.9 - 168

Sample: 305942 - Floor #3

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Q*	1	6.53	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			2.27	mg/Kg	1	2.00	114	70 - 130

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Sample: 305942 - Floor #3

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			111	mg/Kg	1	100	111	61.5 - 159
n-Triacontane			108	mg/Kg	1	100	108	70 - 166

Sample: 305943 - South S.W.

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 305943 - South S.W.

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

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sample 305943 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305943 - South S.W.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			117	mg/Kg	1	100	117	59.9 - 168

Sample: 305943 - South S.W.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs,U	1	<4.00	mg/Kg	1	4.00

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

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Sample: 305943 - South S.W.

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			117	mg/Kg	1	100	117	61.5 - 159
n-Triacontane			119	mg/Kg	1	100	119	70 - 166

Sample: 305944 - East S.W. #1

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.91	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.86	mg/Kg	1	2.00	93	70 - 130

Sample: 305944 - East S.W. #1

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-C1 B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

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sample 305944 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305944 - East S.W. #1

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	59.9 - 168

Sample: 305944 - East S.W. #1

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	qs,u	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.87	mg/Kg	1	2.00	94	70 - 130

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Sample: 305944 - East S.W. #1

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			114	mg/Kg	1	100	114	61.5 - 159
n-Triacontane			116	mg/Kg	1	100	116	70 - 166

Sample: 305945 - East S.W. #2

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	70 - 130

Sample: 305945 - East S.W. #2

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

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sample 305945 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305945 - East S.W. #2

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	59.9 - 168

Sample: 305945 - East S.W. #2

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qs,U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	70 - 130

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Sample: 305945 - East S.W. #2

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			112	mg/Kg	1	100	112	61.5 - 159
n-Triacontane			116	mg/Kg	1	100	116	70 - 166

Sample: 305946 - East S.W. #3

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	1	2.00	94	70 - 130

Sample: 305946 - East S.W. #3

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93742
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

Report Date: August 10, 2012
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sample 305946 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305946 - East S.W. #3

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	qs,u	1	<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	59.9 - 168

Sample: 305946 - East S.W. #3

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	qs,u	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.92	mg/Kg	1	2.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	70 - 130

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Sample: 305946 - East S.W. #3

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	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	61.5 - 159
n-Triacontane			127	mg/Kg	1	100	127	70 - 166

Sample: 305947 - North S.W.

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 93714
Prep Batch: 79441

Analytical Method: S 8021B
Date Analyzed: 2012-08-07
Sample Preparation: 2012-08-07

Prep Method: S 5035
Analyzed By: ZLM
Prepared By: ZLM

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)			1.99	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	70 - 130

Sample: 305947 - North S.W.

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 93743
Prep Batch: 79442

Analytical Method: SM 4500-Cl B
Date Analyzed: 2012-08-09
Sample Preparation: 2012-08-07

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

continued ...

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sample 305947 continued ...

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	u		<20.0	mg/Kg	5	4.00

Sample: 305947 - North S.W.

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 93797

Prep Batch: 79515

Analytical Method: S 8015 D

Date Analyzed: 2012-08-10

Sample Preparation: 2012-08-10

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	59.9 - 168

Sample: 305947 - North S.W.

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 93715

Prep Batch: 79441

Analytical Method: S 8015 D

Date Analyzed: 2012-08-07

Sample Preparation: 2012-08-07

Prep Method: S 5035

Analyzed By: ZLM

Prepared By: ZLM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	qs,u	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)			1.95	mg/Kg	1	2.00	98	70 - 130

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Sample: 305947 - North S.W.

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 93798
Prep Batch: 79515

Analytical Method: S 8015 D
Date Analyzed: 2012-08-10
Sample Preparation: 2012-08-10

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO	u		<17.1	<50.0	<50.0	<50.0	mg/Kg	1	17.1	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	61.5 - 159
n-Triacontane			105	mg/Kg	1	100	105	70 - 166

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Method Blanks

Method Blank (1) QC Batch: 93714

QC Batch: 93714
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

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)			1.74	mg/Kg	1	2.00	87	70 - 130
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	70 - 130

Method Blank (1) QC Batch: 93715

QC Batch: 93715
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.359	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.77	mg/Kg	1	2.00	88	70 - 130
4-Bromofluorobenzene (4-BFB)			1.77	mg/Kg	1	2.00	88	70 - 130

