



AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pTO1419839950

1RP - 3188

PLAINS MARKETING L.P.

8/12/2016

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: Plains Pipeline, LP	Contact: Camille Bryant
Address: 2530 State Hwy 214, Denver City, TX 79323	Telephone No.: (575) 441-1099
Facility Name: Jal Basin Station	Facility Type: Pump

Surface Owner: Plains Pipeline, L.P.	Mineral Owner	API No. 30-025-12803
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LOCATION OF RELEASE

Unit Letter P	Section 32	Township 25S	Range 37E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude N 32.080668° Longitude W 103.178983°

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 500 bbls	Volume Recovered: 390 bbls
Source of Release: Pump	Date and Hour of Occurrence: 4/14/2014 @ 1400	Date and Hour of Discovery 04/14/2014 @ 1424
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Verbal notification to Geoffrey Leking (Voicemail)	
By Whom? Camille Bryant	Date and Hour 04/15/2014 @ 0900	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. 10885 OCD	

If a Watercourse was Impacted, Describe Fully.*

OCT 20 2015

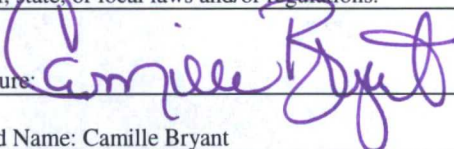
RECEIVED

Describe Cause of Problem and Remedial Action Taken.* Seal failure on booster pump resulted in a release of crude oil. The line was isolated and the seal was replaced.

Describe Area Affected and Cleanup Action Taken.*

The completed excavation measured approximately six (6) feet to one-hundred fifty (150) feet in width, approximately three hundred sixty-seven (367) feet in length and approximately three (3) to five (5) feet in depth. Soil samples were collected from the floor and/or sidewalls of the excavation. Soil samples were submitted to the laboratory and analyzed for concentrations of BTEX and TPH. In addition, select samples were analyzed for concentrations of chloride. Excavated soil was remediated in an on-site treatment cell and utilized as backfill with NMOCD approval. Please reference the "Remediation Summary and Risk-Based Closure Request" dated October 2015 for additional details.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Camille Bryant	Approved by Environmental Specialist: Accepted for Record	
Title: Remediation Coordinator	Approval Date: 10/23/15 by JRK	Expiration Date:
E-mail Address: cjbrant@paalp.com	Conditions of Approval:	Attached ☐ 1RP 3188
Date: 10/20/15	Phone: (575) 441-1099	

* Attach Additional Sheets If Necessary

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

HOBBS OCD

JUL 17 2014

RECEIVED

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Plains Pipeline LP	Contact	Camille Bryant
Address	2530 State Hwy. 214, Denver City, TX 79323	Telephone No.	(575) 441-1099
Facility Name	Jal Basin Station	Facility Type	Pump

Surface Owner	Plains Pipeline, LP	Mineral Owner		Lease No.	30-025 - 12808
---------------	---------------------	---------------	--	-----------	----------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	32	25S	37E					Lea

Latitude N 32.080668° Longitude W 103.178983°

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	500 bbls	Volume Recovered	390 bbls
Source of Release	Pump	Date and Hour of Occurrence	04/14/2014 @ 14:00	Date and Hour of Discovery	04/14/2014 @ 14:24
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required	If YES, To Whom?	Verbal notification to Geoffrey Leking (voicemail)		
By Whom?	Camille Bryant	Date and Hour	04/15/2014 @ 9:00		
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.* Seal failure on booster pump resulted in a release of crude oil. The line was isolated and the seal was replaced.

Describe Area Affected and Cleanup Action Taken. The released crude oil impacted an area of approximately 12,625 square feet inside the facility. The impacted area will be remediated as per applicable NMOCD guidelines.

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

Signature: <i>Camille Bryant</i>	OIL CONSERVATION DIVISION	
Printed Name: Camille Bryant	Approved by District Supervisor: <i>Camille Bryant</i>	
Title: Remediation Coordinator	Approval Date: 7-17-14	Expiration Date: 9-20-14
E-mail Address: cjbryant@paalp.com	Conditions of Approval: <i>Site samples required</i>	Attached ☐
Date: 4/21/2014 Phone: (575) 441-1099	7-14-3128	

* Attach Additional Sheets If Necessary

*Designated remediate area
as per NMOCD guides.
Final C-141 due by 9-20-14*

*OG rid 34053
h70 14 19 839714
P70 14 19 839950*

JUL 17 2014

Stanley, Curtis D.

From: Camille J Bryant <CJBryant@paalp.com>
Sent: Thursday, June 18, 2015 10:45 AM
To: Stanley, Curtis D.
Subject: Fwd: Plains Jal Basin Station 1R-7-14-3188

Sent from my iPhone

Begin forwarded message:

From: "Oberding, Tomas, EMNRD" <Tomas.Oberding@state.nm.us>
Date: June 18, 2015 at 9:42:37 AM MDT
To: Camille J Bryant <CJBryant@paalp.com>
Subject: RE: Plains Jal Basin Station 1R-7-14-3188

Aloha Camille,

Thank you for the update on this as well.
OCD approves the request to backfill.
Have a wonderful rest of the day.
Working on getting a few more email letters back to you today.
Thank you for the patience.
Let me know if there is anything pressing.
Mahalo
-Tomas

Tomáš 'Doc' Oberding PhD
Hydrologist, Adv-District 1
Oil Conservation Division, EMNRD
(505) 476-3403
E-Mail: tomas.oberding@state.nm.us
一期一会

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

Please note:

- The OCD is no longer granting "risk-based," or standard closure of events/RPs with remediation deferred to site abandonment/sale/closure. The RP will remain open until such time as historic contamination is addressed.
- Geotagged photographic documentation is stipulated for all events involving liquids.

If you have any questions or concerns, and for notification, please contact me.

From: Camille J Bryant [<mailto:CJBryant@paalp.com>]
Sent: Tuesday, June 16, 2015 7:04 AM

To: Oberding, Tomas, EMNRD
Subject: Plains Jal Basin Station 1R-7-14-3188

Tomas,

Please find attached the Soil Chemistry Table for the Plains Jal Basin Station Release Site NMOCD Ref# 1R-7-14-3188. As per our conversation on June 10, Plains respectfully requests NMOCD approval to backfill the excavated area with the stockpiled soil. Please contact me with any questions or concerns.

Respectfully,

Camille J. Bryant
Remediation Coordinator
Plains All American
2530 State Highway 214
Denver City, Texas 79323
Office: 806.592.2555
Cell: 575.441.1099
Fax: 806.592.7479
Email: cjbryant@paalp.com

Attention:

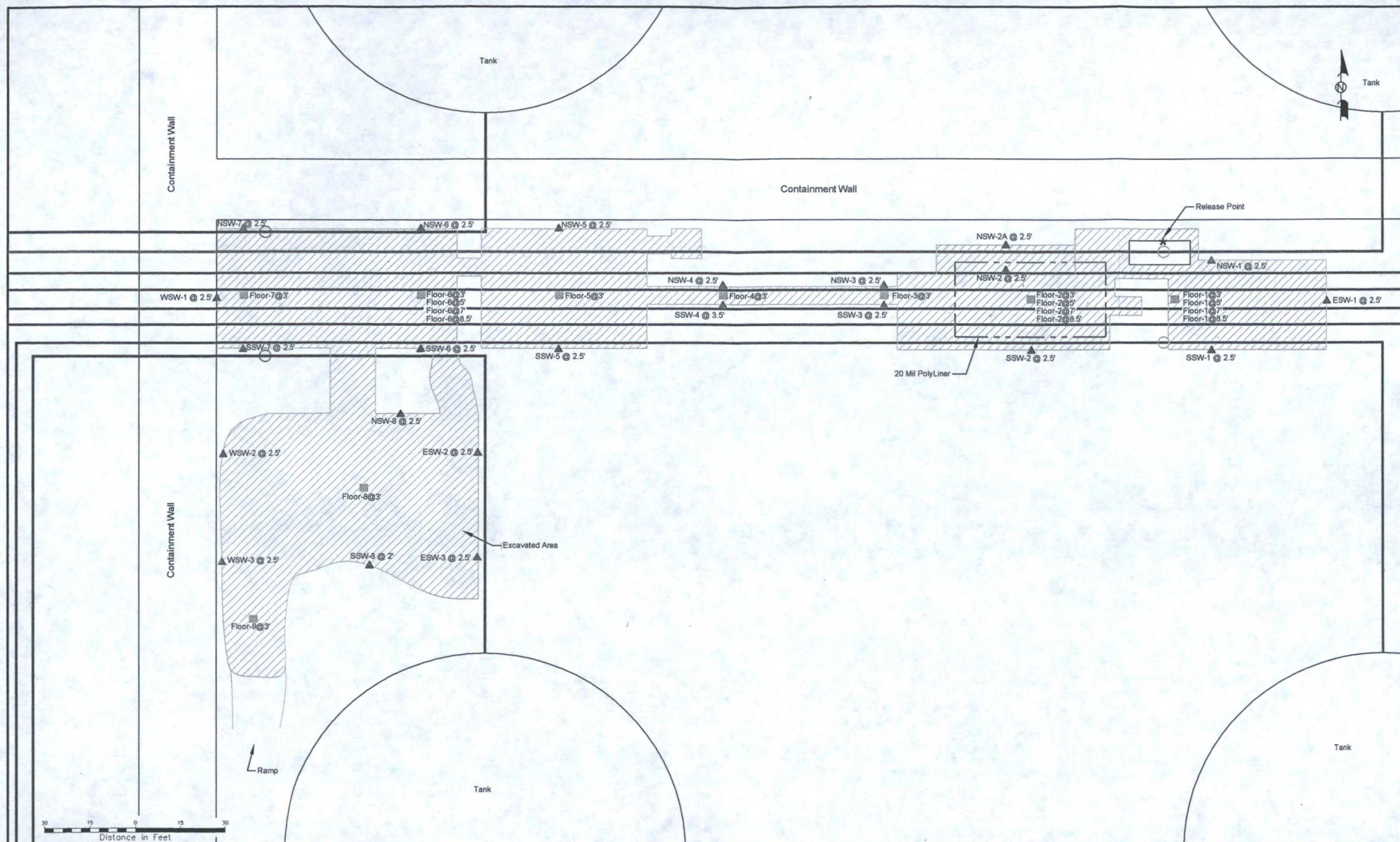
The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

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Attention:

The information contained in this message and/or attachments is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. If you received this in error, please contact the Plains Service Desk at 713-646-4444 and delete the material from any system and destroy any copies.

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LEGEND:

- ▲ Sidewall Soil Sample Location
- Floor Soil Sample Location
- Above Ground Piping
- Booster Pump

Figure 2
Site Details & Confirmation
Soil Sample Locations
Plains Pipeline LP.
Jal Basin Station
Lea County, NM

Scale: 1" = 30'
 CAD By: TA
 Checked By: CS
 Date: June 24, 2014
 Lat. N 32.080668°, Long. W 103.178983°
 SE1/4 SE1/4 Sec 32 T25S R37E





REMEDIATION SUMMARY AND RISK-BASED SITE CLOSURE REQUEST

JAL BASIN STATION
UNIT LETTER "P", SECTION 32, TOWNSHIP 25 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO
SRS #: 2014-096
NMOCD Reference: 1RP 7-14-3188

HOBBS OCD

Prepared for:

OCT 20 2015

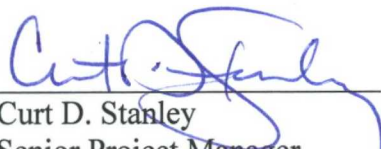
Plains Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002

RECEIVED

Prepared by:

TRC Environmental Corporation
2057 Commerce Drive
Midland, Texas 79703

October 2015


Curt D. Stanley
Senior Project Manager

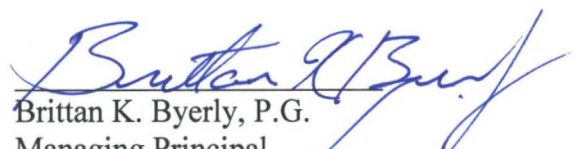

Brittan K. Byerly, P.G.
Managing Principal

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FIGURES

Figure 1: Site Location Map

Figure 2: Site Details and Confirmation Soil Sample Location Map

TABLES

Table 1: Benzene, BTEX, TPH, and Chloride Concentrations in Soil

APPENDICES

Appendix A: Site Photographs

Appendix B: Laboratory Analytical Reports

Appendix C: Release Notification and Corrective Action (Form C-141)

3.0 SUMMARY OF FIELD ACTIVITIES

On April 16, 2014, remediation activities commenced at the Release Site. Impacted soil was hand excavated near and under the pipeline corridor and a backhoe was utilized to excavate in open areas. The completed excavation measured approximately six (6) feet to one-hundred fifty (150) feet in width, approximately three hundred sixty-seven (367) feet in length and approximately three (3) to five (5) feet in depth. Impacted soil was stockpiled on plastic to the south of the excavation, outside of the secondary containment wall.

On June 19, 2014, fourteen (14) sidewall soil samples (ESW-1 @ 2.5', SSW-1 @ 2.5', NSW-1 @ 2.5', SSW-2 @ 2.5', NSW-2 @ 2.5', SSW-3 @ 2.5', NSW-3 @ 2.5', SSW-4 @ 3.5', NSW-4 @ 2.5', SSW-5 @ 2.5', NSW-5 @ 2.5', SSW-7 @ 2.5', NSW-7 @ 2.5', and WSW-1 @ 2.5') were collected and submitted to the laboratory for analysis of concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX) using Method SW-846 8021B and total petroleum hydrocarbon (TPH) using Method SW 846-8015M. The analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for all submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples ESW-1 @ 2.5', SSW-2 @ 2.5', SSW-3 @ 2.5', NSW-3 @ 2.5', SSW-4 @ 3.5', NSW-4 @ 2.5', SSW-5 @ 2.5', NSW-5 @ 2.5', SSW-7 @ 2.5', NSW-7 @ 2.5', and WSW-1 @ 2.5' to 0.4980 mg/Kg for soil sample NSW-2 @ 2.5'. TPH concentrations were less than the laboratory MDL for all soil samples, with the exception of soil samples ESW-1 @ 2.5', NSW-1 @ 2.5', and NSW-2 @ 2.5' which exhibited TPH concentrations of 290 mg/Kg, 50.5 mg/Kg, and 1,809.6 mg/Kg, respectively. Please reference Figure 2 for the location of soil samples. A table summarizing Benzene, BTEX, TPH, and Chloride Concentrations in Soil is provided as Table 1. Laboratory Analytical Reports are provided as Appendix B.

On June 19, 2014, seven (7) excavation floor soil samples (Floor-1 @ 3', Floor-2 @ 3', Floor-3 @ 3', Floor-4 @ 3', Floor-5 @ 3', Floor-6 @ 3', and Floor-7 @ 3') were collected and submitted to the laboratory for BTEX and TPH analysis. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all submitted soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL for soil samples Floor-3 @ 3', Floor-4 @ 3', and Floor-7 @ 3' to 21.05 mg/Kg for soil sample Floor-1 @ 3'. TPH concentrations ranged from less than the laboratory MDL for soil samples Floor-3 @ 3', Floor-4 @ 3', and Floor-7 @ 3' to 7,357 mg/Kg for soil sample Floor-1 @ 3'. Please reference Figure 2 for the locations of soil samples.

On June 20, 2014, two (2) additional sidewall soil samples (SSW-6 @ 2.5' and NSW-6 @ 2.5') were collected and submitted to the laboratory for BTEX and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the appropriate laboratory MDL for all submitted soil samples.

On June 20, 2014, one (1) stockpile soil sample (SP Baseline) was collected and submitted to the laboratory for BTEX and TPH analysis. The analytical results indicated the benzene concentration of the soil sample was less than the laboratory MDL of 0.100 mg/Kg and the BTEX concentration was 23.64 mg/Kg. TPH analysis indicated the soil sample exhibited a TPH concentration of 7,260 mg/Kg. Based on the analytical results, Plains opted to remediate the

impacted soil stockpile by blending and mixing the impacted soil and placing the soil in an on-site treatment cell augmented with high nitrogen fertilizer.

On July 1, 2014, as the excavation progressed to the west and southwest, six (6) sidewall soil samples (WSW-2 @ 2.5', ESW-2 @ 2.5', WSW-3 @ 2.5', ESW-3 @ 2.5', NSW-8 @ 2.5', and SSW-8 @ 2') were collected and submitted to the laboratory for analysis of concentrations BTEX and TPH. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all submitted soil samples. BTEX concentrations were less than the appropriate laboratory MDL for all soil samples, with the exception of soil samples WSW-3 @ 2.5' and SSW-8 @ 2' which exhibited BTEX concentrations of 0.0829 mg/Kg and 0.0208 mg/Kg, respectively. TPH concentrations were less than the laboratory MDL for all soil samples, with the exception of soil samples WSW-3 @ 2.5' and SSW-8 @ 2' which exhibited TPH concentrations of 396.6 mg/Kg and 4.68 mg/Kg, respectively. Please reference Figure 2 for the location of soil samples.

In addition, two (2) soil samples (Floor-8 @ 3' and Floor-9 @ 3') were collected and submitted to the laboratory for BTEX and TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL for all submitted soil samples. TPH concentrations ranged from less than the laboratory MDL for soil sample Floor-9 @ 3' to 125 mg/Kg for soil sample Floor-8 @ 3'.

On July 17, 2014, representatives of Plains and NOVA met with a representative of the NMOCD in the NMOCD Hobbs District Office. During the meeting, the analytical results of soil samples collected on July 1, 2014 were presented to the NMOCD. Based on the analytical results, the NMOCD representative requested additional vertical delineation, utilizing a hand auger, be conducted in the areas represented by soil samples Floor-6 @ 3', Floor-1 @ 3', and Floor-2 @ 3'. In addition, the NMOCD representative requested impacted soil represented by sidewall soil sample NSW-2 @ 2.5' be horizontally delineated and excavated to the north of the existing excavation.

On October 9, 2014, a hand auger was utilized to vertically delineate areas represented by soil samples Floor-6 @ 3', Floor-1 @ 3', and Floor-2 @ 3'. Soil samples were collected and submitted to the laboratory from each area of concern at five (5) feet below ground surface (bgs), seven (7) feet bgs, and eight and one half (8.5) feet bgs.

The analytical results indicated soil samples (Floor-6 @ 5', Floor-6 @ 7', and Floor-6 @ 8.5'), collected from the area represented by soil sample Floor-6 @ 3' exhibited benzene concentrations less than the laboratory MDL of 0.0200 mg/Kg. BTEX concentrations ranged from less than the laboratory MDL of 0.0200 mg/Kg for soil samples Floor-6 @ 5' and Floor-6 @ 8.5' to 0.1135 mg/Kg for soil sample Floor-6 @ 7'. TPH concentration were less than the laboratory MDL for each of the three (3) submitted soil samples. In addition, soil sample Floor-6 @ 8.5' was analyzed for concentrations of chloride using Method E300. The analytical results indicated the chloride concentration for soil sample Floor-6 @ 8.5' was 141 mg/Kg.

The analytical results indicated soil samples (Floor-1 @ 5', Floor-1 @ 7', and Floor-1 @ 8.5') collected from the area represented by soil sample Floor-1 @ 3' exhibited benzene

concentrations less than the laboratory MDL of 0.0200 mg/Kg. BTEX concentrations ranged from 0.0860 mg/Kg for soil sample Floor-1 @ 8.5' to 14.834 mg/Kg for soil sample Floor-1 @ 5'. TPH concentration ranged from 562.4 mg/Kg for soil sample Floor-1 @ 8.5' to 3,987.4 mg/Kg for soil sample Floor-1 @ 5'. In addition, soil sample Floor-1 @ 8.5' was analyzed for concentrations of chloride using Method E300. The analytical results indicated the chloride concentration for soil sample Floor-1 @ 8.5' was 47 mg/Kg.

The analytical results indicated soil samples (Floor-2 @ 5', Floor-2 @ 7', and Floor-2 @ 8.5') collected from the area represented by soil sample Floor-2 @ 3' exhibited benzene concentrations ranging from less than the laboratory MDL of 0.100 mg/Kg for soil sample Floor-2 @ 5' to 0.838 mg/Kg for soil sample Floor-2 @ 7'. BTEX concentrations ranged from 17.437 mg/Kg for soil sample Floor-2 @ 8.5' to 58.588 mg/Kg for soil sample Floor-1 @ 7'. TPH concentrations ranged from 6,591 mg/Kg for soil sample Floor-2 @ 8.5' to 11,684 mg/Kg for soil sample Floor-2 @ 7'. In addition, soil sample Floor-2 @ 8.5' was analyzed for concentrations of chloride using Method E300. The analytical results indicated the chloride concentration for soil sample Floor-2 @ 8.5' was 188 mg/Kg.

On October 9, 2015, following the completion of the excavation of the sidewall represented by soil sample NSW-2 @ 2.5', a soil sample (NSW-2A @ 2.5') was collected and submitted to the laboratory for analysis. The analytical results indicated concentrations of benzene, BTEX, and TPH from less than the appropriate laboratory MDL.

