RECEIVED By JKeyes at 10:20 am, Jun 15, 2016



Closure cannot be granted at this time. The area around the AT&T ROW needs to be addressed. After talking with Mr. Kellum it has been determined that work can be done in the area as long as a horizontal distance of 3' to 5' be maintained from the marked line. Please submit for OCD approval an updated map of the affected area of concern and an addendum detailing how this area will be remediated.

REMEDIATION REPORT Perla Negra Fed Com Well #4H

Lea County, New Mexico 1RP-4049

LAI Project No. 15-0167-01

June 2, 2016

Prepared for:

XTO Energy, Inc. 500 W. Illinois Street, Suite 100 Midland, TX 79701

Prepared by:

Larson & Associates, Inc. 507 North Marienfeld Street, Suite 205 Midland, Texas 79701

Mark J. Larson, P.G. Certified Professional Geologist #10490

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Introduction

This report is prepared on behalf of XTO Energy, Inc. (XTO) for submittal to the New Mexico Oil Conservation Division (OCD) and U.S. Bureau of Land Management (BLM), for a crude oil release from the Perla Negra Fed Com Well #4H (Site) Lea County, New Mexico. The legal description is Unit A (NE/4, NE/4), Section 25, Township 19 South, and Range 34 East. The geodetic position is north 32.637653° and west -103.506267°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

On December 1, 2015, an XTO contractor was servicing the well when the well kicked resulting in loss of well control. The release involved approximately 301.3 barrels (bbl) oil and 192.8 mcf gas. Approximately 158.63 bbl of fluid was recovered. XTO verbally reported the release to the BLM in Carlsbad, New Mexico and filed the initial C-141 with OCD on December 21, 2015. The OCD assigned the release remediation project number 1RP-4049.

<u>Setting</u>

The setting is as follows:

- The surface elevation is about 3,780 feet above mean sea level (MSL);
- The topography is undulating with the regional topographic slope to the southeast;
- The nearest surface water feature is a small playa located about 2 miles northeast of the Site with no surface connection to the Site;
- The dominant soil types are "Pyote soils and dune land" (29.2%), "Kermit-Palomas fine sands, 0 to 12 percent slopes" (20%) and "Simona fine sandy loam, 0 to 3 percent slopes" (18.3%). The soils are fine sandy and calcareous eolian deposits derived from sedimentary rock;
- The upper geologic unit is the Tertiary-age Ogallala formation consisting of unconsolidated to semi-consolidated fine to coarse grained quartz sand, silt, gravel and clay and underlain by the Triassic-age Chinle formation of the Dockum group;
- The nearest fresh water well (CP 8941) is located about 2,000 feet northeast in Unit M (SW/4, SW/4), Section 19, Township 19 South and Range 35 East. Depth to groundwater is reported at 285 feet below ground surface (bgs);
- Groundwater was encountered at 55 feet below ground surface (bgs) in a boring drilled near the northwest corner of the Site.

Initial Response

XTO immediately began cleanup operation once the well was stable and safety personnel cleared the area for entry. Contractors were mobilized to begin recovering free liquid from the location and from a utility right of way (ROW) located immediately south of the location. The ROW is owned by AT&T that includes 3 fiber optic communication cables. An XTO contractor scraped soil to about 8 inches bgs from the affected portion of the pad equaling about 88,031 square feet or about 2.0 acres. The soil was disposed at the R360 Halfway located at MM 66 about 16 miles west of the Site. Figure 3 presents a Site drawing where soil was scraped from the location.