Method Blank (1) QC Batch: 93742

QC Batch: 93742
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

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Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 93743

QC Batch: 93743
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Method Blank (1) QC Batch: 93797

QC Batch: 93797
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<6.50	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	59.9 - 168

Method Blank (1) QC Batch: 93798

QC Batch: 93798
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			<17.1	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	61.5 - 159

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method blank continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			102	mg/Kg	1	100	102	70 - 166

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 93714
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.86	mg/Kg	1	2.00	<0.00365	93	75.4 - 120
Toluene		1	1.82	mg/Kg	1	2.00	<0.00816	91	74.9 - 120
Ethylbenzene		1	1.82	mg/Kg	1	2.00	<0.00560	91	78.1 - 120
Xylene		1	5.50	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	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1	1.78	mg/Kg	1	2.00	<0.00365	89	75.4 - 120	4	20
Toluene		1	1.78	mg/Kg	1	2.00	<0.00816	89	74.9 - 120	2	20
Ethylbenzene		1	1.80	mg/Kg	1	2.00	<0.00560	90	78.1 - 120	1	20
Xylene		1	5.44	mg/Kg	1	6.00	<0.00460	91	77.3 - 120	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.78	1.70	mg/Kg	1	2.00	89	85	70 - 130
4-Bromofluorobenzene (4-BFB)	1.84	1.87	mg/Kg	1	2.00	92	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93715
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.9	mg/Kg	1	20.0	<0.359	84	68.9 - 120

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

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control spikes continued ...

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.1	mg/Kg	1	20.0	<0.359	86	68.9 - 120	1	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.89	1.90	mg/Kg	1	2.00	94	95	70 - 130
4-Bromofluorobenzene (4-BFB)	1.85	1.87	mg/Kg	1	2.00	92	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 93742
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2530	mg/Kg	1	2500	<3.85	101	85 - 115

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

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2630	mg/Kg	1	2500	<3.85	105	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 93743
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2510	mg/Kg	1	2500	<3.85	100	85 - 115

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

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control spikes continued ...

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2580	mg/Kg	1	2500	<3.85	103	85 - 115	3	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 93797
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	230	mg/Kg	1	250	<6.50	92	72.7 - 120

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

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	204	mg/Kg	1	250	<6.50	82	72.7 - 120	12	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
n-Tricosane	103	94.3	mg/Kg	1	100	103	94	59.9 - 168

Laboratory Control Spike (LCS-1)

QC Batch: 93798
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	103	94.3	mg/Kg	1	100	103	94	61.5 - 159
n-Triacontane	98.1	96.3	mg/Kg	1	100	98	96	70 - 166

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Matrix Spike (MS-1) Spiked Sample: 305772

QC Batch: 93714
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1	1.70	mg/Kg	1	2.00	<0.00365	85	37.6 - 142
Toluene		1	1.83	mg/Kg	1	2.00	<0.00816	92	38.6 - 153
Ethylbenzene		1	1.92	mg/Kg	1	2.00	<0.00560	96	36.7 - 172
Xylene		1	5.80	mg/Kg	1	6.00	<0.00460	97	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	1.73	mg/Kg	1	2.00	<0.00365	86	37.6 - 142	2	20
Toluene		1	1.86	mg/Kg	1	2.00	<0.00816	93	38.6 - 153	2	20
Ethylbenzene		1	1.95	mg/Kg	1	2.00	<0.00560	98	36.7 - 172	2	20
Xylene		1	5.89	mg/Kg	1	6.00	<0.00460	98	36.7 - 173	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
Trifluorotoluene (TFT)	1.89	1.88	mg/Kg	1	2	94	94	70 - 130
4-Bromofluorobenzene (4-BFB)	1.90	1.90	mg/Kg	1	2	95	95	70 - 130

Matrix Spike (MS-1) Spiked Sample: 305772

QC Batch: 93715
Prep Batch: 79441

Date Analyzed: 2012-08-07
QC Preparation: 2012-08-07

Analyzed By: ZLM
Prepared By: ZLM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	15.5	mg/Kg	1	20.0	1.14	72	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	Qs	Qs		1	14.3	mg/Kg	1	20.0	1.14	66	68.9 - 120	8	20

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

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.72	1.64	mg/Kg	1	2	86	82	70 - 130
4-Bromofluorobenzene (4-BFB)	2.06	2.00	mg/Kg	1	2	103	100	70 - 130