On October 27, 2014, representatives of Plains and TRC (formerly NOVA) met with a representative of the NMOCD in the NMOCD Hobbs District Office. During the meeting, the analytical results of soil samples collected on October 9, 2014 were presented to the NMOCD. Based on the analytical results, the NMOCD representative approved the installation of a twenty (20) millimeter (mil) polyethylene liner set at approximately five (5) feet bgs in the area represented by soil samples Floor-2 @ 3', Floor-2 @ 5', Floor-2 @ 7', and Floor-2 @ 8.5'. In addition, the NMOCD representative approved a request to allow the excavation to be backfilled with soil remediated to less than 1,500 mg/Kg TPH.

On December 1, 2015 through December 5, 2015, additional soil was hand excavated from beneath the above ground pipelines. The area of additional excavation measured approximately twenty-five (25) feet in width and approximately fifty (50) in length, centered on soil sample Floor-2. At the completion of the hand excavation activities, the floor of the excavation was approximately five (5) bgs, as requested by the NMOCD.

On December 23, 2014, a twenty (20) millimeter (mil) polyethylene liner (liner) was set at approximately five (5) feet bgs. The liner measured approximately twenty-five (25) feet wide and approximately fifty (50) in length and was centered on the area represented by soil sample Floor-2. This engineering control was designed to shed moisture to the edge of the liner beyond the area of deeper vertical impact.

As previously stated, excavated soil was stockpiled on plastic to the south of the excavation outside of the secondary containment wall during the excavation process. A total of approximately 1,093 cubic yards (cy) of impacted soil was stockpiled in this area. From

December 17, 2014 through January 20, 2015, the stockpile was blended, mixed and placed in a treatment cell to encourage bioremediation of the impacted soil.

On January 20, 2015, two (2) – five point composite soil samples (SP-1 (West) and SP-2 (East)) were collected from the on-site treatment cell and submitted to the laboratory for analysis. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL and TPH concentrations ranged from 2,160.2 mg/Kg for soil sample SP-2 (East) to 2,330 mg/Kg for soil sample SP-1 (West).

On April 22, 2015, based on the analytical results of soil samples collected on January 20, 2015, the soil contained in the treatment cell was blended and augmented with a high nitrogen fertilizer to expedite the bioremediation of the impacted soil.

On May 15, 2015, two (2) – five point composite soil samples (SP-1A (West) and SP-2A (East)) were collected from the on-site treatment cell and submitted to the laboratory for analysis. The analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL and TPH concentrations ranged from 650.6 mg/Kg for soil sample SP-1A (West) to 1,116 mg/Kg for soil sample SP-2A (East). Based on the analytical results and with NMOCD approval, the soil within the treatment cell was deemed suitable for backfill material.

On June 16, 2015, Plains requested permission from the NMOCD to backfill the excavation with the remediated soil contained in the on-site treatment cell. On June 18, 2015, Plains received approval from the NMOCD to backfill the excavation with the remediated soil.

On July 7, 2015, heavy equipment and laborers were mobilized to the Release Site and backfilling activities commenced and continued until August 26, 2015.

4.0 SITE CLOSURE REQUEST

TRC recommends Plains provide the NMOCD a copy of this Remediation Summary and Risk-Based Closure Request and request the NMOCD grant site closure status to the Jal Basin Station release of April 14, 2014.

5.0 LIMITATIONS

TRC Environmental Corporation has prepared this Remediation Summary and Risk-Based Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

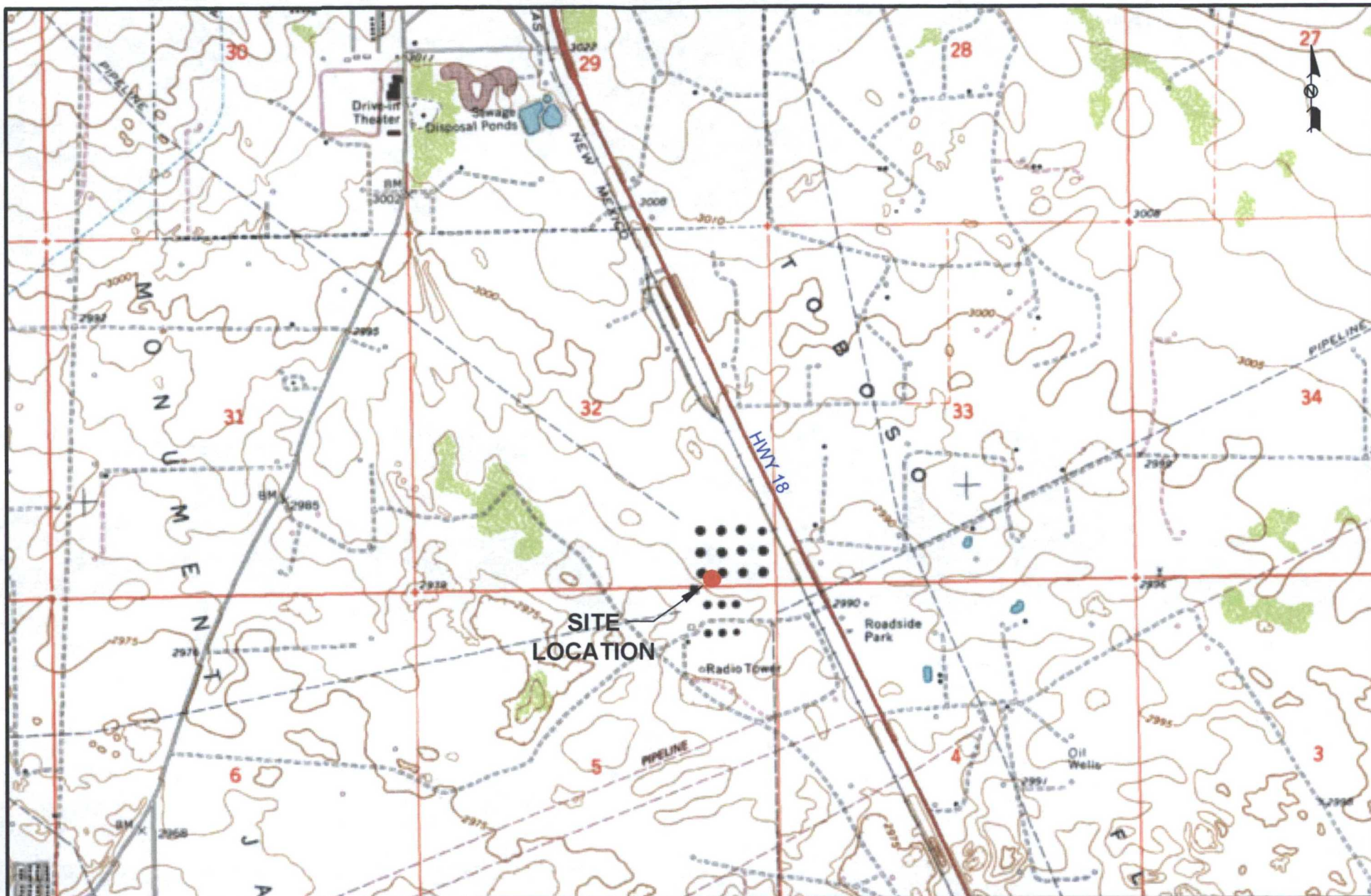
TRC Environmental Corporation has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC Environmental Corporation has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC Environmental Corporation has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC Environmental Corporation also 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 Plains Pipeline, L.P. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC Environmental Corporation. and/or Plains Pipeline L.P.

6.0 DISTRIBUTION

- Copy 1: Kellie Jones
New Mexico Oil Conservation Division (District 1)
1625 French Drive
Hobbs, NM 88240
- Copy 2: Camille Bryant
Plains Pipeline, L.P.
2530 Hwy 214
Denver City, Texas 79323
- Copy 3: Jeff Dann
Plains Pipeline, L.P.
333 Clay Street, Suite 1600
Houston, TX 77002
jpdann@paalp.com
- Copy 4: TRC Environmental Corporation
2057 Commerce Drive
Midland, TX 79703
cdstanley@trcsolutions.com



LEGEND:

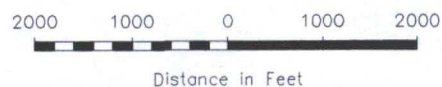


Figure 1
Site Location Map
Plains Pipeline, LP.
Jal Basin Station
Lea County, NM

Scale: 1" = 2000'
CAD By: TA
Checked By: CS
Draft: June 24, 2014
Lat. N 32.080668° Long. W 103.178983°
SW1/4 SW1/4 Sec 32 T25S R37E



2057 Commerce Drive
Midland, Texas 79703
432.520.7720

TABLE 1
CONCENTRATIONS OF BTEX, TPH, AND CHLORIDE IN SOIL

JAL BASIN STATION
PLAINS PIPELINE, L.P.
LEA COUNTY, NM
PLAINS SRS NUMBER: 2014-096
NMOCD REFERENCE NUMBER: 7-14-3188

SAMPLE LOCATION	SAMPLE DATE	SAMPLE DEPTH (feet)	Methods: EPA SW 846-8021B, 5030					Methods:				CHLORIDE (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	m,p,o XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	EPA SW 846-8015M				
								GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TOTAL TPH (mg/Kg)	
NMOCD Regulatory Guideline			10	-	-	-	50	-	-	-	1,000	250
ESW-1 @ 2.5'	06/19/15	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	290	<50.0	290	-
Floor-1 @ 3'	06/19/14	3'	<0.0200	1.40	3.35	16.3	21.05	837	6,520	<250	7,357	-
SSW-1 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	0.0279	0.02790	<4.00	<50.0	<50.0	<50.0	-
NSW-1 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	0.0315	0.0315	<4.00	<50.0	50.5	50.5	-
Floor-2 @ 3'	06/19/14	3'	<0.4	0.858	2.03	9.06	11.948	507	4,960	<250	5,467	-
SSW-2 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-2 @ 2.5'	06/19/14	2.5'	<0.100	<0.100	<0.100	0.498	0.4980	39.6	1,770	<250	1,809.6	-
Floor-3 @ 3'	06/19/14	3'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
SSW-3 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-3 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-4 @ 3'	06/19/14	3'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
SSW-4 @ 3.5'	06/19/14	3.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-4 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-5 @ 3'	06/19/14	3'	<0.0400	<0.0400	0.0418	0.0980	0.1398	<8.00	656	<50.0	656	-
SSW-5 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-5 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-6 @ 3'	06/19/14	3'	<0.0400	<0.0400	<0.0400	0.0684	0.0684	<8.00	1,440	263	1,703	-
Floor-7 @ 3'	06/19/14	3'	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<20.0	<50.0	<50.0	<50.0	-
SSW-7 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-7 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
WSW-1 @ 2.5'	06/19/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
SSW-6 @ 2.5'	06/20/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0020	<0.0020	<4.00	<50.0	<50.0	<50.0	-

TABLE 1
CONCENTRATIONS OF BTEX, TPH, AND CHLORIDE IN SOIL

JAL BASIN STATION
PLAINS PIPELINE, L.P.
LEA COUNTY, NM
PLAINS SRS NUMBER: 2014-096
NMOCD REFERENCE NUMBER: 7-14-3188

SAMPLE LOCATION	SAMPLE DATE	SAMPLE DEPTH (feet)	Methods: EPA SW 846-8021B, 5030					Methods:				CHLORIDE (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	m,p,o XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	EPA SW 846-8015M				
								GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TOTAL TPH (mg/Kg)	
NMOCD Regulatory Guideline			10	-	-	-	50	-	-	-	1,000	250
NSW-6 @ 2.5'	06/20/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
SP Baseline	06/20/14	-	<0.100	1.50	1.5400	20.6000	23.64	5,680	736	844	7,260	-
WSW-2 @ 2.5'	07/01/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
ESW-2 @ 2.5'	07/01/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
WSW-3 @ 2.5'	07/01/14	2.5'	<0.0200	<0.0200	0.0328	0.0501	0.0829	10.6	386	<50.0	396.6	-
ESW-3 @ 2.5'	07/01/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
NSW-8 @ 2.5'	07/01/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-8 @ 3'	07/01/14	3'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	125	<50.0	125	-
SSW-8 @ 2'	07/01/14	2'	<0.0200	<0.0200	<0.0200	0.0208	0.0208	4.68	<50.0	<50.0	4.68	-
Floor-9 @ 3'	07/01/14	3'	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<8.00	<50.0	<50.0	<50.0	-
Floor-6 @ 5'	10/09/14	5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-6 @ 7'	10/09/14	7'	<0.0200	<0.0200	0.0334	0.0801	0.1135	<4.00	<50.0	<50.0	<50.0	-
Floor-6 @ 8.5'	10/09/14	8.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	141
NSW-2A @ 2.5'	10/09/14	2.5'	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<4.00	<50.0	<50.0	<50.0	-
Floor-1 @ 5'	10/09/14	5'	<0.0200	0.714	2.62	11.5	14.834	1,330	2,560	97.4	3,987.4	-
Floor-1 @ 7'	10/09/14	7'	<0.0200	0.268	0.266	3.83	4.364	823	2,480	94.8	3,397.8	-
Floor-1 @ 8.5'	10/09/14	8.5'	<0.0200	<0.0200	<0.0200	0.0860	0.0860	38.4	524	<50.0	562.4	47
Floor-2 @ 5'	10/09/14	5'	<0.100	0.824	<0.100	17.6	18.424	2,310	4,210	212	6,732	-
Floor-2 @ 7'	10/09/14	7'	0.838	8.46	7.79	41.5	58.588	5,010	6,380	294	11,684	-
Floor-2 @ 8.5'	10/09/14	8.5'	0.537	1.58	1.22	14.1	17.437	1,860	4,550	181	6,591	188

TABLE 1
CONCENTRATIONS OF BTEX, TPH, AND CHLORIDE IN SOIL

JAL BASIN STATION
PLAINS PIPELINE, L.P.
LEA COUNTY, NM
PLAINS SRS NUMBER: 2014-096
NMOCD REFERENCE NUMBER: 7-14-3188

SAMPLE LOCATION	SAMPLE DATE	SAMPLE DEPTH (feet)	Methods: EPA SW 846-8021B, 5030					Methods:				CHLORIDE (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	m,p,o XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	EPA SW 846-8015M				
								GRO (mg/Kg)	DRO (mg/Kg)	ORO (mg/Kg)	TOTAL TPH (mg/Kg)	
NMOCD Regulatory Guideline			10	-	-	-	50	-	-	-	1,000	250
SP-1 (West)	01/20/15	-	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<8.00	2,330	<250	2,330	-
SP-2 (East)	01/20/15	-	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	10.2	2,150	<250	2,160.2	-
SP-1A (West)	05/15/15	-	<0.100	<0.100	<0.100	<0.100	<0.100	<20.0	555	95.6	650.6	-
SP-2A (East)	05/15/15	-	<0.100	<0.100	<0.100	<0.100	<0.100	<20.0	921	195	1,116	-

Photographic Documentation

Client: Plains Pipeline L.P.
Project Name: Jal Basin Station

Prepared by: TRC Environmental Corporation
Location: Lea County, NM

Photograph No. 1

Date:
April 16, 2014

Description:
Looking southwest

Impacted area
prior to excavation
and remediation.



Photograph No. 2

Date:
April 16, 2014

Description:
Looking west

Impacted area
prior to excavation
and remediation.
Release point
(Transfer pump) is
at center right of
photo.



Photographic Documentation

Client: Plains Pipeline L.P.
Project Name: Jal Basin Station

Prepared by: TRC Environmental Corporation
Location: Lea County, NM

Photograph No. 3

Date:
June 17, 2014

Description:
Looking east.

**Excavation of
impacted soil in
progress.**



Photograph No. 4

Date:
June 17, 2014

Description:
Looking east.

**Excavation of
impacted soil in
progress.**



Photographic Documentation

Client: Plains Pipeline L.P.
Project Name: Jal Basin Station

Prepared by: TRC Environmental Corporation
Location: Lea County, NM

Photograph No. 5

Date:
December 23, 2014

Description:
Looking northeast.

Polyethylene liner
installed and
centered on soil
sample Floor-2.



Photograph No. 6

Date:
August 21, 2015

Description:
Looking northeast

Excavation
backfilled.





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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: June 26, 2014

Work Order: 14062032



Project Location: Jal, NM
Project Name: Plains/Jal Basin Booster Pump
Project Number: SRS# 2014-096
SRS #: 2014-096

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
366457	ESW-1 @ 2.5'	soil	2014-06-19	10:00	2014-06-20
366458	Floor-1 @ 3'	soil	2014-06-19	10:05	2014-06-20
366459	SSW-1 @ 2.5'	soil	2014-06-19	10:10	2014-06-20
366460	NSW-1 @ 2.5'	soil	2014-06-19	10:15	2014-06-20
366461	Floor-2 @ 3'	soil	2014-06-19	10:20	2014-06-20
366462	SSW-2 @ 2.5'	soil	2014-06-19	10:25	2014-06-20
366463	NSW-2 @ 2.5'	soil	2014-06-19	10:30	2014-06-20
366464	Floor-3 @ 3'	soil	2014-06-19	10:35	2014-06-20
366465	SSW-3 @ 2.5'	soil	2014-06-19	10:40	2014-06-20
366466	NSW-3 @ 2.5'	soil	2014-06-19	10:45	2014-06-20
366467	Floor-4 @ 3'	soil	2014-06-19	10:50	2014-06-20
366468	SSW-4 @ 3.5'	soil	2014-06-19	10:55	2014-06-20
366469	NSW-4 @ 2.5'	soil	2014-06-19	11:00	2014-06-20
366470	Floor-5 @ 3'	soil	2014-06-19	11:05	2014-06-20
366471	SSW-5 @ 2.5'	soil	2014-06-19	11:10	2014-06-20
366472	NSW-5 @ 2.5'	soil	2014-06-19	11:15	2014-06-20
366473	Floor-6 @ 3'	soil	2014-06-19	11:20	2014-06-20

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
366474	Floor-7 @ 3'	soil	2014-06-19	11:25	2014-06-20
366475	SSW-7 @ 2.5'	soil	2014-06-19	11:30	2014-06-20
366476	NSW-7 @ 2.5'	soil	2014-06-19	11:35	2014-06-20
366477	WSW-1 @ 2.5'	soil	2014-06-19	11:40	2014-06-20

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 45 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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

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Case Narrative

Samples for project Plains/Jal Basin Booster Pump were received by TraceAnalysis, Inc. on 2014-06-20 and assigned to work order 14062032. Samples for work order 14062032 were received intact at a temperature of 12.6 C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH DRO - NEW	S 8015 D	95641	2014-06-23 at 15:00	113093	2014-06-23 at 13:00
TPH DRO - NEW	S 8015 D	95657	2014-06-23 at 13:00	113113	2014-06-25 at 12:22
TPH DRO - NEW	S 8015 D	95686	2014-06-26 at 11:19	113148	2014-06-26 at 11:28
TPH GRO	S 8015 D	95615	2014-06-23 at 13:52	113067	2014-06-23 at 13:52
TPH GRO	S 8015 D	95616	2014-06-23 at 13:52	113069	2014-06-23 at 13:52
TPH ORO	S 8015 D	95641	2014-06-23 at 15:00	113094	2014-06-23 at 13:00
TPH ORO	S 8015 D	95657	2014-06-23 at 13:00	113114	2014-06-25 at 12:23
TPH ORO	S 8015 D	95686	2014-06-26 at 11:19	113149	2014-06-26 at 11:29

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 14062032 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: June 26, 2014
SRS# 2014-096

Work Order: 14062032
Plains/Jal Basin Booster Pump

Page Number: 6 of 45
Jal, NM

Analytical Report

Sample: 366457 - ESW-1 @ 2.5'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 113093

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	290	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	70 - 130

Sample: 366457 - ESW-1 @ 2.5'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113067

Prep Batch: 95615

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	73 - 122
4-Bromofluorobenzene (4-BFB)			1.91	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366457 - ESW-1 @ 2.5'

Laboratory: Lubbock

Analysis: TPH ORO

QC Batch: 113094

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

continued ...

Report Date: June 26, 2014
SRS# 2014-096

Work Order: 14062032
Plains/Jal Basin Booster Pump

Page Number: 7 of 45
Jal, NM

sample 366457 continued ...

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
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			113	mg/Kg	1	100	113	61.5 - 159
n-Triacontane			108	mg/Kg	1	100	108	70 - 166

Sample: 366458 - Floor-1 @ 3'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Je	1	6520	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	380	mg/Kg	5	100	380	70 - 130

Sample: 366458 - Floor-1 @ 3'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113069
Prep Batch: 95616

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	837	mg/Kg	10	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.74	mg/Kg	10	2.00	87	73 - 122

continued ...