On December 3, 2015, LAI personnel mapped the release using a Trimble[®] global position system (GPS) hand held receiver. Wind from the west and north dispersed fluid east about 2,850 feet and south about 2,100 feet from the location. LAI mapped an area of heavy hydrocarbons identified as the "Red Zone" about 750 feet east and 850 feet south of the location. The Red Zone encompasses about 831,032

Soil Samples

On January 28, 2016, LAI personnel used a stainless steel hand auger to collect soil samples from 0 to 1 and 1 to 2 feet bgs from the affected area. Twenty-two (22) discrete samples were collected from the location (4), AT&T right of way (3), red zone (11) and transition zone (4). Eleven (11) composite samples (Comp-1 through Comp-11) consisting of 5 discrete samples were collected from 0 to 1 foot bgs from the green zone. The samples were collected in laboratory containers. A duplicate sample was collected in an 8-ounce glass jar for headspace analysis with a calibrated photoionization detector (PID) according to the ambient temperature headspace method. All samples recorded PID readings below 100 parts per million (ppm) except S-3, 0 to 1 foot (589 ppm), S-4, 0 to 1 foot (414 ppm), S-6, 0 to 1 foot (272 ppm) and S-7, 0 to 1 foot (1,078 ppm) which were analyzed by EPA SW-846 method 8021B for benzene, toluene, ethylbenzene and xylene (BTEX). All samples were analyzed for total petroleum hydrocarbons (TPH) by EPA SW-846 method 8015 including gasoline (GRO) and diesel (DRO) range organic fraction and chloride by method 300. Figure 6 presents the sample locations. Appendix B presents the laboratory report.

Referring to Table 1, benzene was below the RRAL of 10 milligrams per kilogram (mg/Kg) in samples with headspace readings above 100 ppm. The RRAL for BTEX (50 mg/Kg) was exceeded in sample S-7, 0 to 1 foot (87.468 mg/Kg). The RRAL for TPH (1,000 mg/Kg) was exceeded in samples S-7, 0 to 1 foot (9,180 mg/Kg) and S-7, 1 to 2 feet (7,030 mg/Kg). Chloride was below 250 mg/Kg in all samples except S-3, 0 to 1 foot (1,800 mg/Kg) and was less than the RL (<25.0 mg/Kg) in sample S-3, 1 to 2 feet.

On February 18, 2016, LAI personnel used a Terraprobe[®] direct push rig to collect samples between about 2 and 8 feet bgs at S-7. The samples were analyzed for BTEX, TPH and chloride by EPA SW-846 methods 8021B, 8015 and 300, respectively. Benzene, BTEX and TPH were below the RRAL in all samples. Chloride was less than 250 mg/Kg.

On March 10, 2016, LAI personnel applied Micro-Blaze[®] (6%) to the area around S-7. Soil samples were collected on April 26, 2016 from 0 to 1 and 1 to 2 feet bgs and were analyzed for TPH by EPA SW-846 method 8015. The laboratory reported TPH at 9,018 mg/Kg (0 to 1 foot) and 5,120 mg/Kg (1 to 2 feet). The area of residual TPH above the RRAL is estimated to be about 30 x 50 feet. Table 1 presents the analytical data summary. Appendix B presents the laboratory report. Appendix C presents photographs.

An archeological survey was performed by Boone Archeological Services, LLC (Boone), Carlsbad, New Mexico, prior to drilling the well and was negative for cultural resources within the 600 x 600 foot area of investigation. Boone performed a follow up of the affected area following remediation and found no disturbance of cultural resources.

Conclusions

- 1. Groundwater was observed in boring SB-1 at 55 feet bgs;
- 2. The nearest fresh water well (CP 8941) is located about 2,000 feet northeast;
- 3. The nearest surface water feature is a small playa located about 2 miles northeast;
- 4. Benzene was below the RRAL of 10 milligrams per kilogram (mg/Kg) in samples with headspace readings above 100 ppm;
- 5. The RRAL for BTEX (50 mg/Kg) was exceeded in sample S-7, 0 to 1 foot (87.468 mg/Kg);

- 6. The RRAL for TPH (1,000 mg/Kg) was exceeded in samples S-7, 0 to 1 foot (9,018 mg/Kg) and S-7, 1 to 2 feet (5,120 mg/Kg);
- 7. The area of TPH exceeding the RRAL is situated within the AT&T ROW that includes 3 fiber optic cables that AT&T was sensitive about mechanical remediation;
- 8. Chloride was below 250 mg/Kg in all samples except S-3, 0 to 1 foot (1,800 mg/Kg) and decreased below the reporting limit of 25.0 mg/Kg in sample S-3, 1 to 2 feet,