Matrix Spike (MS-1) Spiked Sample: 305946

QC Batch: 93742
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2770	mg/Kg	5	2500	<19.2	111	79.4 - 120.6

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			2580	mg/Kg	5	2500	<19.2	103	79.4 - 120.6	7	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: 305947

QC Batch: 93743
Prep Batch: 79442

Date Analyzed: 2012-08-09
QC Preparation: 2012-08-07

Analyzed By: AR
Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2450	mg/Kg	5	2500	<19.2	98	79.4 - 120.6

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			2540	mg/Kg	5	2500	<19.2	102	79.4 - 120.6	4	20

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

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Matrix Spike (MS-1) Spiked Sample: 305783

QC Batch: 93797
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Param		F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Q _s	Q _s	1	1470	mg/Kg	1	250	457	405	45.3 - 139

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

Param				MSD			Spike	Matrix		Rec.		RPD
	F	C		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
DRO	q _s	q _s	1	1310	mg/Kg	1	250	457	341	45.3 - 139	12	20

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

			MS	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Q _{sr}	Q _{sr}	194	190	mg/Kg	1	100	194	190	59.9 - 168

Matrix Spike (xMS-1) Spiked Sample:

QC Batch: 93798
Prep Batch: 79515

Date Analyzed: 2012-08-10
QC Preparation: 2012-08-10

Analyzed By: CM
Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO			200	mg/Kg	1	250	<17.1	80	58 - 129

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
ORO			183	mg/Kg	1	250	<17.1	73	58 - 129	9	20

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

			MS	MSD			Spike	MS	MSD	Rec.
Surrogate			Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
n-Tricosane	Q _{sr}	Q _{sr}	194	190	mg/Kg	1	100	194	190	61.5 - 159
n-Triacontane	Q _{sr}	Q _{sr}	171	153	mg/Kg	1	100	171	153	70 - 166

Calibration Standards

Standard (CCV-1)

QC Batch: 93714

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0890	89	80 - 120	2012-08-07
Toluene		1	mg/kg	0.100	0.0882	88	80 - 120	2012-08-07
Ethylbenzene		1	mg/kg	0.100	0.0893	89	80 - 120	2012-08-07
Xylene		1	mg/kg	0.300	0.269	90	80 - 120	2012-08-07

Standard (CCV-2)

QC Batch: 93714

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0900	90	80 - 120	2012-08-07
Toluene		1	mg/kg	0.100	0.0895	90	80 - 120	2012-08-07
Ethylbenzene		1	mg/kg	0.100	0.0880	88	80 - 120	2012-08-07
Xylene		1	mg/kg	0.300	0.264	88	80 - 120	2012-08-07

Standard (CCV-3)

QC Batch: 93714

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1	mg/kg	0.100	0.0849	85	80 - 120	2012-08-07
Toluene		1	mg/kg	0.100	0.0835	84	80 - 120	2012-08-07
Ethylbenzene		1	mg/kg	0.100	0.0822	82	80 - 120	2012-08-07
Xylene		1	mg/kg	0.300	0.246	82	80 - 120	2012-08-07

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Standard (CCV-1)

QC Batch: 93715

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.842	84	80 - 120	2012-08-07

Standard (CCV-2)

QC Batch: 93715

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.847	85	80 - 120	2012-08-07

Standard (CCV-3)

QC Batch: 93715

Date Analyzed: 2012-08-07

Analyzed By: ZLM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.801	80	80 - 120	2012-08-07

Standard (CCV-1)

QC Batch: 93742

Date Analyzed: 2012-08-09

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.7	100	85 - 115	2012-08-09

Standard (CCV-2)

QC Batch: 93742

Date Analyzed: 2012-08-09

Analyzed By: AR

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-08-09

Standard (CCV-1)

QC Batch: 93743

Date Analyzed: 2012-08-09

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2012-08-09

Standard (CCV-2)

QC Batch: 93743

Date Analyzed: 2012-08-09

Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.9	100	85 - 115	2012-08-09

Standard (CCV-1)

QC Batch: 93797

Date Analyzed: 2012-08-10

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	225	90	80 - 120	2012-08-10

Standard (CCV-2)

QC Batch: 93797

Date Analyzed: 2012-08-10

Analyzed By: CM

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	228	91	80 - 120	2012-08-10

Standard (CCV-3)

QC Batch: 93797

Date Analyzed: 2012-08-10

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	217	87	80 - 120	2012-08-10

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 then 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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