Report Date: June 26, 2014
SRS# 2014-096

Work Order: 14062032
Plains/Jal Basin Booster Pump

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Jal, NM

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	25.3	mg/Kg	10	2.00	1265	74.6 - 120

Sample: 366458 - Floor-1 @ 3'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			111	mg/Kg	5	100	111	61.5 - 159
n-Triacontane	Qsr	Qsr	282	mg/Kg	5	100	282	70 - 166

Sample: 366459 - SSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.2	mg/Kg	1	100	99	70 - 130

Sample: 366459 - SSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.72	mg/Kg	1	2.00	86	73 - 122
4-Bromofluorobenzene (4-BFB)			1.79	mg/Kg	1	2.00	90	74.6 - 120

Sample: 366459 - SSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	MDL Result	MLQ Result	PQL Result	RL Result	Units	Dilution	MDL	MLQ	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			99.2	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			96.2	mg/Kg	1	100	96	70 - 166

Sample: 366460 - NSW-1 @ 2.5'

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			96.6	mg/Kg	1	100	97	70 - 130

Sample: 366460 - NSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	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	73 - 122
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	74.6 - 120

Sample: 366460 - NSW-1 @ 2.5'

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			50.5	50.5	50.5	50.5	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			95.5	mg/Kg	1	100	96	61.5 - 159
n-Triacontane			104	mg/Kg	1	100	104	70 - 166

Sample: 366461 - Floor-2 @ 3'

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	113093	Date Analyzed:	2014-06-23	Analyzed By:	CM
Prep Batch:	95641	Sample Preparation:	2014-06-23	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	4960	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	315	mg/Kg	5	100	315	70 - 130

Sample: 366461 - Floor-2 @ 3'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	113069	Date Analyzed:	2014-06-23	Analyzed By:	MT
Prep Batch:	95616	Sample Preparation:	2014-06-23	Prepared By:	MT

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	507	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.48	mg/Kg	20	2.00	74	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	15.2	mg/Kg	20	2.00	760	74.6 - 120

Sample: 366461 - Floor-2 @ 3'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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	Qsr	Qsr	261	mg/Kg	5	100	261	61.5 - 159
n-Triacontane	Qsr	Qsr	261	mg/Kg	5	100	261	70 - 166

Sample: 366462 - SSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.9	mg/Kg	1	100	99	70 - 130

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Sample: 366462 - SSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	u	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	73 - 122
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	1	2.00	102	74.6 - 120

Sample: 366462 - SSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			98.9	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			96.0	mg/Kg	1	100	96	70 - 166

Sample: 366463 - NSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1770	mg/Kg	5	50.0

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	203	mg/Kg	5	100	203	70 - 130

Sample: 366463 - NSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113069
Prep Batch: 95616

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	39.6	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.69	mg/Kg	5	2.00	84	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	2.96	mg/Kg	5	2.00	148	74.6 - 120

Sample: 366463 - NSW-2 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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	Qsr	Qsr	203	mg/Kg	5	100	203	61.5 - 159
n-Triacontane			156	mg/Kg	5	100	156	70 - 166

Sample: 366464 - Floor-3 @ 3'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.1	mg/Kg	1	100	99	70 - 130

Sample: 366464 - Floor-3 @ 3'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.10	mg/Kg	1	2.00	105	73 - 122
4-Bromofluorobenzene (4-BFB)			2.06	mg/Kg	1	2.00	103	74.6 - 120

Sample: 366464 - Floor-3 @ 3'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			99.1	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			96.4	mg/Kg	1	100	96	70 - 166

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Sample: 366465 - SSW-3 @ 2.5'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 113093

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.4	mg/Kg	1	100	97	70 - 130

Sample: 366465 - SSW-3 @ 2.5'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113067

Prep Batch: 95615

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	73 - 122
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	1	2.00	102	74.6 - 120

Sample: 366465 - SSW-3 @ 2.5'

Laboratory: Lubbock

Analysis: TPH ORO

QC Batch: 113094

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

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			97.4	mg/Kg	1	100	97	61.5 - 159

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			95.7	mg/Kg	1	100	96	70 - 166

Sample: 366466 - NSW-3 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.2	mg/Kg	1	100	99	70 - 130

Sample: 366466 - NSW-3 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	73 - 122
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	74.6 - 120

Sample: 366466 - NSW-3 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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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				99.2	mg/Kg		1	100	99		61.5 - 159	
n-Triacontane				97.0	mg/Kg		1	100	97		70 - 166	

Sample: 366467 - Floor-4 @ 3'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL		
DRO		1	<50.0	mg/Kg	1	50.0		
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.9	mg/Kg	1	100	100	70 - 130

Sample: 366467 - Floor-4 @ 3'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL		
GRO	u	1	<4.00	mg/Kg	1	4.00		
Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.26	mg/Kg	1	2.00	113	73 - 122
4-Bromofluorobenzene (4-BFB)			2.03	mg/Kg	1	2.00	102	74.6 - 120

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Sample: 366467 - Floor-4 @ 3'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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		<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			99.9	mg/Kg	1	100	100	61.5 - 159
n-Triacontane			97.8	mg/Kg	1	100	98	70 - 166

Sample: 366468 - SSW-4 @ 3.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.0	mg/Kg	1	100	99	70 - 130

Sample: 366468 - SSW-4 @ 3.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.90	mg/Kg	1	2.00	95	73 - 122
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366468 - SSW-4 @ 3.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			99.0	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			97.5	mg/Kg	1	100	98	70 - 166

Sample: 366469 - NSW-4 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.5	mg/Kg	1	100	98	70 - 130

Sample: 366469 - NSW-4 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.03	mg/Kg	1	2.00	102	73 - 122
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366469 - NSW-4 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			98.6	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			97.3	mg/Kg	1	100	97	70 - 166

Sample: 366470 - Floor-5 @ 3'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	656	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	142	mg/Kg	1	100	142	70 - 130

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Sample: 366470 - Floor-5 @ 3'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113069
Prep Batch: 95616

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	1	1	<8.00	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.76	mg/Kg	2	2.00	88	73 - 122
4-Bromofluorobenzene (4-BFB)			2.05	mg/Kg	2	2.00	102	74.6 - 120

Sample: 366470 - Floor-5 @ 3'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			142	mg/Kg	1	100	142	61.5 - 159
n-Triacontane			131	mg/Kg	1	100	131	70 - 166

Sample: 366471 - SSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	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			98.3	mg/Kg	1	100	98	70 - 130

Sample: 366471 - SSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.96	mg/Kg	1	2.00	98	73 - 122
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	74.6 - 120

Sample: 366471 - SSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			98.3	mg/Kg	1	100	98	61.5 - 159
n-Triacontane			97.5	mg/Kg	1	100	98	70 - 166

Sample: 366472 - NSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113093
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.3	mg/Kg	1	100	97	70 - 130

Sample: 366472 - NSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.28	mg/Kg	1	2.00	114	73 - 122
4-Bromofluorobenzene (4-BFB)			2.04	mg/Kg	1	2.00	102	74.6 - 120

Sample: 366472 - NSW-5 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			97.3	mg/Kg	1	100	97	61.5 - 159
n-Triacontane			97.1	mg/Kg	1	100	97	70 - 166

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Sample: 366473 - Floor-6 @ 3'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 113093

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	1440	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	188	mg/Kg	1	100	188	70 - 130

Sample: 366473 - Floor-6 @ 3'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113069

Prep Batch: 95616

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	2	1	<8.00	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.47	mg/Kg	2	2.00	74	73 - 122
4-Bromofluorobenzene (4-BFB)			1.89	mg/Kg	2	2.00	94	74.6 - 120

Sample: 366473 - Floor-6 @ 3'

Laboratory: Lubbock

Analysis: TPH ORO

QC Batch: 113094

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

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			263	263	263	263	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	Qsr	Qsr	187	mg/Kg	1	100	187	61.5 - 159

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			149	mg/Kg	1	100	149	70 - 166

Sample: 366474 - Floor-7 @ 3'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 113093

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

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

Sample: 366474 - Floor-7 @ 3'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113069

Prep Batch: 95616

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	3	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.71	mg/Kg	5	2.00	86	73 - 122
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	5	2.00	114	74.6 - 120

Sample: 366474 - Floor-7 @ 3'

Laboratory: Lubbock

Analysis: TPH ORO

QC Batch: 113094

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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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			100	mg/Kg	1	100	100	61.5 - 159
n-Triacontane			99.1	mg/Kg	1	100	99	70 - 166

Sample: 366475 - SSW-7 @ 2.5'

Laboratory: Lubbock

Analysis: TPH DRO - NEW

QC Batch: 113093

Prep Batch: 95641

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: N/A

Analyzed By: CM

Prepared By: CM

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.0	mg/Kg	1	100	99	70 - 130

Sample: 366475 - SSW-7 @ 2.5'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113067

Prep Batch: 95615

Analytical Method: S 8015 D

Date Analyzed: 2014-06-23

Sample Preparation: 2014-06-23

Prep Method: S 5035

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.08	mg/Kg	1	2.00	104	73 - 122
4-Bromofluorobenzene (4-BFB)			1.92	mg/Kg	1	2.00	96	74.6 - 120

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Sample: 366475 - SSW-7 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113094
Prep Batch: 95641

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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			99.0	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			98.2	mg/Kg	1	100	98	70 - 166

Sample: 366476 - NSW-7 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113113
Prep Batch: 95657

Analytical Method: S 8015 D
Date Analyzed: 2014-06-25
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.9	mg/Kg	1	100	100	70 - 130

Sample: 366476 - NSW-7 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113069
Prep Batch: 95616

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.93	mg/Kg	1	2.00	96	73 - 122
4-Bromofluorobenzene (4-BFB)			1.97	mg/Kg	1	2.00	98	74.6 - 120

Sample: 366476 - NSW-7 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113114
Prep Batch: 95657

Analytical Method: S 8015 D
Date Analyzed: 2014-06-25
Sample Preparation: 2014-06-23

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			99.9	mg/Kg	1	100	100	61.5 - 159
n-Triacontane			97.0	mg/Kg	1	100	97	70 - 166

Sample: 366477 - WSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113113
Prep Batch: 95657

Analytical Method: S 8015 D
Date Analyzed: 2014-06-25
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.8	mg/Kg	1	100	99	70 - 130

Sample: 366477 - WSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113067
Prep Batch: 95615

Analytical Method: S 8015 D
Date Analyzed: 2014-06-23
Sample Preparation: 2014-06-23

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

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.16	mg/Kg	1	2.00	108	73 - 122
4-Bromofluorobenzene (4-BFB)			1.93	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366477 - WSW-1 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113114
Prep Batch: 95657

Analytical Method: S 8015 D
Date Analyzed: 2014-06-25
Sample Preparation: 2014-06-23

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			98.8	mg/Kg	1	100	99	61.5 - 159
n-Triacontane			97.4	mg/Kg	1	100	97	70 - 166

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Method Blanks

Method Blank (1) QC Batch: 113067

QC Batch: 113067
Prep Batch: 95615

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.17	mg/Kg	1	2.00	108	73 - 122
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	74.6 - 120

Method Blank (1) QC Batch: 113069

QC Batch: 113069
Prep Batch: 95616

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.01	mg/Kg	1	2.00	100	73 - 122
4-Bromofluorobenzene (4-BFB)			1.81	mg/Kg	1	2.00	90	74.6 - 120

Method Blank (1) QC Batch: 113093

QC Batch: 113093
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<5.22	mg/Kg	50

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	70 - 130

Method Blank (1) QC Batch: 113094

QC Batch: 113094
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

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			101	mg/Kg	1	100	101	61.5 - 159
n-Triacontane			92.3	mg/Kg	1	100	92	70 - 166

Method Blank (1) QC Batch: 113113

QC Batch: 113113
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<5.22	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			97.9	mg/Kg	1	100	98	70 - 130

Method Blank (1) QC Batch: 113114

QC Batch: 113114
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

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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			97.9	mg/Kg	1	100	98	61.5 - 159
n-Triacontane			99.3	mg/Kg	1	100	99	70 - 166

Method Blank (1) QC Batch: 113148

QC Batch: 113148
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	10.0	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			87.4	mg/Kg	1	100	87	70 - 130

Method Blank (1) QC Batch: 113149

QC Batch: 113149
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

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			87.4	mg/Kg	1	100	87	61.5 - 159
n-Triacontane			89.4	mg/Kg	1	100	89	70 - 166

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113067
Prep Batch: 95615

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.7	mg/Kg	1	20.0	<0.217	88	60.1 - 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	19.1	mg/Kg	1	20.0	<0.217	96	60.1 - 120	8	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)	2.08	2.13	mg/Kg	1	2.00	104	106	73 - 122
4-Bromofluorobenzene (4-BFB)	2.01	2.07	mg/Kg	1	2.00	100	104	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113069
Prep Batch: 95616

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.8	mg/Kg	1	20.0	<0.217	84	60.1 - 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	17.6	mg/Kg	1	20.0	<0.217	88	60.1 - 120	5	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)	1.96	1.93	mg/Kg	1	2.00	98	96	73 - 122

continued ...

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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	1.87	1.90	mg/Kg	1	2.00	94	95	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113093
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	223	mg/Kg	1	250	<5.22	89	70 - 130

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	212	mg/Kg	1	250	<5.22	85	70 - 130	5	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	94.1	94.0	mg/Kg	1	100	94	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113094
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	94.1	94.0	mg/Kg	1	100	94	94	61.5 - 159
n-Triacontane	89.5	89.6	mg/Kg	1	100	90	90	70 - 166

Laboratory Control Spike (LCS-1)

QC Batch: 113113
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Report Date: June 26, 2014
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Plains/Jal Basin Booster Pump

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	223	mg/Kg	1	250	<5.22	89	70 - 130

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	234	mg/Kg	1	250	<5.22	94	70 - 130	5	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	95.7	96.0	mg/Kg	1	100	96	96	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113114
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	95.7	96.0	mg/Kg	1	100	96	96	61.5 - 159
n-Triacontane	96.0	95.2	mg/Kg	1	100	96	95	70 - 166

Laboratory Control Spike (LCS-1)

QC Batch: 113148
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	206	mg/Kg	1	250	10	78	70 - 130

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	205	mg/Kg	1	250	10	78	70 - 130	0	20

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

continued ...

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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
n-Tricosane	84.5	83.7	mg/Kg	1	100	84	84	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113149
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	84.5	83.7	mg/Kg	1	100	84	84	61.5 - 159
n-Triacontane	85.5	84.4	mg/Kg	1	100	86	84	70 - 166

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 366462

QC Batch: 113067
Prep Batch: 95615

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	13.5	mg/Kg	1	20.0	<0.217	68	40.3 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	14.6	mg/Kg	1	20.0	<0.217	73	40.3 - 120	8	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)	1.95	1.98	mg/Kg	1	2	98	99	73 - 122
4-Bromofluorobenzene (4-BFB)	2.07	2.04	mg/Kg	1	2	104	102	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 366476

QC Batch: 113069
Prep Batch: 95616

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: MT
Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.5	mg/Kg	1	20.0	<0.217	88	40.3 - 120

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	19.1	mg/Kg	1	20.0	<0.217	96	40.3 - 120	9	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)	1.95	2.04	mg/Kg	1	2	98	102	73 - 122

continued ...

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	2.16	2.17	mg/Kg	1	2	108	108	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 366475

QC Batch: 113093
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	221	mg/Kg	1	250	<5.22	88	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	255	mg/Kg	1	250	<5.22	102	70 - 130	14	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	98.4	104	mg/Kg	1	100	98	104	70 - 130
n-Triacontane	97.4	98.6	mg/Kg	1	100	97	99	70 - 166

Matrix Spike (MS-1) Spiked Sample: 366475

QC Batch: 113094
Prep Batch: 95641

Date Analyzed: 2014-06-23
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	98.4	104	mg/Kg	1	100	98	104	61.5 - 159
n-Triacontane	97.4	98.6	mg/Kg	1	100	97	99	70 - 166

Matrix Spike (MS-1) Spiked Sample: 366477

QC Batch: 113113
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Report Date: June 26, 2014
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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	223	mg/Kg	1	250	<5.22	89	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	220	mg/Kg	1	250	<5.22	88	70 - 130	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
n-Tricosane	97.0	95.7	mg/Kg	1	100	97	96	70 - 130

Matrix Spike (MS-1) Spiked Sample: 366477

QC Batch: 113114
Prep Batch: 95657

Date Analyzed: 2014-06-25
QC Preparation: 2014-06-23

Analyzed By: CM
Prepared By: CM

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	97.0	95.7	mg/Kg	1	100	97	96	61.5 - 159
n-Triacontane	94.6	94.9	mg/Kg	1	100	95	95	70 - 166

Matrix Spike (xMS-1) Spiked Sample: 366385

QC Batch: 113148
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

Param			F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs		1	5670	mg/Kg	10	2500	4290	55	70 - 130

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

Param	F		C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	Qs	Qs	1	5740	mg/Kg	10	2500	4290	58	70 - 130	1	20

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

continued ...

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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
n-Tricosane	1230	1230	mg/Kg	10	1000	123	123	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 366385

QC Batch: 113149
Prep Batch:

Date Analyzed:
QC Preparation:

Analyzed By:
Prepared By:

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	1210	1210	mg/Kg	1	1000	121	121	61.5 - 159
n-Triacontane	1590	1610	mg/Kg	1	1000	159	161	70 - 166

Calibration Standards

Standard (CCV-1)

QC Batch: 113067

Date Analyzed: 2014-06-23

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.17	117	80 - 120	2014-06-23

Standard (CCV-2)

QC Batch: 113067

Date Analyzed: 2014-06-23

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.909	91	80 - 120	2014-06-23

Standard (CCV-3)

QC Batch: 113067

Date Analyzed: 2014-06-23

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.909	91	80 - 120	2014-06-23

Standard (CCV-1)

QC Batch: 113069

Date Analyzed: 2014-06-23

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.963	96	80 - 120	2014-06-23

Report Date: June 26, 2014
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Plains/Jal Basin Booster Pump

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Standard (CCV-2)

QC Batch: 113069

Date Analyzed: 2014-06-23

Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.971	97	80 - 120	2014-06-23

Standard (CCV-1)

QC Batch: 113093

Date Analyzed: 2014-06-23

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	220	88	80 - 120	2014-06-23

Standard (CCV-2)

QC Batch: 113093

Date Analyzed: 2014-06-23

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	222	89	80 - 120	2014-06-23

Standard (CCV-3)

QC Batch: 113093

Date Analyzed: 2014-06-23

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	222	89	80 - 120	2014-06-23

Standard (CCV-1)

QC Batch: 113113

Date Analyzed: 2014-06-25

Analyzed By: CM

Report Date: June 26, 2014
SRS# 2014-096

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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	222	89	80 - 120	2014-06-25

Standard (CCV-2)

QC Batch: 113113

Date Analyzed: 2014-06-25

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	231	92	80 - 120	2014-06-25

Standard (CCV-1)

QC Batch: 113148

Date Analyzed:

Analyzed By:

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	199	80	80 - 120	2014-06-26

Standard (CCV-2)

QC Batch: 113148

Date Analyzed:

Analyzed By:

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	211	84	80 - 120	2014-06-26

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	T104704219-14-10	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 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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
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

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Plains/Jal Basin Booster Pump

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

Attachments

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

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Contact Person:	Curt Stanley	E-mail:	cstanley@novatraining.cc cjbryant@paalp.com
Invoice to:	Plains (Camille Bryant)		
Project #:	2014-096	Project Name:	Jal Basin Station Booster Pump
Project Location: (Include state)	Jal, New Mexico	Sampler Signature	

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible]

Relinquished by: <i>W. O. King</i> Company: NOVA Date: 6/22/14 Time: 12:33	Received by: <i>W. O. King</i> Company: NOVA Date: 6/22/14 Time: 12:33	INST _____	OBS _____	COR _____
Relinquished by: <i>W. O. King</i> Company: NOVA Date: 6/22/14 Time: 12:41	Received by: <i>W. O. King</i> Company: TA Date: 6/20/14 Time: 12:41	INST <i>124</i>	OBS <i>12.6</i>	COR <i>12.6</i>
Relinquished by: <i>W. O. King</i> Company: TA Date: 6/20/14 Time: 15:30	Received by: <i>W. O. King</i> Company: TA Date: 6/20/14 Time: 15:30	INST <i>124</i>	OBS _____	COR _____

LAB USE ONLY

Intact Y/N
Headspace Y/N/NA

Log-in Review

REMARKS: Must have 2ri 6/2
as early as possible

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check if Special Reporting Limits Are Needed