Recommendation

Due to sensitivity of fiber optic communication, AT&T was not in favor of mechanical remediation methods that could damage the cables therefore XTO respectfully requests natural attenuation for the residual hydrocarbons in the vicinity of sample S-7. The area of residual THP above the RRAL is estimated to be about 30 x 50 feet. XTO respectfully requests no further action for the spill. Appendix D presents the initial and final C-141.

square feet or approximately 19.07 acres including the affected area of the location. Beyond the "Red Zone" for a distance of about 250 feet is an area of lighter hydrocarbons identified as the "transition zone". The Transition Zone encompasses about 677,292 square feet or about 15.55 acres. Beyond the transition zone is the area of lightest hydrocarbons or mist which is identified as the "Green Zone". The Green Zone extends about 1,000 feet south and 1,700 feet east of the transition zone and encompasses about 3,120,362 square feet or about 71.63 acres. The total affected area is about 4,628,686 square feet or about 106.26 acres. Figure 4 presents a map showing the approximate boundary for the affected area.

Between December 5, 2015 and January 8, 2016, LAI personnel applied a solution (6%) of Micro-Blaze[®] microbial amendment and potable water to the affected area of the location and Red Zone. The amendment was applied using a low impact all terrain vehicle and tank. The treated area was mapped each day with the Trimble GPS receiver. Figure 5 presents the Micro-Blaze[®] treatment areas by date.

On January 25, 2016, LAI, on behalf of XTO, submitted a document to OCD titled, *"Investigation Summary and Remediation Plan"* that summarized the initial response actions and proposed locations for collecting soil samples and determination of depth to groundwater.

Remediation Action Levels

Remediation action levels (RRAL) were calculated for benzene, BTEX and TPH based on the following criteria established by the OCD (*Guidelines for Remediation of Leaks, Spills and Releases, August 13,* 1993):

| Criteria | Result | Score |
|--------------------------------|-----------------------|-------|
| Depth-to-Groundwater | 50 - 100 feet | 10 |
| Wellhead Protection Area | No | 0 |
| Distance to Surface Water Body | >1000 Horizontal Feet | 0 |

The following RRAL apply to the release for ranking score: 10

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg
- TPH 1,000 mg/Kg

Soil Boring

On February 19, 2016, Scarborough Drilling, Inc., Lamesa, Texas, drilled a boring (SB-1) to about 62 feet bgs near the northwest corner of the location. The boring was drilled with a truck-mounted air rotary rig and drill cuttings were logged according to the Unified Soil Classification System (USCS). Groundwater was observed 55 feet bgs and the boring was plugged with bentonite. Figure 3 presents the boring location. Appendix A presents the boring log.

Soil Samples

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- 6. The RRAL for TPH (1,000 mg/Kg) was exceeded in samples S-7, 0 to 1 foot (9,018 mg/Kg) and S-7, 1 to 2 feet (5,120 mg/Kg);

TABLES

Table 1

Soil Sample Analytical Data Summary

XTO Energy, Inc., Perla Negra #4 Well Release Unit A (NE/4, NE/4), Section 25, Township 19 South, Range 34 East Lea County, New Mexico 1RP-4049