Submission of samples constitutes agreement to Terms and Conditions

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Contact Person: **Curt Stanley** E-mail: **cstanley@novatraining.cc**
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Invoice to: **Plains (Camille Bryant)**Project #: **2014-096** Project Name: **Jal Basin Station Booster Pump**Project Location: **Jal, New Mexico** Sampler Signature: *[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B / 200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	Na, Ca, Mg, K, TDS, EC	TPH 8015M (GRO DRO 060) C-6 through C-35	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCL	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																					
468	SSW-4 @ 3.5	1	4oz	X							X			6/19/14	055	X																	X			
469	NSW-4 @ 2.5'	1	4oz	X							X				1100	X																	X			
470	Floor-5 @ 3'	1	4oz	X							X				1105	X																	X			
471	SSW-5 @ 2.5'	1	4oz	X							X				1110	X																	X			
472	NSW-5 @ 2.5'	1	4oz	X							X				1115	X																	X			
473	Floor-6 @ 3'	1	4oz	X							X				1120	X																	X			
474	Floor-7 @ 3'	1	4oz	X							X				1125	X																	X			
475	SSW-7 @ 2.5'	1	4oz	X							X				1130	X																	X			
476	NSW-7 @ 2.5'	1	4oz	X							X				1135	X																	X			
477	WSW-1 @ 2.5'	1	4oz	X							X				1140	X																	X			
478																																				

Relinquished by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:33** Received by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:33** INST **12.6** OBS **12.6** COR **12.6**

Relinquished by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:42** Received by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:42** INST **12.6** OBS **12.6** COR **12.6**

Relinquished by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:42** Received by: *[Signature]* Company: **NOVA** Date: **6/20/14** Time: **12:42** INST **12.6** OBS **12.6** COR **12.6**

LAB USE ONLYIntact ☒ Y / N / NA
Headspace Y / N / NA
Log-in Review ☒**REMARKS:**

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check if Special Reporting Limits Are Needed



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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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

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: July 1, 2014

Work Order: 14062302



Project Location: Jal, NM
Project Name: Plains/Jal Basin Booster Pump
Project Number: SRS# 2014-096
SRS #: 2014-096

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
366504	SSW-6 @ 2.5'	soil	2014-06-20	12:00	2014-06-20
366505	NSW-6 @ 2.5'	soil	2014-06-20	12:05	2014-06-20

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 19 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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Case Narrative

Samples for project Plains/Jal Basin Booster Pump were received by TraceAnalysis, Inc. on 2014-06-20 and assigned to work order 14062302. Samples for work order 14062302 were received intact at a temperature of 4.1 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	95648	2014-06-24 at 14:53	113100	2014-06-24 at 14:53
TPH DRO - NEW	S 8015 D	95790	2014-06-30 at 12:30	113273	2014-07-01 at 12:03
TPH GRO	S 8015 D	95648	2014-06-24 at 14:53	113101	2014-06-24 at 14:53
TPH ORO	S 8015 D	95790	2014-06-30 at 12:30	113274	2014-07-01 at 12:04

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 14062302 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: July 1, 2014
SRS# 2014-096

Work Order: 14062302
Plains/Jal Basin Booster Pump

Page Number: 4 of 19
Jal, NM

Analytical Report

Sample: 366504 - SSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113100
Prep Batch: 95648

Analytical Method: S 8021B
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	Jb	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		s	2.03	mg/Kg	1	2.00	102	66.2 - 120
4-Bromofluorobenzene (4-BFB)		s	2.14	mg/Kg	1	2.00	107	59.5 - 120

Sample: 366504 - SSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113273
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Jb	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		s	92.2	mg/Kg	1	100	92	70 - 130

Sample: 366504 - SSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113101
Prep Batch: 95648

Analytical Method: S 8015 D
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Report Date: July 1, 2014
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Plains/Jal Basin Booster Pump

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.77	mg/Kg	1	2.00	88	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.91	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366504 - SSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113274
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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			92.2	mg/Kg	1	100	92	61.5 - 159
n-Triacontane			92.9	mg/Kg	1	100	93	70 - 166

Sample: 366505 - NSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113100
Prep Batch: 95648

Analytical Method: S 8021B
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Toluene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200
Xylene	U	1,2,3,4,5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.12	mg/Kg	1	2.00	106	66.2 - 120
4-Bromofluorobenzene (4-BFB)		5	2.15	mg/Kg	1	2.00	108	59.5 - 120

Report Date: July 1, 2014
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Work Order: 14062302
Plains/Jal Basin Booster Pump

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Sample: 366505 - NSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113273
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	1,2,3,4	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	90.9	mg/Kg	1	100	91	70 - 130

Sample: 366505 - NSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113101
Prep Batch: 95648

Analytical Method: S 8015 D
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1,2,3,4	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.93	mg/Kg	1	2.00	96	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.91	mg/Kg	1	2.00	96	74.6 - 120

Sample: 366505 - NSW-6 @ 2.5'

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113274
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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			90.9	mg/Kg	1	100	91	61.5 - 159

continued ...

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Work Order: 14062302
Plains/Jal Basin Booster Pump

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			91.2	mg/Kg	1	100	91	70 - 166

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Plains/Jal Basin Booster Pump

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Method Blanks

Method Blank (1) QC Batch: 113100

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.00487	mg/Kg	0.02
Toluene		1,2,3,4,5	<0.00358	mg/Kg	0.02
Ethylbenzene		1,2,3,4,5	<0.00283	mg/Kg	0.02
Xylene		1,2,3,4,5	0.00370	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)	Qsr	Qsr	5	2.40	mg/Kg	1	2.00	120	66.2 - 120
4-Bromofluorobenzene (4-BFB)			5	2.20	mg/Kg	1	2.00	110	59.5 - 120

Method Blank (1) QC Batch: 113101

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.18	mg/Kg	1	2.00	109	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.98	mg/Kg	1	2.00	99	74.6 - 120

Method Blank (1) QC Batch: 113273

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Report Date: July 1, 2014
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Work Order: 14062302
Plains/Jal Basin Booster Pump

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Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	7.11	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	96.4	mg/Kg	1	100	96	70 - 130

Method Blank (1) QC Batch: 113274

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

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			96.4	mg/Kg	1	100	96	61.5 - 159
n-Triacontane			96.5	mg/Kg	1	100	96	70 - 166

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Work Order: 14062302
Plains/Jal Basin Booster Pump

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.95	mg/Kg	1	2.00	<0.00487	98	69.3 - 120
Toluene		1,2,3,4,5	2.09	mg/Kg	1	2.00	<0.00358	104	70.5 - 120
Ethylbenzene		1,2,3,4,5	2.29	mg/Kg	1	2.00	<0.00283	114	70.6 - 120
Xylene		1,2,3,4,5	6.51	mg/Kg	1	6.00	0.0037	108	70.7 - 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
Benzene		1,2,3,4,5	2.01	mg/Kg	1	2.00	<0.00487	100	69.3 - 120	3	20
Toluene		1,2,3,4,5	2.12	mg/Kg	1	2.00	<0.00358	106	70.5 - 120	1	20
Ethylbenzene		1,2,3,4,5	2.36	mg/Kg	1	2.00	<0.00283	118	70.6 - 120	3	20
Xylene		1,2,3,4,5	6.74	mg/Kg	1	6.00	0.0037	112	70.7 - 120	4	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)	5	2.24	2.32	mg/Kg	1	2.00	112	116	66.2 - 120
4-Bromofluorobenzene (4-BFB)	5	2.00	2.01	mg/Kg	1	2.00	100	100	59.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	17.0	mg/Kg	1	20.0	0.257	85	60.1 - 120

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

continued ...

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Work Order: 14062302
Plains/Jal Basin Booster Pump

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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		1,2,3,4	18.2	mg/Kg	1	20.0	0.257	91	60.1 - 120	7	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)	3	1.96	1.97	mg/Kg	1	2.00	98	98	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.96	1.94	mg/Kg	1	2.00	98	97	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	214	mg/Kg	1	250	7.11	83	70 - 130

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
DRO		1,2,3,4	210	mg/Kg	1	250	7.11	81	70 - 130	2	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
n-Tricosane	3	87.5	85.9	mg/Kg	1	100	88	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Surrogate		LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Tricosane		87.5	85.9	mg/Kg	1	100	88	86	61.5 - 159

continued ...

Report Date: July 1, 2014
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Work Order: 14062302
Plains/Jal Basin Booster Pump

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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	87.3	86.3	mg/Kg	1	100	87	86	70 - 166

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 366661

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.94	mg/Kg	5	2.00	<0.0244	97	63.6 - 120
Toluene		1,2,3,4,5	1.89	mg/Kg	5	2.00	<0.0179	94	67.8 - 128
Ethylbenzene		1,2,3,4,5	2.12	mg/Kg	5	2.00	<0.0142	106	69.5 - 136
Xylene		1,2,3,4,5	6.06	mg/Kg	5	6.00	<0.0118	101	69.3 - 139

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		1,2,3,4,5	1.96	mg/Kg	5	2.00	<0.0244	98	63.6 - 120	1	20
Toluene		1,2,3,4,5	2.02	mg/Kg	5	2.00	<0.0179	101	67.8 - 128	7	20
Ethylbenzene		1,2,3,4,5	2.14	mg/Kg	5	2.00	<0.0142	107	69.5 - 136	1	20
Xylene		1,2,3,4,5	6.18	mg/Kg	5	6.00	<0.0118	103	69.3 - 139	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)	5	1.70	1.91	mg/Kg	5	2	85	96	66.2 - 120
4-Bromofluorobenzene (4-BFB)	5	2.02	2.03	mg/Kg	5	2	101	102	59.5 - 120

Matrix Spike (MS-1) Spiked Sample: 366661

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	13.6	mg/Kg	5	20.0	<1.08	68	40.3 - 120

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

continued ...

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Plains/Jal Basin Booster Pump

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matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	11.9	mg/Kg	5	20.0	<1.08	60	40.3 - 120	13	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)	3	1.99	1.56	mg/Kg	5	2	100	78	73 - 122
4-Bromofluorobenzene (4-BFB)	3	2.38	2.14	mg/Kg	5	2	119	107	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 366505

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	210	mg/Kg	1	250	<5.22	84	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	192	mg/Kg	1	250	<5.22	77	70 - 130	9	20

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	90.2	89.8	mg/Kg	1	100	90	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 366505

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		90.2	89.8	mg/Kg	1	100	90	90	61.5 - 159

continued ...

Report Date: July 1, 2014
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Plains/Jal Basin Booster Pump

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	89.4	89.0	mg/Kg	1	100	89	89	70 - 166

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Calibration Standards

Standard (CCV-1)

QC Batch: 113100

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0981	98	80 - 120	2014-06-24
Toluene		1,2,3,4,5	mg/kg	0.100	0.100	100	80 - 120	2014-06-24
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.106	106	80 - 120	2014-06-24
Xylene		1,2,3,4,5	mg/kg	0.300	0.309	103	80 - 120	2014-06-24

Standard (CCV-2)

QC Batch: 113100

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0960	96	80 - 120	2014-06-24
Toluene		1,2,3,4,5	mg/kg	0.100	0.0970	97	80 - 120	2014-06-24
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.104	104	80 - 120	2014-06-24
Xylene		1,2,3,4,5	mg/kg	0.300	0.303	101	80 - 120	2014-06-24

Standard (CCV-1)

QC Batch: 113101

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.986	99	80 - 120	2014-06-24

Standard (CCV-2)

QC Batch: 113101

Date Analyzed: 2014-06-24

Analyzed By: JS

Report Date: July 1, 2014
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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.999	100	80 - 120	2014-06-24

Standard (CCV-1)

QC Batch: 113273

Date Analyzed: 2014-07-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	208	83	80 - 120	2014-07-01

Standard (CCV-2)

QC Batch: 113273

Date Analyzed: 2014-07-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	201	80	80 - 120	2014-07-01

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MLQ	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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5		2013-083	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 MLQ. 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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
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.

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F	Description
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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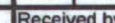
200 East Sunset Rd., Suite E
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2501 Mayes Rd., Ste 100
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Company Name:	Nova Safety and Environmental	Phone #:	432-520-77250
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Contact Person:	Curt Stanley	E-mail:	cstanley@novatraining.cc cjbryant@paalp.com
Invoice to:	Plains (Camille Bryant)		
Project #:	2014-096	Project Name:	Jal Basin Station Booster Pump
Project Location: (include state)	Jal, New Mexico	Sampler Signature:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

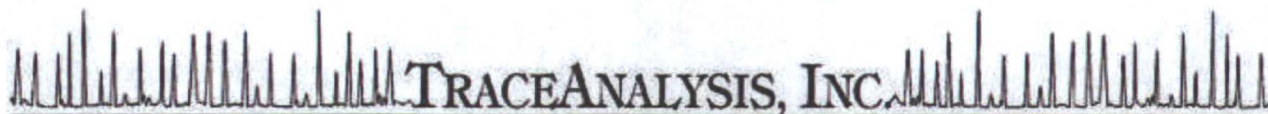
[illegible]

Relinquished by:  Company: NOVA Date: 6/20/14 Time: 1525	Received by:  Company: NOVA Date: 6/20/14 Time: 1525	INST _____ OBS _____% COR _____%
Relinquished by:  Company: NOVA Date: 6/20/14 Time: 1645	Received by:  Company: TA Date: 6/20/14 Time: 1645	INST _____ OBS _____% COR _____%
Relinquished by:  Company: TA Date: 6/20/14 Time: 1530	Received by:  Company: TA Date: 6/20/14 Time: 1530	INST _____ OBS _____% COR _____%

LAB USE ONLY Intact <u>Y/N</u> Headspace <u>Y/N/NA</u> Log-in Review _____ Carrier # <u>Carver</u>	REMARKS: <i>Laboratory</i>
	☐ Dry Weight Basis Required
	☐ TRRP Report Required
	☐ Check If Special Reporting Limits Are Needed
Carrier # <u>Carver</u> <u>LS 350334</u>	

Submittal of samples constitutes agreement to Terms and Conditions

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: July 1, 2014

Work Order: 14062301



Project Location: Jal, NM
Project Name: Plains/Jal Basin Booster Pump
Project Number: SRS# 2014-096
SRS #: 2014-096

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
366503	SP Baseline	soil	2014-06-20	13:00	2014-06-20

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 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

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Case Narrative

Samples for project Plains/Jal Basin Booster Pump were received by TraceAnalysis, Inc. on 2014-06-20 and assigned to work order 14062301. Samples for work order 14062301 were received intact at a temperature of 4.1 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	95648	2014-06-24 at 14:53	113100	2014-06-24 at 14:53
TPH DRO - NEW	S 8015 D	95790	2014-06-30 at 12:30	113273	2014-07-01 at 12:03
TPH GRO	S 8015 D	95648	2014-06-24 at 14:53	113101	2014-06-24 at 14:53
TPH ORO	S 8015 D	95790	2014-06-30 at 12:30	113274	2014-07-01 at 12:04

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 14062301 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: July 1, 2014
SRS# 2014-096

Work Order: 14062301
Plains/Jal Basin Booster Pump

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Analytical Report

Sample: 366503 - SP Baseline

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113100
Prep Batch: 95648

Analytical Method: S 8021B
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	1	1,2,3,4,5	<0.100	mg/Kg	5	0.0200
Toluene		1,2,3,4,5	1.50	mg/Kg	5	0.0200
Ethylbenzene		1,2,3,4,5	1.54	mg/Kg	5	0.0200
Xylene		1,2,3,4,5	20.6	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	5	1.17 mg/Kg	5	2.00	58	66.2 - 120
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	5	2.70 mg/Kg	5	2.00	135	59.5 - 120

Sample: 366503 - SP Baseline

Laboratory: Lubbock
Analysis: TPH DRO - NEW
QC Batch: 113273
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1,2,3,4	5680	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	3	383 mg/Kg	5	100	383	70 - 130

Sample: 366503 - SP Baseline

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113101
Prep Batch: 95648

Analytical Method: S 8015 D
Date Analyzed: 2014-06-24
Sample Preparation: 2014-06-24

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

Report Date: July 1, 2014
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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1,2,3,4	736	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	Qsr	Qsr	3	1.22 mg/Kg	5	2.00	61	73 - 122
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	3	20.2 mg/Kg	5	2.00	1010	74.6 - 120

Sample: 366503 - SP Baseline

Laboratory: Lubbock
Analysis: TPH ORO
QC Batch: 113274
Prep Batch: 95790

Analytical Method: S 8015 D
Date Analyzed: 2014-07-01
Sample Preparation: 2014-06-30

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			844	844	844	844	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	366	mg/Kg	5	100	366	61.5 - 159
n-Triacontane	Qsr	Qsr	276	mg/Kg	5	100	276	70 - 166

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Method Blanks

Method Blank (1) QC Batch: 113100

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,5	<0.00487	mg/Kg	0.02
Toluene		1,2,3,4,5	<0.00358	mg/Kg	0.02
Ethylbenzene		1,2,3,4,5	<0.00283	mg/Kg	0.02
Xylene		1,2,3,4,5	0.00370	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)	Qsr	Qsr	5	2.40	mg/Kg	1	2.00	120	66.2 - 120
4-Bromofluorobenzene (4-BFB)			5	2.20	mg/Kg	1	2.00	110	59.5 - 120

Method Blank (1) QC Batch: 113101

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.217	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.18	mg/Kg	1	2.00	109	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.98	mg/Kg	1	2.00	99	74.6 - 120

Method Blank (1) QC Batch: 113273

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Report Date: July 1, 2014
SRS# 2014-096

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Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1,2,3,4	7.11	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	96.4	mg/Kg	1	100	96	70 - 130

Method Blank (1) QC Batch: 113274

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

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			96.4	mg/Kg	1	100	96	61.5 - 159
n-Triacontane			96.5	mg/Kg	1	100	96	70 - 166

Report Date: July 1, 2014
SRS# 2014-096

Work Order: 14062301
Plains/Jal Basin Booster Pump

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.95	mg/Kg	1	2.00	<0.00487	98	69.3 - 120
Toluene		1,2,3,4,5	2.09	mg/Kg	1	2.00	<0.00358	104	70.5 - 120
Ethylbenzene		1,2,3,4,5	2.29	mg/Kg	1	2.00	<0.00283	114	70.6 - 120
Xylene		1,2,3,4,5	6.51	mg/Kg	1	6.00	0.0037	108	70.7 - 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		1,2,3,4,5	2.01	mg/Kg	1	2.00	<0.00487	100	69.3 - 120	3	20
Toluene		1,2,3,4,5	2.12	mg/Kg	1	2.00	<0.00358	106	70.5 - 120	1	20
Ethylbenzene		1,2,3,4,5	2.36	mg/Kg	1	2.00	<0.00283	118	70.6 - 120	3	20
Xylene		1,2,3,4,5	6.74	mg/Kg	1	6.00	0.0037	112	70.7 - 120	4	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)	5	2.24	2.32	mg/Kg	1	2.00	112	116	66.2 - 120
4-Bromofluorobenzene (4-BFB)	5	2.00	2.01	mg/Kg	1	2.00	100	100	59.5 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	17.0	mg/Kg	1	20.0	0.257	85	60.1 - 120

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

continued ...

Report Date: July 1, 2014
SRS# 2014-096

Work Order: 14062301
Plains/Jal Basin Booster Pump

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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
GRO		1,2,3,4	18.2	mg/Kg	1	20.0	0.257	91	60.1 - 120	7	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)	3	1.96	1.97	mg/Kg	1	2.00	98	98	73 - 122
4-Bromofluorobenzene (4-BFB)	3	1.96	1.94	mg/Kg	1	2.00	98	97	74.6 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	214	mg/Kg	1	250	7.11	83	70 - 130

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		1,2,3,4	210	mg/Kg	1	250	7.11	81	70 - 130	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
n-Tricosane	3	87.5	85.9	mg/Kg	1	100	88	86	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane		87.5	85.9	mg/Kg	1	100	88	86	61.5 - 159

continued ...

Report Date: July 1, 2014
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control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	87.3	86.3	mg/Kg	1	100	87	86	70 - 166

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 366661

QC Batch: 113100
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.94	mg/Kg	5	2.00	<0.0244	97	63.6 - 120
Toluene		1,2,3,4,5	1.89	mg/Kg	5	2.00	<0.0179	94	67.8 - 128
Ethylbenzene		1,2,3,4,5	2.12	mg/Kg	5	2.00	<0.0142	106	69.5 - 136
Xylene		1,2,3,4,5	6.06	mg/Kg	5	6.00	<0.0118	101	69.3 - 139

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		1,2,3,4,5	1.96	mg/Kg	5	2.00	<0.0244	98	63.6 - 120	1	20
Toluene		1,2,3,4,5	2.02	mg/Kg	5	2.00	<0.0179	101	67.8 - 128	7	20
Ethylbenzene		1,2,3,4,5	2.14	mg/Kg	5	2.00	<0.0142	107	69.5 - 136	1	20
Xylene		1,2,3,4,5	6.18	mg/Kg	5	6.00	<0.0118	103	69.3 - 139	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)	5	1.70	1.91	mg/Kg	5	2	85	96	66.2 - 120
4-Bromofluorobenzene (4-BFB)	5	2.02	2.03	mg/Kg	5	2	101	102	59.5 - 120

Matrix Spike (MS-1) Spiked Sample: 366661

QC Batch: 113101
Prep Batch: 95648

Date Analyzed: 2014-06-24
QC Preparation: 2014-06-24

Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	13.6	mg/Kg	5	20.0	<1.08	68	40.3 - 120

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

continued ...

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matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1,2,3,4	11.9	mg/Kg	5	20.0	<1.08	60	40.3 - 120	13	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)	3	1.99	1.56	mg/Kg	5	2	100	78	73 - 122
4-Bromofluorobenzene (4-BFB)	3	2.38	2.14	mg/Kg	5	2	119	107	74.6 - 120

Matrix Spike (MS-1) Spiked Sample: 366505

QC Batch: 113273
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	210	mg/Kg	1	250	<5.22	84	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	192	mg/Kg	1	250	<5.22	77	70 - 130	9	20

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

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	3	90.2	89.8	mg/Kg	1	100	90	90	70 - 130

Matrix Spike (MS-1) Spiked Sample: 366505

QC Batch: 113274
Prep Batch: 95790

Date Analyzed: 2014-07-01
QC Preparation: 2014-06-30

Analyzed By: CM
Prepared By: CM

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		90.2	89.8	mg/Kg	1	100	90	90	61.5 - 159

continued ...

Report Date: July 1, 2014
SRS# 2014-096

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Plains/Jal Basin Booster Pump

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	89.4	89.0	mg/Kg	1	100	89	89	70 - 166

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Calibration Standards

Standard (CCV-1)

QC Batch: 113100

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0981	98	80 - 120	2014-06-24
Toluene		1,2,3,4,5	mg/kg	0.100	0.100	100	80 - 120	2014-06-24
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.106	106	80 - 120	2014-06-24
Xylene		1,2,3,4,5	mg/kg	0.300	0.309	103	80 - 120	2014-06-24

Standard (CCV-2)

QC Batch: 113100

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0960	96	80 - 120	2014-06-24
Toluene		1,2,3,4,5	mg/kg	0.100	0.0970	97	80 - 120	2014-06-24
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.104	104	80 - 120	2014-06-24
Xylene		1,2,3,4,5	mg/kg	0.300	0.303	101	80 - 120	2014-06-24

Standard (CCV-1)

QC Batch: 113101

Date Analyzed: 2014-06-24

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.986	99	80 - 120	2014-06-24

Standard (CCV-2)

QC Batch: 113101

Date Analyzed: 2014-06-24

Analyzed By: JS

Report Date: July 1, 2014
SRS# 2014-096

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.999	100	80 - 120	2014-06-24

Standard (CCV-1)

QC Batch: 113273

Date Analyzed: 2014-07-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	208	83	80 - 120	2014-07-01

Standard (CCV-2)

QC Batch: 113273

Date Analyzed: 2014-07-01

Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	201	80	80 - 120	2014-07-01

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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5		2013-083	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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
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.

Report Date: July 1, 2014
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Work Order: 14062301
Plains/Jal Basin Booster Pump

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F	Description
U	The analyte is not detected above the SDL

Result Comments

1 dilution due to hydrocarbons.

Attachments

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

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: July 9, 2014

Work Order: 14070209



Project Location: Jal, NM
Project Name: Plains/Jal Basin Booster Pump
SRS #: 2014-096

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
367374	WSW-2 @ 2.5'	soil	2014-07-01	12:00	2014-07-02
367375	ESW-2 @ 2.5'	soil	2014-07-01	12:05	2014-07-02
367376	WSW-3 @ 2.5'	soil	2014-07-01	12:10	2014-07-02
367377	ESW-3 @ 2.5'	soil	2014-07-01	12:15	2014-07-02
367378	NSW-8 @ 2.5'	soil	2014-07-01	12:20	2014-07-02
367379	Floor-8 @ 3'	soil	2014-07-01	12:25	2014-07-02
367380	SSW-8 @ 2'	soil	2014-07-01	12:30	2014-07-02
367381	Floor-9 @ 3'	soil	2014-07-01	12:35	2014-07-02

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 26 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:

For inorganic analyses, the term MQL should actually read PQL.



Blair Leftwich

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

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Case Narrative

Samples for project Plains/Jal Basin Booster Pump were received by TraceAnalysis, Inc. on 2014-07-02 and assigned to work order 14070209. Samples for work order 14070209 were received intact at a temperature of -10.0 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	95895	2014-07-03 at 13:51	113387	2014-07-03 at 13:51
TPH DRO - NEW	S 8015 D	95925	2014-07-08 at 08:50	113419	2014-07-08 at 09:31
TPH GRO	S 8015 D	95952	2014-07-08 at 09:40	113446	2014-07-08 at 09:40
TPH ORO	S 8015 D	95925	2014-07-08 at 08:50	113420	2014-07-08 at 09:32

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 14070209 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 367374 - WSW-2 @ 2.5'

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 113387

Prep Batch: 95895

Analytical Method: S 8021B

Date Analyzed: 2014-07-03

Sample Preparation: 2014-07-03

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	U	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	U	1,2,3,4,5	<0.00312	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene	U	1,2,3,4,5	<0.00310	<0.0200	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.17	mg/Kg	1	2.00	108	70 - 130

Sample: 367374 - WSW-2 @ 2.5'

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.22	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	106	mg/Kg	1	100	106	70 - 130

Sample: 367374 - WSW-2 @ 2.5'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113446

Prep Batch: 95952

Analytical Method: S 8015 D

Date Analyzed: 2014-07-08

Sample Preparation: 2014-07-08

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
GRO	U	1,2,3,4	<0.217	<4.00	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.89	mg/Kg	1	2.00	94	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.01	mg/Kg	1	2.00	100	74.6 - 120

Sample: 367374 - WSW-2 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	u		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	61.5 - 159
n-Triacontane			93.0	mg/Kg	1	100	93	70 - 166

Sample: 367375 - ESW-2 @ 2.5'

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113387
Prep Batch: 95895

Analytical Method: S 8021B
Date Analyzed: 2014-07-03
Sample Preparation: 2014-07-03

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	u	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	u	1,2,3,4,5	<0.00312	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene	j	1,2,3,4,5	0.0150	<0.0200	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.17	mg/Kg	1	2.00	108	70 - 130

Sample: 367375 - ESW-2 @ 2.5'

continued ...

sample 367375 continued ...

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
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Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.22	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	109	mg/Kg	1	100	109	70 - 130

Sample: 367375 - ESW-2 @ 2.5'

Laboratory: Lubbock
 Analysis: TPH GRO
 QC Batch: 113446
 Prep Batch: 95952

Analytical Method: S 8015 D
 Date Analyzed: 2014-07-08
 Sample Preparation: 2014-07-08

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	1,2,3,4	<0.217	<4.00	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.96	mg/Kg	1	2.00	98	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.13	mg/Kg	1	2.00	106	74.6 - 120

Sample: 367375 - ESW-2 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	U		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			108	mg/Kg	1	100	108	61.5 - 159
n-Triacontane			97.6	mg/Kg	1	100	98	70 - 166

Sample: 367376 - WSW-3 @ 2.5'

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 113387

Prep Batch: 95895

Analytical Method: S 8021B

Date Analyzed: 2014-07-03

Sample Preparation: 2014-07-03

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	U	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene		1,2,3,4,5	0.0328	0.0328	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene		1,2,3,4,5	0.0501	0.0501	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.97	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.25	mg/Kg	1	2.00	112	70 - 130

Sample: 367376 - WSW-3 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO		1,2,3,4	386	386	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	123	mg/Kg	1	100	123	70 - 130

Sample: 367376 - WSW-3 @ 2.5'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113446

Prep Batch: 95952

Analytical Method: S 8015 D

Date Analyzed: 2014-07-08

Sample Preparation: 2014-07-08

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		1,2,3,4	10.6	10.6	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.08	mg/Kg	1	2.00	104	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.27	mg/Kg	1	2.00	114	74.6 - 120

Sample: 367376 - WSW-3 @ 2.5'

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
ORO	u		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			123	mg/Kg	1	100	123	61.5 - 159
n-Triacontane			105	mg/Kg	1	100	105	70 - 166

Sample: 367377 - ESW-3 @ 2.5'

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 113387

Prep Batch: 95895

Analytical Method: S 8021B

Date Analyzed: 2014-07-03

Sample Preparation: 2014-07-03

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	u	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	u	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	u	1,2,3,4,5	<0.00312	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene	u	1,2,3,4,5	<0.00310	<0.0200	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.01	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.24	mg/Kg	1	2.00	112	70 - 130

Sample: 367377 - ESW-3 @ 2.5'

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
DRO	u	1,2,3,4	<5.22	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	104	mg/Kg	1	100	104	70 - 130

Sample: 367377 - ESW-3 @ 2.5'Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113446
Prep Batch: 95952Analytical Method: S 8015 D
Date Analyzed: 2014-07-08
Sample Preparation: 2014-07-08Prep Method: S 5035
Analyzed By: JS
Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	1,2,3,4	<0.217	<4.00	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.05	mg/Kg	1	2.00	102	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.14	mg/Kg	1	2.00	107	74.6 - 120

Sample: 367377 - ESW-3 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	U		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	61.5 - 159
n-Triacontane			93.4	mg/Kg	1	100	93	70 - 166

Sample: 367378 - NSW-8 @ 2.5'Laboratory: Lubbock
Analysis: BTEX
QC Batch: 113387
Prep Batch: 95895Analytical Method: S 8021B
Date Analyzed: 2014-07-03
Sample Preparation: 2014-07-03Prep Method: S 5035
Analyzed By: JS
Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	U	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	U	1,2,3,4,5	<0.00312	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene	U	1,2,3,4,5	<0.00310	<0.0200	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

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Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.18	mg/Kg	1	2.00	109	70 - 130

Sample: 367378 - NSW-8 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	1,2,3,4	<5.22	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	105	mg/Kg	1	100	105	70 - 130

Sample: 367378 - NSW-8 @ 2.5'

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 113446
Prep Batch: 95952Analytical Method: S 8015 D
Date Analyzed: 2014-07-08
Sample Preparation: 2014-07-08Prep Method: S 5035
Analyzed By: JS
Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	1,2,3,4	<0.217	<4.00	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.84	mg/Kg	1	2.00	92	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.09	mg/Kg	1	2.00	104	74.6 - 120

Sample: 367378 - NSW-8 @ 2.5'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	U		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			105	mg/Kg	1	100	105	61.5 - 159
n-Triacontane			92.4	mg/Kg	1	100	92	70 - 166

Sample: 367379 - Floor-8 @ 3'

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 113387

Prep Batch: 95895

Analytical Method: S 8021B

Date Analyzed: 2014-07-03

Sample Preparation: 2014-07-03

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
Benzene	U	1,2,3,4,5	<0.00296	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	U	1,2,3,4,5	<0.00351	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	U	1,2,3,4,5	<0.00312	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene	U	1,2,3,4,5	<0.00310	<0.0200	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.98	mg/Kg	1	2.00	99	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.14	mg/Kg	1	2.00	107	70 - 130

Sample: 367379 - Floor-8 @ 3'

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
DRO		1,2,3,4	125	125	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	115	mg/Kg	1	100	115	70 - 130

Sample: 367379 - Floor-8 @ 3'

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 113446

Prep Batch: 95952

Analytical Method: S 8015 D

Date Analyzed: 2014-07-08

Sample Preparation: 2014-07-08

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
GRO	U	1,2,3,4	<0.217	<4.00	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.02	mg/Kg	1	2.00	101	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.06	mg/Kg	1	2.00	103	74.6 - 120

Sample: 367379 - Floor-8 @ 3'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	u		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			115	mg/Kg	1	100	115	61.5 - 159
n-Triacontane			102	mg/Kg	1	100	102	70 - 166

Sample: 367380 - SSW-8 @ 2'

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 113387

Prep Batch: 95895

Analytical Method: S 8021B

Date Analyzed: 2014-07-03

Sample Preparation: 2014-07-03

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzene	J	1,2,3,4,5	0.00500	<0.0200	<0.00296	mg/Kg	1	0.00296	0.02	0.00296
Toluene	J	1,2,3,4,5	0.0146	<0.0200	<0.00351	mg/Kg	1	0.00351	0.02	0.00351
Ethylbenzene	J	1,2,3,4,5	0.0101	<0.0200	<0.00312	mg/Kg	1	0.00312	0.02	0.00312
Xylene		1,2,3,4,5	0.0208	0.0208	<0.00310	mg/Kg	1	0.00310	0.02	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	2.00	mg/Kg	1	2.00	100	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.15	mg/Kg	1	2.00	108	70 - 130

Sample: 367380 - SSW-8 @ 2'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	Jb	1,2,3,4	7.13	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	104	mg/Kg	1	100	104	70 - 130

Sample: 367380 - SSW-8 @ 2'

Laboratory: Lubbock
 Analysis: TPH GRO
 QC Batch: 113446
 Prep Batch: 95952

Analytical Method: S 8015 D
 Date Analyzed: 2014-07-08
 Sample Preparation: 2014-07-08

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

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
GRO		1,2,3,4	4.68	4.68	<0.217	mg/Kg	1	0.217	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.85	mg/Kg	1	2.00	92	73 - 122
4-Bromofluorobenzene (4-BFB)		3	1.99	mg/Kg	1	2.00	100	74.6 - 120

Sample: 367380 - SSW-8 @ 2'

Parameter	F	C	SDL Based Result	SQL Based Result	Method Blank Result	Units	Dilution	SDL	SQL (Unadjusted)	MDL (Unadjusted)
ORO	u		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			104	mg/Kg	1	100	104	61.5 - 159
n-Triacontane			93.0	mg/Kg	1	100	93	70 - 166

Sample: 367381 - Floor-9 @ 3'

Laboratory: Lubbock
 Analysis: BTEX
 QC Batch: 113387
 Prep Batch: 95895

Analytical Method: S 8021B
 Date Analyzed: 2014-07-03
 Sample Preparation: 2014-07-03

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

Parameter	F	C	SDL	MQL	Method	Units	Dilution	SDL	MQL	MDL	
			Based	Based	Blank				(Unadjusted)	(Unadjusted)	
			Result	Result	Result						
Benzene	1	U	1,2,3,4,5	<0.00592	<0.0400	<0.00592	mg/Kg	2	0.00592	0.02	0.00296
Toluene		U	1,2,3,4,5	<0.00702	<0.0400	<0.00702	mg/Kg	2	0.00702	0.02	0.00351
Ethylbenzene		U	1,2,3,4,5	<0.00624	<0.0400	<0.00624	mg/Kg	2	0.00624	0.02	0.00312
Xylene		U	1,2,3,4,5	<0.00620	<0.0400	<0.00620	mg/Kg	2	0.00620	0.02	0.0031

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Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	3.82	mg/Kg	2	4.00	96	70 - 130
4-Bromofluorobenzene (4-BFB)		5	4.23	mg/Kg	2	4.00	106	70 - 130

Sample: 367381 - Floor-9 @ 3'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	Jb	1,2,3,4	6.48	<50.0	5.23	mg/Kg	1	5.22	50	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	106	mg/Kg	1	100	106	70 - 130

Sample: 367381 - Floor-9 @ 3'

Laboratory: Lubbock
 Analysis: TPH GRO
 QC Batch: 113446
 Prep Batch: 95952

Analytical Method: S 8015 D
 Date Analyzed: 2014-07-08
 Sample Preparation: 2014-07-08

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

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	2	U	<0.434	<8.00	<0.434	mg/Kg	2	0.434	4	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.93	mg/Kg	2	2.00	96	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.15	mg/Kg	2	2.00	108	74.6 - 120

Sample: 367381 - Floor-9 @ 3'

Parameter	F	C	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
ORO	U		<17.1	<50.0	<17.1	mg/Kg	1	17.1	50	17.1

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	61.5 - 159
n-Triacontane			94.3	mg/Kg	1	100	94	70 - 166

Method Blanks

Method Blank (1)

QC Batch: 113387
Prep Batch: 95895Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03Analyzed By: JS
Prepared By: JS

Parameter	F	C	Result	Units	Reporting Limits
Benzene		1,2,3,4,5	<0.00296	mg/Kg	0.00296
Toluene		1,2,3,4,5	<0.00351	mg/Kg	0.00351
Ethylbenzene		1,2,3,4,5	<0.00312	mg/Kg	0.00312
Xylene		1,2,3,4,5	<0.00310	mg/Kg	0.0031

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5	1.86	mg/Kg	1	2.00	93	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.00	mg/Kg	1	2.00	100	70 - 130

Method Blank (1)

QC Batch: 113419
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Parameter	F	C	Result	Units	Reporting Limits
DRO		1,2,3,4	5.23	mg/Kg	5.22

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane		3	106	mg/Kg	1	100	106	70 - 130

Method Blank (1)

QC Batch: 113420
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Parameter	F	C	Result	Units	Reporting Limits
ORO			<17.1	mg/Kg	17.1

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Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	61.5 - 159
n-Triacontane			94.1	mg/Kg	1	100	94	70 - 166

Method Blank (1)

QC Batch: 113446

Date Analyzed: 2014-07-08

Analyzed By: JS

Prep Batch: 95952

QC Preparation: 2014-07-08

Prepared By: JS

Parameter	F	C	Result	Units	Reporting Limits
GRO		1,2,3,4	<0.217	mg/Kg	0.217

Surrogate	F	C	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	2.36	mg/Kg	1	2.00	118	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.06	mg/Kg	1	2.00	103	74.6 - 120

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 113387
Prep Batch: 95895Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.79	mg/Kg	1	2.00	<0.00296	90	70 - 130
Toluene		1,2,3,4,5	1.90	mg/Kg	1	2.00	<0.00351	95	70 - 130
Ethylbenzene		1,2,3,4,5	1.91	mg/Kg	1	2.00	<0.00312	96	70 - 130
Xylene		1,2,3,4,5	5.70	mg/Kg	1	6.00	<0.00310	95	70 - 130

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		1,2,3,4,5	1.79	mg/Kg	1	2.00	<0.00296	90	70 - 130	0	20
Toluene		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00351	94	70 - 130	2	20
Ethylbenzene		1,2,3,4,5	1.91	mg/Kg	1	2.00	<0.00312	96	70 - 130	0	20
Xylene		1,2,3,4,5	5.77	mg/Kg	1	6.00	<0.00310	96	70 - 130	1	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		5	1.92	1.87	mg/Kg	1	2.00	96	94	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.02	2.06	mg/Kg	1	2.00	101	103	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113419
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	294	mg/Kg	1	250	5.23	116	70 - 130

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		1,2,3,4	289	mg/Kg	1	250	5.23	114	70 - 130	2	20

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

Report Date: July 9, 2014

Work Order: 14070209
Plains/Jal Basin Booster PumpPage Number: 19 of 26
Jal, NM

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane		3	100	101	mg/Kg	1	100	100	101	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 113420
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane			100	101	mg/Kg	1	100	100	101	61.5 - 159
n-Triacontane			89.2	88.6	mg/Kg	1	100	89	89	70 - 166

Laboratory Control Spike (LCS-1)

QC Batch: 113446
Prep Batch: 95952Date Analyzed: 2014-07-08
QC Preparation: 2014-07-08Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	19.3	mg/Kg	1	20.0	<0.217	96	60.1 - 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. Limit	RPD Limit
GRO		1,2,3,4	19.4	mg/Kg	1	20.0	<0.217	97	60.1 - 120
								0	20

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

Surrogate	F	C	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		3	2.26	2.13	mg/Kg	1	2.00	113	106	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.16	2.13	mg/Kg	1	2.00	108	106	74.6 - 120

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 367374

QC Batch: 113387
Prep Batch: 95895Date Analyzed: 2014-07-03
QC Preparation: 2014-07-03Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,5	1.87	mg/Kg	1	2.00	<0.00296	94	70 - 130
Toluene		1,2,3,4,5	1.97	mg/Kg	1	2.00	<0.00351	98	70 - 130
Ethylbenzene		1,2,3,4,5	2.08	mg/Kg	1	2.00	<0.00312	104	70 - 130
Xylene		1,2,3,4,5	6.28	mg/Kg	1	6.00	<0.00310	105	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		1,2,3,4,5	1.85	mg/Kg	1	2.00	<0.00296	92	70 - 130	1	20
Toluene		1,2,3,4,5	1.96	mg/Kg	1	2.00	<0.00351	98	70 - 130	0	20
Ethylbenzene		1,2,3,4,5	2.09	mg/Kg	1	2.00	<0.00312	104	70 - 130	0	20
Xylene		1,2,3,4,5	6.31	mg/Kg	1	6.00	<0.00310	105	70 - 130	0	20

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		5	2.00	2.01	mg/Kg	1	2	100	100	70 - 130
4-Bromofluorobenzene (4-BFB)		5	2.17	2.20	mg/Kg	1	2	108	110	70 - 130

Matrix Spike (MS-1) Spiked Sample: 367374

QC Batch: 113419
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1,2,3,4	280	mg/Kg	1	250	<5.22	112	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1,2,3,4	288	mg/Kg	1	250	<5.22	115	70 - 130	3	20

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

Report Date: July 9, 2014

Work Order: 14070209
Plains/Jal Basin Booster PumpPage Number: 21 of 26
Jal, NM

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane		3	103	104	mg/Kg	1	100	103	104	70 - 130

Matrix Spike (MS-1) Spiked Sample: 367374

QC Batch: 113420
Prep Batch:Date Analyzed:
QC Preparation:Analyzed By:
Prepared By:

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane			103	104	mg/Kg	1	100	103	104	61.5 - 159
n-Triacontane			91.2	91.0	mg/Kg	1	100	91	91	70 - 166

Matrix Spike (MS-1) Spiked Sample: 367374

QC Batch: 113446
Prep Batch: 95952Date Analyzed: 2014-07-08
QC Preparation: 2014-07-08Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	13.9	mg/Kg	1	20.0	<0.217	70	40.3 - 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. Limit	RPD Limit
GRO		1,2,3,4	15.2	mg/Kg	1	20.0	<0.217	76	40.3 - 120

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

Surrogate	F	C	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)		3	2.28	2.26	mg/Kg	1	2	114	113	73 - 122
4-Bromofluorobenzene (4-BFB)		3	2.24	2.26	mg/Kg	1	2	112	113	74.6 - 120

Calibration Standards

Standard (CCV-1)

QC Batch: 113387

Date Analyzed: 2014-07-03

Analyzed By: JS

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0860	86	80 - 120	2014-07-03
Toluene		1,2,3,4,5	mg/kg	0.100	0.0904	90	80 - 120	2014-07-03
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0925	92	80 - 120	2014-07-03
Xylene		1,2,3,4,5	mg/kg	0.300	0.279	93	80 - 120	2014-07-03

Standard (CCV-2)

QC Batch: 113387

Date Analyzed: 2014-07-03

Analyzed By: JS

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0889	89	80 - 120	2014-07-03
Toluene		1,2,3,4,5	mg/kg	0.100	0.0978	98	80 - 120	2014-07-03
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0985	98	80 - 120	2014-07-03
Xylene		1,2,3,4,5	mg/kg	0.300	0.297	99	80 - 120	2014-07-03

Standard (CCV-3)

QC Batch: 113387

Date Analyzed: 2014-07-03

Analyzed By: JS

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,5	mg/kg	0.100	0.0891	89	80 - 120	2014-07-03
Toluene		1,2,3,4,5	mg/kg	0.100	0.0918	92	80 - 120	2014-07-03
Ethylbenzene		1,2,3,4,5	mg/kg	0.100	0.0934	93	80 - 120	2014-07-03
Xylene		1,2,3,4,5	mg/kg	0.300	0.282	94	80 - 120	2014-07-03

Standard (CCV-1)

QC Batch: 113419

Date Analyzed:

Analyzed By:

Report Date: July 9, 2014

Work Order: 14070209
Plains/Jal Basin Booster PumpPage Number: 23 of 26
Jal, NM

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	296	118	80 - 120	2014-07-08

Standard (CCV-2)

QC Batch: 113419

Date Analyzed:

Analyzed By:

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1,2,3,4	mg/Kg	250	300	120	80 - 120	2014-07-08

Standard (CCV-1)

QC Batch: 113446

Date Analyzed: 2014-07-08

Analyzed By: JS

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	1.05	105	80 - 120	2014-07-08

Standard (CCV-2)

QC Batch: 113446

Date Analyzed: 2014-07-08

Analyzed By: JS

Param	F	C	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	1.03	103	80 - 120	2014-07-08

Limits of Detection (LOD)

Test	Method	Matrix	Instrument	Analyte	Spike Amount	Pass
BTEX	S 8021B	soil	GC-9	Benzene	0.00880	Pass
BTEX	S 8021B	soil	GC-9	Toluene	0.00880	Pass
BTEX	S 8021B	soil	GC-9	Ethylbenzene	0.00880	Pass
BTEX	S 8021B	soil	GC-9	Xylene	0.00880	Pass
TPH DRO - NEW	S 8015 D	soil	TPH-2	DRO	15.0	Pass
TPH GRO	S 8015 D	soil	BTEX-2	GRO	0.650	Pass

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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5		2013-083	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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
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 turbidity.
- 2 Dilution due to turbidity.

Attachments

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

TraceAnalysis, Inc.

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Carrollton, Texas 75006
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3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
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Company Name: Nova Safety & Environmental Phone #: 432-520-7720

Address: (Street, City, Zip) 2057 Commerce Dr. Midland, TX. 79703 Fax #: _____

Contact Person: Curt Stanley E-mail: CStanley@envtraining.cc

Invoice to: Plains

Project #: 2014-096 Project Name: Jal Basin Booster Pump

Project Location (including state): Jal, NM Sampler Signature: Matthew Green

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021 / 602 / 8260 / 625	BTEX 8021 / 602 / 8260 / 625	TPH 418.1 / TX1005	TPH 8015 GAO / DRD / TVHC EXTEND TO C35	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME																					

367314	WSW-2 @ 2.5'	1	402	X						X	7-1-14	1200	X	X																					
375	ESW-2 @ 2.5'											1205																							
376	WSW-3 @ 2.5'											1210																							
377	ESW-3 @ 2.5'											1215																							
378	NSW-8 @ 2.5'											1220																							
379	Floor-8 @ 3'											1225																							
380	SSW-8 @ 2'											1230																							
381	Floor-9 @ 3'											1235																							

Relinquished by: Matthew Green Company: NOVA Date: 7-2-14 Time: 1429

Received by: Don Company: TA Date: 7/2/14 Time: 1429

Relinquished by: _____ Company: _____ Date: _____ Time: _____

Received by: _____ Company: _____ Date: _____ Time: _____

Relinquished by: _____ Company: _____ Date: _____ Time: _____

Received by: TA Company: TA Date: 7/3/14 Time: 9:30

LAB USE ONLY

Intact Y / N _____

Headspace Y / N / T / N / A _____

Log-in-Review X

REMARKS: Samples frozen - unable to split at Lubbock lab

☐ Dry Weight Basis Required

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Carrier # Car

25: 12386615



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
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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

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: October 21, 2014

Work Order: 14101030



Project Location: Jal, NM
Project Name: Jal Basin Station Booster Pump
Project Number: 2014-096
SRS #: 2014-096

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
376491	Floor-6 @ 5'	soil	2014-10-09	11:20	2014-10-10
376492	Floor-6 @ 7'	soil	2014-10-09	11:30	2014-10-10
376493	Floor-6 @ 8.5'	soil	2014-10-09	11:40	2014-10-10
376494	NSW-2A @ 2.5'	soil	2014-10-09	12:30	2014-10-10
376495	Floor-1 @ 5'	soil	2014-10-09	10:00	2014-10-10
376496	Floor-1 @ 7'	soil	2014-10-09	10:10	2014-10-10
376497	Floor-1 @ 8.5'	soil	2014-10-09	10:20	2014-10-10
376498	Floor-2 @ 5'	soil	2014-10-09	10:40	2014-10-10
376499	Floor-2 @ 7'	soil	2014-10-09	10:50	2014-10-10
376500	Floor-2 @ 8.5'	soil	2014-10-09	11:00	2014-10-10

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 37 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blair Leftwich

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

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Case Narrative

Samples for project Jal Basin Station Booster Pump were received by TraceAnalysis, Inc. on 2014-10-10 and assigned to work order 14101030. Samples for work order 14101030 were received intact at a temperature of 4.8 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	98294	2014-10-13 at 10:06	116263	2014-10-14 at 08:56
Chloride (Titration)	SM 4500-Cl B	98411	2014-10-15 at 11:20	116366	2014-10-16 at 12:39
TPH DRO - NEW	S 8015 D	98381	2014-10-15 at 15:00	116345	2014-10-16 at 10:13
TPH GRO	S 8015 D	98351	2014-10-14 at 14:19	116328	2014-10-15 at 15:40
TPH ORO	S 8015 D	98381	2014-10-15 at 15:00	116346	2014-10-16 at 10:37
TPH ORO	S 8015 D	98458	2014-10-17 at 16:25	116456	2014-10-20 at 12:37

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 14101030 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: October 21, 2014
2014-096

Work Order: 14101030
Jal Basin Station Booster Pump

Page Number: 6 of 37
Jal, NM

Analytical Report

Sample: 376491 - Floor-6 @ 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene	U	5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	5	<0.0200	mg/Kg	1	0.0200
Xylene	U	5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.71	mg/Kg	1	2.00	86	70 - 130
4-Bromofluorobenzene (4-BFB)			2.21	mg/Kg	1	2.00	110	70 - 130

Sample: 376491 - Floor-6 @ 5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 116345
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

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

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

Sample: 376491 - Floor-6 @ 5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 116328
Prep Batch: 98351

Analytical Method: S 8015 D
Date Analyzed: 2014-10-15
Sample Preparation: 2014-10-14

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

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc,Qr,U	5	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.94	mg/Kg	1	2.00	97	70 - 130
4-Bromofluorobenzene (4-BFB)			1.71	mg/Kg	1	2.00	86	70 - 130

Sample: 376491 - Floor-6 @ 5'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MDL Result	PQL Result	RL Result	Units	Dilution	MDL	MDL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			80.2	mg/Kg	1	100	80	70 - 130
n-Triacontane			75.6	mg/Kg	1	100	76	37.1 - 162

Sample: 376492 - Floor-6 @ 7'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene	U	5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene		5	0.0334	mg/Kg	1	0.0200
Xylene		5	0.0801	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	70 - 130

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Sample: 376492 - Floor-6 @ 7'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 116345

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

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

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			106	mg/Kg	1	100	106	70 - 130

Sample: 376492 - Floor-6 @ 7'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 116328

Prep Batch: 98351

Analytical Method: S 8015 D

Date Analyzed: 2014-10-15

Sample Preparation: 2014-10-14

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc,Qr,U	s	<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)			1.60	mg/Kg	1	2.00	80	70 - 130

Sample: 376492 - Floor-6 @ 7'

Laboratory: Midland

Analysis: TPH ORO

QC Batch: 116346

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			77.0	mg/Kg	1	100	77	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			69.7	mg/Kg	1	100	70	37.1 - 162

Sample: 376493 - Floor-6 @ 8.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene	U	5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	5	<0.0200	mg/Kg	1	0.0200
Xylene	U	5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.68	mg/Kg	1	2.00	84	70 - 130
4-Bromofluorobenzene (4-BFB)			2.16	mg/Kg	1	2.00	108	70 - 130

Sample: 376493 - Floor-6 @ 8.5'

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 116366
Prep Batch: 98411

Analytical Method: SM 4500-Cl B
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			141	mg/Kg	5	4.00

Sample: 376493 - Floor-6 @ 8.5'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 116345
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

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

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

Sample: 376493 - Floor-6 @ 8.5'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 116328
Prep Batch: 98351

Analytical Method: S 8015 D
Date Analyzed: 2014-10-15
Sample Preparation: 2014-10-14

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr, U	S	<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)			1.53	mg/Kg	1	2.00	76	70 - 130

Sample: 376493 - Floor-6 @ 8.5'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			80.1	mg/Kg	1	100	80	70 - 130
n-Triacontane			70.6	mg/Kg	1	100	71	37.1 - 162

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Sample: 376494 - NSW-2A @ 2.5'

Laboratory: Midland

Analysis: BTEX

QC Batch: 116263

Prep Batch: 98294

Analytical Method: S 8021B

Date Analyzed: 2014-10-14

Sample Preparation: 2014-10-09

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene	U	5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	5	<0.0200	mg/Kg	1	0.0200
Xylene	U	5	<0.0200	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.65	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			2.11	mg/Kg	1	2.00	106	70 - 130

Sample: 376494 - NSW-2A @ 2.5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 116345

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	U	5	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			116	mg/Kg	1	100	116	70 - 130

Sample: 376494 - NSW-2A @ 2.5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 116328

Prep Batch: 98351

Analytical Method: S 8015 D

Date Analyzed: 2014-10-15

Sample Preparation: 2014-10-14

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr, U	5	<4.00	mg/Kg	1	4.00

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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)			1.54	mg/Kg	1	2.00	77	70 - 130

Sample: 376494 - NSW-2A @ 2.5'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			84.1	mg/Kg	1	100	84	70 - 130
n-Triacontane			73.8	mg/Kg	1	100	74	37.1 - 162

Sample: 376495 - Floor-1 @ 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	u	s	<0.0200	mg/Kg	1	0.0200
Toluene		s	0.714	mg/Kg	1	0.0200
Ethylbenzene		s	2.62	mg/Kg	1	0.0200
Xylene		s	11.5	mg/Kg	1	0.0200

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)			6.35	mg/Kg	1	2.00	318	70 - 130

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Sample: 376495 - Floor-1 @ 5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 116345

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	2560	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	181	mg/Kg	1	100	181	70 - 130

Sample: 376495 - Floor-1 @ 5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 116328

Prep Batch: 98351

Analytical Method: S 8015 D

Date Analyzed: 2014-10-15

Sample Preparation: 2014-10-14

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr	5	1330	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			34.9	mg/Kg	20	40.0	87	70 - 130
4-Bromofluorobenzene (4-BFB)			46.8	mg/Kg	20	40.0	117	70 - 130

Sample: 376495 - Floor-1 @ 5'

Laboratory: Midland

Analysis: TPH ORO

QC Batch: 116346

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			97.4	97.4	97.4	97.4	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	134	mg/Kg	1	100	134	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			98.3	mg/Kg	1	100	98	37.1 - 162

Sample: 376496 - Floor-1 @ 7'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene		5	0.268	mg/Kg	1	0.0200
Ethylbenzene		5	0.266	mg/Kg	1	0.0200
Xylene		5	3.83	mg/Kg	1	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.64	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			5.88	mg/Kg	1	2.00	294	70 - 130

Sample: 376496 - Floor-1 @ 7'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 116345
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	2480	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{SR}	Q _{SR}	188	mg/Kg	1	100	188	70 - 130

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Sample: 376496 - Floor-1 @ 7'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 116328
Prep Batch: 98351

Analytical Method: S 8015 D
Date Analyzed: 2014-10-15
Sample Preparation: 2014-10-14

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr	5	823	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			35.3	mg/Kg	20	40.0	88	70 - 130
4-Bromofluorobenzene (4-BFB)			43.1	mg/Kg	20	40.0	108	70 - 130

Sample: 376496 - Floor-1 @ 7'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			94.8	94.8	94.8	94.8	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	134	mg/Kg	1	100	134	70 - 130
n-Triacontane			103	mg/Kg	1	100	103	37.1 - 162

Sample: 376497 - Floor-1 @ 8.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	5	<0.0200	mg/Kg	1	0.0200
Toluene	U	5	<0.0200	mg/Kg	1	0.0200
Ethylbenzene	U	5	<0.0200	mg/Kg	1	0.0200

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene		5	0.0860	mg/Kg	1	0.0200

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)			2.22	mg/Kg	1	2.00	111	70 - 130

Sample: 376497 - Floor-1 @ 8.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	116366	Date Analyzed:	2014-10-16	Analyzed By: MM
Prep Batch:	98411	Sample Preparation:	2014-10-15	Prepared By: MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			47.0	mg/Kg	5	4.00

Sample: 376497 - Floor-1 @ 8.5'

Laboratory:	Midland			
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method: N/A
QC Batch:	116345	Date Analyzed:	2014-10-16	Analyzed By: SC
Prep Batch:	98381	Sample Preparation:	2014-10-15	Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	524	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	132	mg/Kg	1	100	132	70 - 130

Sample: 376497 - Floor-1 @ 8.5'

Laboratory:	Midland			
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method: S 5035
QC Batch:	116328	Date Analyzed:	2014-10-15	Analyzed By: AK
Prep Batch:	98351	Sample Preparation:	2014-10-14	Prepared By: AK

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	QC,QR	5	38.4	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)			1.97	mg/Kg	1	2.00	98	70 - 130

Sample: 376497 - Floor-1 @ 8.5'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<50.0	<50.0	<50.0	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			94.6	mg/Kg	1	100	95	70 - 130
n-Triacontane			79.7	mg/Kg	1	100	80	37.1 - 162

Sample: 376498 - Floor-2 @ 5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	1	5	<0.100	mg/Kg	5	0.0200
Toluene		5	0.824	mg/Kg	5	0.0200
Ethylbenzene	5	5	<0.100	mg/Kg	5	0.0200
Xylene		5	17.6	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			7.98	mg/Kg	5	10.0	80	70 - 130
4-Bromofluorobenzene (4-BFB)			17.5	mg/Kg	5	10.0	175	70 - 130

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Sample: 376498 - Floor-2 @ 5'

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 116345

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	4210	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	222	mg/Kg	1	100	222	70 - 130

Sample: 376498 - Floor-2 @ 5'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 116328

Prep Batch: 98351

Analytical Method: S 8015 D

Date Analyzed: 2014-10-15

Sample Preparation: 2014-10-14

Prep Method: S 5035

Analyzed By: AK

Prepared By: AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr	5	2310	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			37.2	mg/Kg	20	40.0	93	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	57.7	mg/Kg	20	40.0	144	70 - 130

Sample: 376498 - Floor-2 @ 5'

Laboratory: Midland

Analysis: TPH ORO

QC Batch: 116346

Prep Batch: 98381

Analytical Method: S 8015 D

Date Analyzed: 2014-10-16

Sample Preparation: 2014-10-15

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			212	212	212	212	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	165	mg/Kg	1	100	165	70 - 130

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Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			120	mg/Kg	1	100	120	37.1 - 162

Sample: 376499 - Floor-2 @ 7'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	0.838	mg/Kg	5	0.0200
Toluene		5	8.46	mg/Kg	5	0.0200
Ethylbenzene		5	7.79	mg/Kg	5	0.0200
Xylene		5	41.5	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			7.97	mg/Kg	5	10.0	80	70 - 130
4-Bromofluorobenzene (4-BFB)			25.3	mg/Kg	5	10.0	253	70 - 130

Sample: 376499 - Floor-2 @ 7'

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 116345
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Je	5	6380	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	276	mg/Kg	1	100	276	70 - 130

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Sample: 376499 - Floor-2 @ 7'

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 116328
Prep Batch: 98351

Analytical Method: S 8015 D
Date Analyzed: 2014-10-15
Sample Preparation: 2014-10-14

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr	5	5010	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			84.1	mg/Kg	50	100	84	70 - 130
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	133	mg/Kg	50	100	133	70 - 130

Sample: 376499 - Floor-2 @ 7'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116346
Prep Batch: 98381

Analytical Method: S 8015 D
Date Analyzed: 2014-10-16
Sample Preparation: 2014-10-15

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			294	294	294	294	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	205	mg/Kg	1	100	205	70 - 130
n-Triacontane			144	mg/Kg	1	100	144	37.1 - 162

Sample: 376500 - Floor-2 @ 8.5'

Laboratory: Midland
Analysis: BTEX
QC Batch: 116263
Prep Batch: 98294

Analytical Method: S 8021B
Date Analyzed: 2014-10-14
Sample Preparation: 2014-10-09

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene		5	0.537	mg/Kg	5	0.0200
Toluene		5	1.58	mg/Kg	5	0.0200
Ethylbenzene		5	1.22	mg/Kg	5	0.0200

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Xylene		5	14.1	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.04	mg/Kg	5	10.0	80	70 - 130
4-Bromofluorobenzene (4-BFB)			17.4	mg/Kg	5	10.0	174	70 - 130

Sample: 376500 - Floor-2 @ 8.5'

Laboratory:	Midland			
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method: N/A
QC Batch:	116366	Date Analyzed:	2014-10-16	Analyzed By: MM
Prep Batch:	98411	Sample Preparation:	2014-10-15	Prepared By: MM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			188	mg/Kg	5	4.00

Sample: 376500 - Floor-2 @ 8.5'

Laboratory:	Midland			
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method: N/A
QC Batch:	116345	Date Analyzed:	2014-10-16	Analyzed By: SC
Prep Batch:	98381	Sample Preparation:	2014-10-15	Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	4550	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			245	mg/Kg	1	100	245	70 - 130

Sample: 376500 - Floor-2 @ 8.5'

Laboratory:	Midland			
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method: S 5035
QC Batch:	116328	Date Analyzed:	2014-10-15	Analyzed By: AK
Prep Batch:	98351	Sample Preparation:	2014-10-14	Prepared By: AK

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	Qc, Qr	5	1860	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			37.6	mg/Kg	20	40.0	94	70 - 130
4-Bromofluorobenzene (4-BFB)			51.1	mg/Kg	20	40.0	128	70 - 130

Sample: 376500 - Floor-2 @ 8.5'

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 116456
Prep Batch: 98458

Analytical Method: S 8015 D
Date Analyzed: 2014-10-20
Sample Preparation: 2014-10-17

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

Parameter	Flag	Cert	MDL Result	ML Result	PQL Result	RL Result	Units	Dilution	MDL	ML	PQL	RL
ORO			181	181	181	181	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	193	mg/Kg	1	100	193	70 - 130
n-Triacontane			115	mg/Kg	1	100	115	37.1 - 162

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Method Blanks

Method Blank (1) QC Batch: 116263

QC Batch: 116263
Prep Batch: 98294

Date Analyzed: 2014-10-14
QC Preparation: 2014-10-13

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		5	<0.00533	mg/Kg	0.02
Toluene		5	<0.00645	mg/Kg	0.02
Ethylbenzene		5	<0.0116	mg/Kg	0.02
Xylene		5	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.64	mg/Kg	1	2.00	82	70 - 130
4-Bromofluorobenzene (4-BFB)			1.85	mg/Kg	1	2.00	92	70 - 130

Method Blank (1) QC Batch: 116328

QC Batch: 116328
Prep Batch: 98351

Date Analyzed: 2014-10-15
QC Preparation: 2014-10-14

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<2.32	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.78	mg/Kg	1	2.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			1.53	mg/Kg	1	2.00	76	70 - 130

Method Blank (1) QC Batch: 116345

QC Batch: 116345
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

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Parameter	Flag	Cert	MDL Result	Units	RL
DRO		5	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			113	mg/Kg	1	100	113	70 - 130

Method Blank (1) QC Batch: 116346

QC Batch: 116346
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			81.6	mg/Kg	1	100	82	70 - 130
n-Triacontane			72.8	mg/Kg	1	100	73	37.1 - 162

Method Blank (1) QC Batch: 116366

QC Batch: 116366
Prep Batch: 98411

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: MM
Prepared By: WK

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

Method Blank (1) QC Batch: 116456

QC Batch: 116456
Prep Batch: 98458

Date Analyzed: 2014-10-20
QC Preparation: 2014-10-17

Analyzed By: SC
Prepared By: SC

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Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			75.4	mg/Kg	1	100	75	70 - 130
n-Triacontane			64.9	mg/Kg	1	100	65	37.1 - 162

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 116263
Prep Batch: 98294

Date Analyzed: 2014-10-14
QC Preparation: 2014-10-13

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	1.92	mg/Kg	1	2.00	<0.00533	96	70 - 130
Toluene		5	1.97	mg/Kg	1	2.00	<0.00645	98	70 - 130
Ethylbenzene		5	1.92	mg/Kg	1	2.00	<0.0116	96	70 - 130
Xylene		5	5.89	mg/Kg	1	6.00	<0.00874	98	70 - 130

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		5	1.90	mg/Kg	1	2.00	<0.00533	95	70 - 130	1	20
Toluene		5	1.96	mg/Kg	1	2.00	<0.00645	98	70 - 130	0	20
Ethylbenzene		5	1.94	mg/Kg	1	2.00	<0.0116	97	70 - 130	1	20
Xylene		5	5.93	mg/Kg	1	6.00	<0.00874	99	70 - 130	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)	1.40	1.41	mg/Kg	1	2.00	70	70	70 - 130
4-Bromofluorobenzene (4-BFB)	2.38	2.41	mg/Kg	1	2.00	119	120	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 116328
Prep Batch: 98351

Date Analyzed: 2014-10-15
QC Preparation: 2014-10-14

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	22.9	mg/Kg	1	20.0	<2.32	114	70 - 130

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

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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	s		24.7	mg/Kg	1	20.0	<2.32	124	70 - 130	8	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)	1.84	1.85	mg/Kg	1	2.00	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.64	1.64	mg/Kg	1	2.00	82	82	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 116345
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	s		301	mg/Kg	1	250	<7.41	120	70 - 130

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
DRO	s		301	mg/Kg	1	250	<7.41	120	70 - 130	0	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
n-Tricosane	113	109	mg/Kg	1	100	113	109	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 116346
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Tricosane	83.0	79.4	mg/Kg	1	100	83	79	70 - 130

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Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	70.4	67.2	mg/Kg	1	100	70	67	54.8 - 164

Laboratory Control Spike (LCS-1)

QC Batch: 116366
Prep Batch: 98411

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: MM
Prepared By: WK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2630	mg/Kg	5	2500	<19.2	105	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			2770	mg/Kg	5	2500	<19.2	111	85 - 115	5	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: 116456
Prep Batch: 98458

Date Analyzed: 2014-10-20
QC Preparation: 2014-10-17

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO			0.00	mg/Kg	1	250	0	0	-

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
ORO			0.00	mg/Kg	1	250	0	0	-	0	

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	77.2	79.9	mg/Kg	1	100	77	80	70 - 130
n-Triacontane	64.1	65.8	mg/Kg	1	100	64	66	54.8 - 164

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Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 376491

QC Batch: 116263
Prep Batch: 98294

Date Analyzed: 2014-10-14
QC Preparation: 2014-10-13

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		5	1.56	mg/Kg	1	2.00	<0.00533	78	70 - 130
Toluene		5	1.65	mg/Kg	1	2.00	<0.00645	82	70 - 130
Ethylbenzene		5	1.68	mg/Kg	1	2.00	<0.0116	84	70 - 130
Xylene		5	5.22	mg/Kg	1	6.00	<0.00874	87	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		5	1.65	mg/Kg	1	2.00	<0.00533	82	70 - 130	6	20
Toluene		5	1.72	mg/Kg	1	2.00	<0.00645	86	70 - 130	4	20
Ethylbenzene		5	1.80	mg/Kg	1	2.00	<0.0116	90	70 - 130	7	20
Xylene		5	5.58	mg/Kg	1	6.00	<0.00874	93	70 - 130	7	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)	1.70	1.74	mg/Kg	1	2	85	87	70 - 130
4-Bromofluorobenzene (4-BFB)	2.21	2.22	mg/Kg	1	2	110	111	70 - 130

Matrix Spike (MS-1) Spiked Sample: 376586

QC Batch: 116328
Prep Batch: 98351

Date Analyzed: 2014-10-15
QC Preparation: 2014-10-14

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		5	12.1	mg/Kg	1	10.0	<2.32	121	70 - 130

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 ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit	
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit	
GRO	Qr	Qr	5	8.02	mg/Kg	1	10.0	<2.32	80	70 - 130	41	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)	1.78	1.80	mg/Kg	1	2	89	90	70 - 130
4-Bromofluorobenzene (4-BFB)	1.76	1.72	mg/Kg	1	2	88	86	70 - 130

Matrix Spike (MS-1) Spiked Sample: 376492

QC Batch: 116345
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		5	278	mg/Kg	1	250	<7.41	111	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		5	298	mg/Kg	1	250	<7.41	119	70 - 130	7	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	103	108	mg/Kg	1	100	103	108	70 - 130

Matrix Spike (MS-1) Spiked Sample: 376492

QC Batch: 116346
Prep Batch: 98381

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: SC
Prepared By: SC

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	74.5	78.8	mg/Kg	1	100	74	79	70 - 130

continued ...

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2014-096

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Jal Basin Station Booster Pump

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matrix spikes continued ...

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	62.3	67.0	mg/Kg	1	100	62	67	10 - 258

Matrix Spike (MS-1) Spiked Sample: 376521

QC Batch: 116366
Prep Batch: 98411

Date Analyzed: 2014-10-16
QC Preparation: 2014-10-15

Analyzed By: MM
Prepared By: WK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2910	mg/Kg	5	2500	94	113	78.9 - 121

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			2820	mg/Kg	5	2500	94	109	78.9 - 121	3	20

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

Matrix Spike (xMS-1) Spiked Sample: 377008

QC Batch: 116456
Prep Batch: 98458

Date Analyzed: 2014-10-20
QC Preparation: 2014-10-17

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
ORO			0.00	mg/Kg	1	250	0	0	-

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			0.00	mg/Kg	1	250	0	0	-	0	

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	90.0	99.1	mg/Kg	1	100	90	99	70 - 130
n-Triacontane	76.5	83.7	mg/Kg	1	100	76	84	10 - 258

Calibration Standards

Standard (CCV-1)

QC Batch: 116263

Date Analyzed: 2014-10-14

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0951	95	80 - 120	2014-10-14
Toluene		5	mg/kg	0.100	0.0954	95	80 - 120	2014-10-14
Ethylbenzene		5	mg/kg	0.100	0.0922	92	80 - 120	2014-10-14
Xylene		5	mg/kg	0.300	0.280	93	80 - 120	2014-10-14

Standard (CCV-2)

QC Batch: 116263

Date Analyzed: 2014-10-14

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0888	89	80 - 120	2014-10-14
Toluene		5	mg/kg	0.100	0.0912	91	80 - 120	2014-10-14
Ethylbenzene		5	mg/kg	0.100	0.0901	90	80 - 120	2014-10-14
Xylene		5	mg/kg	0.300	0.273	91	80 - 120	2014-10-14

Standard (CCV-3)

QC Batch: 116263

Date Analyzed: 2014-10-14

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		5	mg/kg	0.100	0.0903	90	80 - 120	2014-10-14
Toluene		5	mg/kg	0.100	0.0916	92	80 - 120	2014-10-14
Ethylbenzene		5	mg/kg	0.100	0.0900	90	80 - 120	2014-10-14
Xylene		5	mg/kg	0.300	0.273	91	80 - 120	2014-10-14

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2014-096

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Standard (CCV-2)

QC Batch: 116328

Date Analyzed: 2014-10-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		s	mg/Kg	1.00	0.909	91	80 - 120	2014-10-15

Standard (CCV-3)

QC Batch: 116328

Date Analyzed: 2014-10-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		s	mg/Kg	1.00	1.14	114	80 - 120	2014-10-15

Standard (CCV-4)

QC Batch: 116328

Date Analyzed: 2014-10-15

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
GRO	² Qc	Qc	s	mg/Kg	1.00	1.25	125	80 - 120	2014-10-15

Standard (CCV-1)

QC Batch: 116345

Date Analyzed: 2014-10-16

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	270	108	80 - 120	2014-10-16

Standard (CCV-2)

QC Batch: 116345

Date Analyzed: 2014-10-16

Analyzed By: SC

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	273	109	80 - 120	2014-10-16

Standard (CCV-3)

QC Batch: 116345

Date Analyzed: 2014-10-16

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	288	115	80 - 120	2014-10-16

Standard (ICV-1)

QC Batch: 116366

Date Analyzed: 2014-10-16

Analyzed By: MM

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	102	102	85 - 115	2014-10-16

Standard (CCV-1)

QC Batch: 116366

Date Analyzed: 2014-10-16

Analyzed By: MM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	98.0	98	85 - 115	2014-10-16

Standard (CCV-2)

QC Batch: 116456

Date Analyzed: 2014-10-20

Analyzed By: SC

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2014-096

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Jal Basin Station Booster Pump

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.470	0	-	2014-10-20

Standard (CCV-3)

QC Batch: 116456

Date Analyzed: 2014-10-20

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.430	0	-	2014-10-20

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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

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F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

- 1 Dilution due to hydrocarbons.
- 2 CCV recovery high due to carryover from previous samples.

Attachments

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

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 Address: 2057 COMMERCE MIDLAND, TEXAS 79703 Fax #:
 Contact Person: CURT STANLEY E-mail: cstanley@novasafety.com
 Invoice to: PLAINS (Camille) cjbryant@pcc.com
 (If different from above)
 Project #: 2014-096 Project Name: JAL BASIN STATION
 Project Location (including state): JAL, NM Sample Signature: Booster

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	BTX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 E/C35	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Chloride 4500	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE																								
37641	FLOOR-6@S'	1	4oz	X								X		10/9	1120	X	X																				
492	FLOOR-6@7'	1	4oz												1130																						
493	FLOOR-6@8.5'	1	4oz												1140																						
494	NSW-2A@2.5'	1	4oz												1230																						
495	FLOOR-1@5'	1	4oz												1000																						
496	FLOOR-1@7'	1	4oz												1010																						
497	FLOOR-1@8.5'	1	4oz												1020																						
498	FLOOR-2@5'	1	4oz												1040																						
499	FLOOR-2@7'	1	4oz												1050																						
500	FLOOR-2@8.5'	1	4oz												1100																						

Relinquished by: CT Stanley Company: NOVA Date: 10/14/12 Time: 12:35 Received by: TA Company: TA Date: 10/14/12 Time: 12:35 INST 4.9
 OBS 4.8
 COR 4.8
 Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____ Date: _____ Time: _____ INST _____
 OBS _____
 COR _____
 Relinquished by: _____ Company: _____ Date: _____ Time: _____ Received by: _____ Company: _____ Date: _____ Time: _____ INST _____
 OBS _____
 COR _____

LAB USE ONLY

Initials: Y/N
 Methodspace: Y/N/NA
 Log-In Review: Y

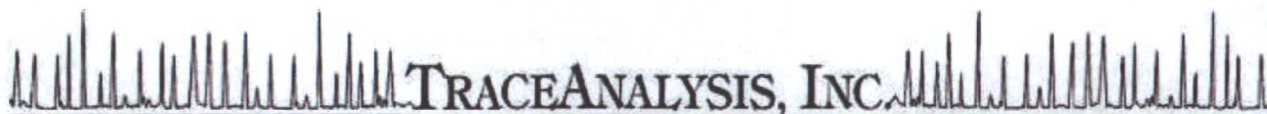
REMARKS:

- ☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # 1410

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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: January 28, 2015

Work Order: 15012143



Project Location: Jal, NM
Project Name: Plains/Jal Basin Booster Pump
Project Number: SRS #2014-096
SRS #: 2014-096

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
384938	SP-1 (West)	soil	2015-01-20	15:25	2015-01-21
384939	SP-2 (East)	soil	2015-01-20	15:30	2015-01-21

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 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

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Case Narrative

Samples for project Plains/Jal Basin Booster Pump were received by TraceAnalysis, Inc. on 2015-01-21 and assigned to work order 15012143. Samples for work order 15012143 were received intact at a temperature of -0.8 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	100523	2015-01-27 at 09:51	118895	2015-01-28 at 07:26
TPH DRO - NEW	S 8015 D	100444	2015-01-21 at 18:05	118788	2015-01-22 at 09:47
TPH GRO	S 8015 D	100523	2015-01-27 at 09:51	118896	2015-01-28 at 07:31
TPH ORO	S 8015 D	100444	2015-01-21 at 18:05	118791	2015-01-22 at 10:17

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 15012143 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: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Analytical Report

Sample: 384938 - SP-1 (West)

Laboratory: Midland
Analysis: BTEX
QC Batch: 118895
Prep Batch: 100523

Analytical Method: S 8021B
Date Analyzed: 2015-01-28
Sample Preparation: 2015-01-27

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	S	<0.0400	mg/Kg	2	0.0200
Toluene	U	S	<0.0400	mg/Kg	2	0.0200
Ethylbenzene	U	S	<0.0400	mg/Kg	2	0.0200
Xylene	U	S	<0.0400	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.90	mg/Kg	2	4.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			4.11	mg/Kg	2	4.00	103	70 - 130

Sample: 384938 - SP-1 (West)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 118788
Prep Batch: 100444

Analytical Method: S 8015 D
Date Analyzed: 2015-01-22
Sample Preparation: 2015-01-21

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qsr	S	2330	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	260	mg/Kg	5	100	260	70 - 130

Sample: 384938 - SP-1 (West)

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 118896
Prep Batch: 100523

Analytical Method: S 8015 D
Date Analyzed: 2015-01-28
Sample Preparation: 2015-01-27

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

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	2	u	s	<8.00	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.56	mg/Kg	2	4.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			3.40	mg/Kg	2	4.00	85	70 - 130

Sample: 384938 - SP-1 (West)

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 118791
Prep Batch: 100444

Analytical Method: S 8015 D
Date Analyzed: 2015-01-22
Sample Preparation: 2015-01-21

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<250	<250	<250	mg/Kg	5	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	270	mg/Kg	5	100	270	70 - 130
n-Triacontane	Qsr	Qsr	198	mg/Kg	5	100	198	37.1 - 162

Sample: 384939 - SP-2 (East)

Laboratory: Midland
Analysis: BTEX
QC Batch: 118895
Prep Batch: 100523

Analytical Method: S 8021B
Date Analyzed: 2015-01-28
Sample Preparation: 2015-01-27

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

Parameter	Flag	Cert	RL	Units	Dilution	RL	
			Result				
Benzene	3	u	5	<0.0400	mg/Kg	2	0.0200
Toluene		u	5	<0.0400	mg/Kg	2	0.0200
Ethylbenzene		u	5	<0.0400	mg/Kg	2	0.0200
Xylene		u	5	<0.0400	mg/Kg	2	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.69	mg/Kg	2	4.00	92	70 - 130
4-Bromofluorobenzene (4-BFB)			4.09	mg/Kg	2	4.00	102	70 - 130

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Jal, NM

Sample: 384939 - SP-2 (East)

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118788	Date Analyzed:	2015-01-22	Analyzed By:	SC
Prep Batch:	100444	Sample Preparation:	2015-01-21	Prepared By:	SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qr	5	2150	mg/Kg	5	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	214	mg/Kg	5	100	214	70 - 130

Sample: 384939 - SP-2 (East)

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	118896	Date Analyzed:	2015-01-28	Analyzed By:	AK
Prep Batch:	100523	Sample Preparation:	2015-01-27	Prepared By:	AK

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		5	10.2	mg/Kg	2	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			3.55	mg/Kg	2	4.00	89	70 - 130
4-Bromofluorobenzene (4-BFB)			3.60	mg/Kg	2	4.00	90	70 - 130

Sample: 384939 - SP-2 (East)

Laboratory:	Midland				
Analysis:	TPH ORO	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	118791	Date Analyzed:	2015-01-22	Analyzed By:	SC
Prep Batch:	100444	Sample Preparation:	2015-01-21	Prepared By:	SC

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			0.00	<250	<250	<250	mg/Kg	5	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	220	mg/Kg	5	100	220	70 - 130

continued ...

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane			154	mg/Kg	5	100	154	37.1 - 162

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
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Jal, NM

Method Blanks

Method Blank (1) QC Batch: 118788

QC Batch: 118788
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		s	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.2	mg/Kg	1	100	89	70 - 130

Method Blank (1) QC Batch: 118791

QC Batch: 118791
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.3	mg/Kg	1	100	89	70 - 130
n-Triacontane			93.3	mg/Kg	1	100	93	37.1 - 162

Method Blank (1) QC Batch: 118895

QC Batch: 118895
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		s	<0.00533	mg/Kg	0.02
Toluene		s	<0.00645	mg/Kg	0.02
Ethylbenzene		s	<0.0116	mg/Kg	0.02

continued ...

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Jal, NM

method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Xylene		5	<0.00874	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.95	mg/Kg	1	2.00	98	70 - 130
4-Bromofluorobenzene (4-BFB)			2.29	mg/Kg	1	2.00	114	70 - 130

Method Blank (1) QC Batch: 118896

QC Batch: 118896
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		5	<2.32	mg/Kg	4

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

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Jal, NM

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 118788
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		s	282	mg/Kg	1	250	<7.41	113	70 - 130

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		s	262	mg/Kg	1	250	<7.41	105	70 - 130	7	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	114	99.7	mg/Kg	1	100	114	100	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118791
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	115	99.5	mg/Kg	1	100	115	100	70 - 130
n-Triacontane	112	93.6	mg/Kg	1	100	112	94	54.8 - 164

Laboratory Control Spike (LCS-1)

QC Batch: 118895
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		s	1.77	mg/Kg	1	2.00	<0.00533	88	70 - 130
Toluene		s	1.81	mg/Kg	1	2.00	<0.00645	90	70 - 130
Ethylbenzene		s	1.93	mg/Kg	1	2.00	<0.0116	96	70 - 130
Xylene		s	5.87	mg/Kg	1	6.00	<0.00874	98	70 - 130

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		s	1.69	mg/Kg	1	2.00	<0.00533	84	70 - 130	5	20
Toluene		s	1.74	mg/Kg	1	2.00	<0.00645	87	70 - 130	4	20
Ethylbenzene		s	1.83	mg/Kg	1	2.00	<0.0116	92	70 - 130	5	20
Xylene		s	5.59	mg/Kg	1	6.00	<0.00874	93	70 - 130	5	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)	1.84	1.83	mg/Kg	1	2.00	92	92	70 - 130
4-Bromofluorobenzene (4-BFB)	2.22	2.17	mg/Kg	1	2.00	111	108	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 118896
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		s	20.9	mg/Kg	1	20.0	<2.32	104	70 - 130

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		s	21.8	mg/Kg	1	20.0	<2.32	109	70 - 130	4	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)	1.88	1.96	mg/Kg	1	2.00	94	98	70 - 130
4-Bromofluorobenzene (4-BFB)	1.72	1.76	mg/Kg	1	2.00	86	88	70 - 130

Report Date: January 28, 2015
SRS #2014-096

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Plains/Jal Basin Booster Pump

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Jal, NM

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 384579

QC Batch: 118788
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		s	271	mg/Kg	1	250	<7.41	108	70 - 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 _r	q _r	s	177	mg/Kg	1	250	<7.41	71	70 - 130	42	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	104	69.5	mg/Kg	1	100	104	70	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 384579

QC Batch: 118791
Prep Batch: 100444

Date Analyzed: 2015-01-22
QC Preparation: 2015-01-21

Analyzed By: SC
Prepared By: SC

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	103	69.7	mg/Kg	1	100	103	70	70 - 130
n-Triacontane	100	68.2	mg/Kg	1	100	100	68	10 - 258

Matrix Spike (MS-1) Spiked Sample: 384938

QC Batch: 118895
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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Jal, NM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		s	1.74	mg/Kg	2	2.00	<0.0107	87	70 - 130
Toluene		s	1.75	mg/Kg	2	2.00	<0.0129	88	70 - 130
Ethylbenzene		s	1.89	mg/Kg	2	2.00	<0.0232	94	70 - 130
Xylene		s	5.41	mg/Kg	2	6.00	<0.0175	90	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene		s	1.71	mg/Kg	2	2.00	<0.0107	86	70 - 130	2	20
Toluene		s	1.76	mg/Kg	2	2.00	<0.0129	88	70 - 130	1	20
Ethylbenzene		s	1.78	mg/Kg	2	2.00	<0.0232	89	70 - 130	6	20
Xylene		s	5.46	mg/Kg	2	6.00	<0.0175	91	70 - 130	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)	3.98	4.13	mg/Kg	2	4	100	103	70 - 130
4-Bromofluorobenzene (4-BFB)	4.34	4.44	mg/Kg	2	4	108	111	70 - 130

Matrix Spike (MS-1) Spiked Sample: 384938

QC Batch: 118896
Prep Batch: 100523

Date Analyzed: 2015-01-28
QC Preparation: 2015-01-27

Analyzed By: AK
Prepared By: AK

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		s	22.8	mg/Kg	2	20.0	<4.64	114	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		s	25.7	mg/Kg	2	20.0	<4.64	128	70 - 130	12	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)	3.61	3.67	mg/Kg	2	4	90	92	70 - 130
4-Bromofluorobenzene (4-BFB)	3.93	3.72	mg/Kg	2	4	98	93	70 - 130

Calibration Standards

Standard (CCV-1)

QC Batch: 118788

Date Analyzed: 2015-01-22

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	259	104	80 - 120	2015-01-22

Standard (CCV-2)

QC Batch: 118788

Date Analyzed: 2015-01-22

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	218	87	80 - 120	2015-01-22

Standard (CCV-2)

QC Batch: 118791

Date Analyzed: 2015-01-22

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
ORO			mg/Kg	250	0.00	0	-	2015-01-22

Standard (CCV-1)

QC Batch: 118895

Date Analyzed: 2015-01-28

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/kg	0.100	0.105	105	80 - 120	2015-01-28
Toluene		s	mg/kg	0.100	0.103	103	80 - 120	2015-01-28

continued ...

Report Date: January 28, 2015
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Work Order: 15012143
Plains/Jal Basin Booster Pump

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standard continued ...

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		s	mg/kg	0.100	0.103	103	80 - 120	2015-01-28
Xylene		s	mg/kg	0.300	0.314	105	80 - 120	2015-01-28

Standard (CCV-2)

QC Batch: 118895

Date Analyzed: 2015-01-28

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		s	mg/kg	0.100	0.103	103	80 - 120	2015-01-28
Toluene		s	mg/kg	0.100	0.102	102	80 - 120	2015-01-28
Ethylbenzene		s	mg/kg	0.100	0.103	103	80 - 120	2015-01-28
Xylene		s	mg/kg	0.300	0.309	103	80 - 120	2015-01-28

Standard (CCV-1)

QC Batch: 118896

Date Analyzed: 2015-01-28

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		s	mg/Kg	1.00	0.871	87	80 - 120	2015-01-28

Standard (CCV-2)

QC Batch: 118896

Date Analyzed: 2015-01-28

Analyzed By: AK

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		s	mg/Kg	1.00	0.970	97	80 - 120	2015-01-28

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	PJLA	L14-93	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-14-10	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

Report Date: January 28, 2015
SRS #2014-096

Work Order: 15012143
Plains/Jal Basin Booster Pump

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F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

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

Attachments

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

TraceAnalysis, Inc.

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1 (888) 588-3443BioAquatic Testing
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Company Name: NOVA SAFETY & ENVIRONMENTAL Phone #: 432-520-7720
Address: 2057 Commerce Midland, TX 79703
Contact Person: WIRT STANLEY Email: cstanley@novatracking.com
Invoice to: PLAINS (CAMILLE BRYANT)
(If different from above)
Project #: SRS 2014-0916
Project Location (including state): SALT RUN

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING		MTBE 8021 / 602 / 8260 / 824 BTX 8021 / 602 / 8260 / 624 TPH 418.1 / TX1005 TPH 8015 GRO / DROT/VHC EXTRACTOR PAH 8270 / 625 Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7 TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles TCLP Pesticides RCI GC/MS Vol. 8260 / 624 GC/MS Semi. Vol. 8270 / 625 PCB's 8082 / 608 Pesticides 8081 / 608 BOD, TSS, pH Moisture Content Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Relinquished by: [Signature] Company: NOVA Date: 1/21/15 Time: 13:15
Received by: [Signature] Company: TA Date: 01/21/15 Time: 13:15
INST [Signature] OBS [Signature] COR [Signature]
Relinquished by: [Signature] Company: NOVA Date: 1/21/15 Time: 13:15
Received by: [Signature] Company: TA Date: 01/21/15 Time: 13:15
INST [Signature] OBS [Signature] COR [Signature]

LAB USE ONLY

Intact Y / N
Headspace Y / N / NA

Log-in/Review

REMARKS:

- ☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
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Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Curt Stanley
Nova Safety & Environmental
2057 Commerce St.
Midland, TX, 79703

Report Date: May 29, 2015

Work Order: 15051827



Project Location: Jal, NM
Project Name: Jal Basin Station Booster Pump
Project Number: 2014-096
SRS #: 2014-096

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
393496	SP-1A (West)	soil	2015-05-15	13:00	2015-05-18
393497	SP-2A (East)	soil	2015-05-15	13:05	2015-05-18

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.

TraceAnalysis, Inc. uses the attached chain of custody (COC) as the laboratory check-in documentation which includes sample receipt, temperature, sample preservation method and condition, collection date and time, testing requested, company, sampler, contacts and any special remarks.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blair Leftwich

Dr. Blair Leftwich, Director
James Taylor, Assistant Director
Brian Pellam, Operations Manager

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Case Narrative

Samples for project Jal Basin Station Booster Pump were received by TraceAnalysis, Inc. on 2015-05-18 and assigned to work order 15051827. Samples for work order 15051827 were received intact at a temperature of -1.7 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	103091	2015-05-28 at 13:38	121834	2015-05-28 at 13:38
TPH DRO - NEW	S 8015 D	102955	2015-05-20 at 15:47	121678	2015-05-21 at 10:09
TPH GRO	S 8015 D	103091	2015-05-28 at 13:38	121835	2015-05-28 at 13:38
TPH ORO	S 8015 D	102955	2015-05-20 at 15:47	121679	2015-05-21 at 10:30

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 15051827 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

Analytical Report

Sample: 393496 - SP-1A (West)

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 121834
Prep Batch: 103091

Analytical Method: S 8021B
Date Analyzed: 2015-05-28
Sample Preparation: 2015-05-28

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Benzene	U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Toluene	U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Ethylbenzene	U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Xylene	U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.96	mg/Kg	5	2.00	98	65.6 - 125
4-Bromofluorobenzene (4-BFB)		6	2.02	mg/Kg	5	2.00	101	67.9 - 120

Sample: 393496 - SP-1A (West)

Laboratory: Midland
Analysis: TPH DRO - NEW
QC Batch: 121678
Prep Batch: 102955

Analytical Method: S 8015 D
Date Analyzed: 2015-05-21
Sample Preparation: 2015-05-20

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

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	555	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	70 - 130

Sample: 393496 - SP-1A (West)

Laboratory: Lubbock
Analysis: TPH GRO
QC Batch: 121835
Prep Batch: 103091

Analytical Method: S 8015 D
Date Analyzed: 2015-05-28
Sample Preparation: 2015-05-28

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

Report Date: May 29, 2015
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Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	2	Qr,U	1,2,3,4	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.67	mg/Kg	5	2.00	84	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	2.08	mg/Kg	5	2.00	104	68.4 - 120

Sample: 393496 - SP-1A (West)

Laboratory: Midland
Analysis: TPH ORO
QC Batch: 121679
Prep Batch: 102955

Analytical Method: S 8015 D
Date Analyzed: 2015-05-21
Sample Preparation: 2015-05-20

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

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			95.6	95.6	95.6	95.6	mg/Kg	1	0.00	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	70 - 130
n-Triacontane			148	mg/Kg	1	100	148	37.1 - 162

Sample: 393497 - SP-2A (East)

Laboratory: Lubbock
Analysis: BTEX
QC Batch: 121834
Prep Batch: 103091

Analytical Method: S 8021B
Date Analyzed: 2015-05-28
Sample Preparation: 2015-05-28

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

Parameter	Flag	Cert	RL				
			Result	Units	Dilution	RL	
Benzene	3	U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Toluene		U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Ethylbenzene		U	1,2,3,4,6	<0.100	mg/Kg	5	0.0200
Xylene		Jb	1,2,3,4,6	<0.100	mg/Kg	5	0.0200

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)	Qsr	Qsr	6	2.68	mg/Kg	5	2.00	134	65.6 - 125
4-Bromofluorobenzene (4-BFB)	Qsr	Qsr	6	2.58	mg/Kg	5	2.00	129	67.9 - 120

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Sample: 393497 - SP-2A (East)

Laboratory: Midland

Analysis: TPH DRO - NEW

QC Batch: 121678

Prep Batch: 102955

Analytical Method: S 8015 D

Date Analyzed: 2015-05-21

Sample Preparation: 2015-05-20

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		5	921	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	140	mg/Kg	1	100	140	70 - 130

Sample: 393497 - SP-2A (East)

Laboratory: Lubbock

Analysis: TPH GRO

QC Batch: 121835

Prep Batch: 103091

Analytical Method: S 8015 D

Date Analyzed: 2015-05-28

Sample Preparation: 2015-05-28

Prep Method: S 5035

Analyzed By: JS

Prepared By: JS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL	
GRO	4	Q _r , U	1,2,3,4	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
Trifluorotoluene (TFT)		3	2.48	mg/Kg	5	2.00	124	76.5 - 130	
4-Bromofluorobenzene (4-BFB)	Q _{sr}	Q _{sr}	3	2.74	mg/Kg	5	2.00	137	68.4 - 120

Sample: 393497 - SP-2A (East)

Laboratory: Midland

Analysis: TPH ORO

QC Batch: 121679

Prep Batch: 102955

Analytical Method: S 8015 D

Date Analyzed: 2015-05-21

Sample Preparation: 2015-05-20

Prep Method: N/A

Analyzed By: SC

Prepared By: SC

Parameter	Flag	Cert	MDL Result	MQL Result	PQL Result	RL Result	Units	Dilution	MDL	MQL	PQL	RL
ORO			195	195	195	195	mg/Kg	1	0.00	50.0	50.0	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Q _{sr}	Q _{sr}	140	mg/Kg	1	100	140	70 - 130

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sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	Q _{nr}	Q _{nr}	180	mg/Kg	1	100	180	37.1 - 162

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Method Blanks

Method Blank (1) QC Batch: 121678

QC Batch: 121678
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		s	<7.41	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.2	mg/Kg	1	100	89	70 - 130

Method Blank (1) QC Batch: 121679

QC Batch: 121679
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Parameter	Flag	Cert	MDL Result	Units	RL
ORO			0.00	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			89.2	mg/Kg	1	100	89	70 - 130
n-Triacontane			90.2	mg/Kg	1	100	90	37.1 - 162

Method Blank (1) QC Batch: 121834

QC Batch: 121834
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
Benzene		1,2,3,4,6	<0.00444	mg/Kg	0.02
Toluene		1,2,3,4,6	0.0107	mg/Kg	0.02
Ethylbenzene		1,2,3,4,6	0.00820	mg/Kg	0.02

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method blank continued ...

Parameter	Flag	Cert	MDL Result	Units	RL
Xylene		1,2,3,4,6	0.0299	mg/Kg	0.02

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		6	1.95	mg/Kg	1	2.00	98	65.6 - 125
4-Bromofluorobenzene (4-BFB)		6	1.75	mg/Kg	1	2.00	88	67.9 - 120

Method Blank (1) QC Batch: 121835

QC Batch: 121835
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1,2,3,4	<0.641	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		3	1.76	mg/Kg	1	2.00	88	76.5 - 130
4-Bromofluorobenzene (4-BFB)		3	1.67	mg/Kg	1	2.00	84	68.4 - 120

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Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 121678
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		s	248	mg/Kg	1	250	<7.41	99	70 - 130

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		s	257	mg/Kg	1	250	<7.41	103	70 - 130	4	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	100	104	mg/Kg	1	100	100	104	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 121679
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	100	104	mg/Kg	1	100	100	104	70 - 130
n-Triacontane	96.6	102	mg/Kg	1	100	97	102	54.8 - 164

Laboratory Control Spike (LCS-1)

QC Batch: 121834
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

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Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.88	mg/Kg	1	2.00	<0.00444	94	71.4 - 120
Toluene		1,2,3,4,6	1.93	mg/Kg	1	2.00	0.0107	96	71.8 - 120
Ethylbenzene		1,2,3,4,6	1.87	mg/Kg	1	2.00	0.0082	93	71.1 - 120
Xylene		1,2,3,4,6	5.71	mg/Kg	1	6.00	0.0299	95	72.5 - 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		1,2,3,4,6	1.88	mg/Kg	1	2.00	<0.00444	94	71.4 - 120	0	20
Toluene		1,2,3,4,6	2.06	mg/Kg	1	2.00	0.0107	102	71.8 - 120	6	20
Ethylbenzene		1,2,3,4,6	2.20	mg/Kg	1	2.00	0.0082	110	71.1 - 120	16	20
Xylene		1,2,3,4,6	6.54	mg/Kg	1	6.00	0.0299	108	72.5 - 120	14	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)	6	2.14	2.16	mg/Kg	1	2.00	107	108	65.6 - 125
4-Bromofluorobenzene (4-BFB)	6	1.83	2.00	mg/Kg	1	2.00	92	100	67.9 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 121835
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	14.6	mg/Kg	1	20.0	<0.641	73	60.3 - 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
GRO		1,2,3,4	14.9	mg/Kg	1	20.0	<0.641	74	60.3 - 120	2	20

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

Surrogate		LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	3	1.83	1.85	mg/Kg	1	2.00	92	92	76.5 - 130
4-Bromofluorobenzene (4-BFB)	3	1.90	1.97	mg/Kg	1	2.00	95	98	68.4 - 120

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Matrix Spikes

Matrix Spike (xMS-1) Spiked Sample: 393499

QC Batch: 121678
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		s	256	mg/Kg	1	250	<7.41	102	70 - 130

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

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		s	240	mg/Kg	1	250	<7.41	96	70 - 130	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
n-Tricosane	104	91.2	mg/Kg	1	100	104	91	70 - 130

Matrix Spike (xMS-1) Spiked Sample: 393499

QC Batch: 121679
Prep Batch: 102955

Date Analyzed: 2015-05-21
QC Preparation: 2015-05-20

Analyzed By: SC
Prepared By: SC

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	104	91.2	mg/Kg	1	100	104	91	70 - 130
n-Triacontane	111	97.1	mg/Kg	1	100	111	97	10 - 258

Matrix Spike (MS-1) Spiked Sample: 393497

QC Batch: 121834
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

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Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene		1,2,3,4,6	1.81	mg/Kg	5	2.00	<0.0222	90	63.9 - 132
Toluene		1,2,3,4,6	1.93	mg/Kg	5	2.00	0.0577	94	64 - 141
Ethylbenzene		1,2,3,4,6	1.73	mg/Kg	5	2.00	<0.0381	86	66.7 - 148
Xylene		1,2,3,4,6	4.86	mg/Kg	5	6.00	0.0594	80	63.6 - 145

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		1,2,3,4,6	1.83	mg/Kg	5	2.00	<0.0222	92	63.9 - 132	1	20
Toluene		1,2,3,4,6	2.04	mg/Kg	5	2.00	0.0577	99	64 - 141	6	20
Ethylbenzene		1,2,3,4,6	2.05	mg/Kg	5	2.00	<0.0381	102	66.7 - 148	17	20
Xylene		1,2,3,4,6	5.84	mg/Kg	5	6.00	0.0594	96	63.6 - 145	18	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)	Q _{sr}	Q _{sr}	6	2.56	2.14	mg/Kg	5	2	128	107	65.6 - 125
4-Bromofluorobenzene (4-BFB)			6	1.77	1.92	mg/Kg	5	2	88	96	67.9 - 120

Matrix Spike (MS-1) Spiked Sample: 393497

QC Batch: 121835
Prep Batch: 103091

Date Analyzed: 2015-05-28
QC Preparation: 2015-05-28

Analyzed By: JS
Prepared By: JS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1,2,3,4	12.1	mg/Kg	5	20.0	<3.20	60	25 - 139

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 _r	Q _r	15.0	mg/Kg	5	20.0	<3.20	75	25 - 139	21	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)			3	1.64	1.91	mg/Kg	5	2	82	96	76.5 - 130
4-Bromofluorobenzene (4-BFB)			3	1.77	2.25	mg/Kg	5	2	88	112	68.4 - 120

Calibration Standards

Standard (CCV-1)

QC Batch: 121678

Date Analyzed: 2015-05-21

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	258	103	80 - 120	2015-05-21

Standard (CCV-2)

QC Batch: 121678

Date Analyzed: 2015-05-21

Analyzed By: SC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		s	mg/Kg	250	238	95	80 - 120	2015-05-21

Standard (CCV-1)

QC Batch: 121834

Date Analyzed: 2015-05-28

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.103	103	80 - 120	2015-05-28
Toluene		1,2,3,4,6	mg/kg	0.100	0.105	105	80 - 120	2015-05-28
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.104	104	80 - 120	2015-05-28
Xylene		1,2,3,4,6	mg/kg	0.300	0.301	100	80 - 120	2015-05-28

Standard (CCV-2)

QC Batch: 121834

Date Analyzed: 2015-05-28

Analyzed By: JS

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Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		1,2,3,4,6	mg/kg	0.100	0.102	102	80 - 120	2015-05-28
Toluene		1,2,3,4,6	mg/kg	0.100	0.107	107	80 - 120	2015-05-28
Ethylbenzene		1,2,3,4,6	mg/kg	0.100	0.107	107	80 - 120	2015-05-28
Xylene		1,2,3,4,6	mg/kg	0.300	0.308	103	80 - 120	2015-05-28

Standard (CCV-1)

QC Batch: 121835

Date Analyzed: 2015-05-28

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.934	93	80 - 120	2015-05-28

Standard (CCV-2)

QC Batch: 121835

Date Analyzed: 2015-05-28

Analyzed By: JS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1,2,3,4	mg/Kg	1.00	0.822	82	80 - 120	2015-05-28

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	L-A-B	L2418	Lubbock
2	Kansas	Kansas E-10317	Lubbock
3	LELAP	LELAP-02003	Lubbock
4	NELAP	T104704219-15-11	Lubbock
5	NELAP	T104704392-14-8	Midland
6		2014-018	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.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.

Report Date: May 29, 2015
2014-096

Work Order: 15051827
Jal Basin Station Booster Pump

Page Number: 18 of 18
Jal, NM

F	Description
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

- 1 dilution due to surfactants.
- 2 dilution due to surfactants.
- 3 dilution due to hydrocarbons.
- 4 dilution due to hydrocarbons.

Attachments

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

LAB Order ID # 15051827

Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-12965002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750Brandon & Clark
3403 Industrial Blvd.
Hobbs, NM 88240
Tel (575) 392-7561
Fax (575) 392-4508

Company Name: TRC SOLUTIONS Phone #: 432-520-7720
Address: (Street, City, Zip) 2057 Commerce Midland, TX 79703 Fax #:
Contact Person: CURT STANLEY E-mail: CStanley@trcsolutions.com
Invoice to: PLAINS (Camille Bryant)
(If different from above)
Project #: AL BASIN STATION BOOSTER PUMP 2014-096
Project Location (including state): AL, NEUMEXCO Project Name:
Sampler Signature: [Signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING		DATE	TIME	MTBE 8021 / 602 / 8260 / 624	STEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 DRO / DRO / TVHC EXTENDED C35	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO ₄ , NO ₃ -N, NO ₂ -N, PO ₄ -P, Alkalinity	Na, Ca, Mg, K, TDS, EC	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE																							
393496	SP-1A (WEST)	1	4oz	X								X		5/15	1300																					
393497	SP-2A (EAST)	1	4oz	X								X		5/15	1305																					

Relinquished by: [Signature] Company: TRC Date: 5/12/15 Time: 1601
Received by: [Signature] Company: TH Date: 5/18/15 Time: 1601
INST 12.1
OBS -1.7
COR -1.8

Relinquished by: Company: Date: Time:
Received by: Company: Date: Time:
INST
OBS
COR

Relinquished by: Company: Date: Time:
Received by: Company: Date: Time:
INST
OBS
COR

LAB USE ONLY

Intact Y / N
Headspace Y / N / NA

Log-In-Review

REMARKS:

- ☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

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Carrier # CARRY - W