| Chloride | **250 | | 39.6 <25.0 | 31.5 <25.0 | 1,800 <25.0 | 92.9 30.5 | | 37.2 <25.0 | 148 125 | 73.2 - 50.9 - 55.4 27.7 27.7 27.7 27.7 27.7 29.3 29.3 29.3 |
|--------------------|------------|----------------|------------------------|------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|---|
| HdL | 1,000 | | <54.0 <54.0 | <54.0 <54.0 | 610 <54.0 | 92.1 <54.0 | | 530 <54.0 | 355.3 51.6 | 9,180 9,018 7,030 5,120 54.0 54.0 54.0 54.0 54.0 54.0 54.0 54. |
| GRO (ma/ka) | 1911/9111 | | <4.00 <4.00 | <4.00 <4.00 | 132 <4.00 | 92.1 <4.00 | | <4.00 <4.00 | 11.3 <4.00 | 2,790 878 878 2,800 1,030 <50 <4.00 <4.00 <4.00 <4.00 |
| DRO | 1911/9111/ | | <50.0 <50.0 | <50.0 <50.0 | 478 <50.0 | <50.0<50.0 | | 530 <50.0 | 344 51.6 | 6,390 8,140 4,230 4,090 316 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 |
| BTEX (mc/vc) | 50 | | 1 1 | 11 | 3.022 | 0.4204 | | 1 1 | 0.2609 | 87.468 |
| Benzene /mc/vc/ | 10 10 | | 1 1 | 1 1 | <0.0200 | <0.0200 | | 1 1 | <0.0200 | 0.568 |
| DID | 1911/9111/ | | 3.8 | 6.6 | 589 | 414 | | | 272 | 1,078 20 20 80 80 2.6 2.6 0.8 0.8 |
| Status | | | In-Situ In-Situ | In-Situ In-Situ | In-Situ In-Situ | In-Situ In-Situ | | In-Situ In-Situ | In-Situ In-Situ | In-Situ In-Situ In-Situ In-Situ In-Situ In-Situ In-Situ |
| Collection | קמנב | | 1/28/2016 1/28/2016 | 1/28/2016 1/28/2016 | 1/28/2016 1/28/2016 | 1/28/2016 1/28/2016 | | 1/28/2016 1/28/2016 | 1/28/2016 1/28/2016 | 1/28/2016 4/26/2016 1/28/2016 4/26/2016 2/18/2016 2/18/2016 2/18/2016 2/18/2016 2/18/2016 2/18/2016 2/18/2016 |
| Depth (Foot) | | ad | 0 - 1 1 - 2 | Area: Right of Way (AT&T | 0 - 1 1 - 2 | 0 - 1 1 - 2 | 0 - 1 1 - 2 2 - 3 3 - 4 4 - 5 5 - 6 6 - 7 7 - 8 7 - 8 7 - 8 0 - 1 |
| Sample | OCD RRAL: | Area: Well Pad | S-1 | S-2 | S-3 | S-4 | Area: Right | S-5 | S-6 | S-7 0 1 1 3 3 3 3 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 |

Table 1

Soil Sample Analytical Data Summary

XTO Energy, Inc., Perla Negra #4 Well Release Unit A (NE/4, NE/4), Section 25, Township 19 South, Range 34 East Lea County, New Mexico 1RP-4049

Table 1

Soil Sample Analytical Data Summary

XTO Energy, Inc., Perla Negra #4 Well Release

Unit A (NE/4, NE/4), Section 25, Township 19 South, Range 34 East

Lea County, New Mexico 1RP-4049

| S-21 | 0 - 1 1 - 2 | 1/29/2016 1/29/2016 | In-Situ In-Situ | 0.0 | | 1 | <50.0 | <4.00 <4.00 | <54.0 <54.0 | <25.0 <25.0 |
|------------------|----------------|--|--------------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| C C J | 4 | 100/00/ | | | | | C C | | 4 | |
| 77-C | 1 - 7 1 - 2 | 1/29/2016 | In-Situ In-Situ | 0.0 | **** | 1 1 | <50.0 <50.0 | <4.00 | <54.0 <54.0 | <25.0 |
| Area: Green Zone | en Zone | | | | | | | | | 2 |
| Comp-1 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 1 | | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -2 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 1 | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -3 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 4 | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -4 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 1 | 1 | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -5 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | - | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -6 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 1 | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -7 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 44 M | | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -8 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | ł | t t | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -9 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | ** | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -10 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | 1 | 7 | <50.0 | <4.00 | <54.0 | <25.0 |
| Comp -11 | 0 - 1 | 1/29/2016 | In-Situ | 0.0 | ł | ł | <50.0 | <4.00 | <54.0 | <25.0 |
| Notes: Analys | is performed t | Notes: Analysis performed by Trace Analysis, Inc., Midland and Lubbock by EPA SW-846 Method 8021B (BTEX), Method 8015M (TPH) | s. Inc., Midlano | and Lubbock t | 3V EPA SW-84(| 5 Method 8021 | LB (BTEX), Met | hod 8015M (T | (Hd | |

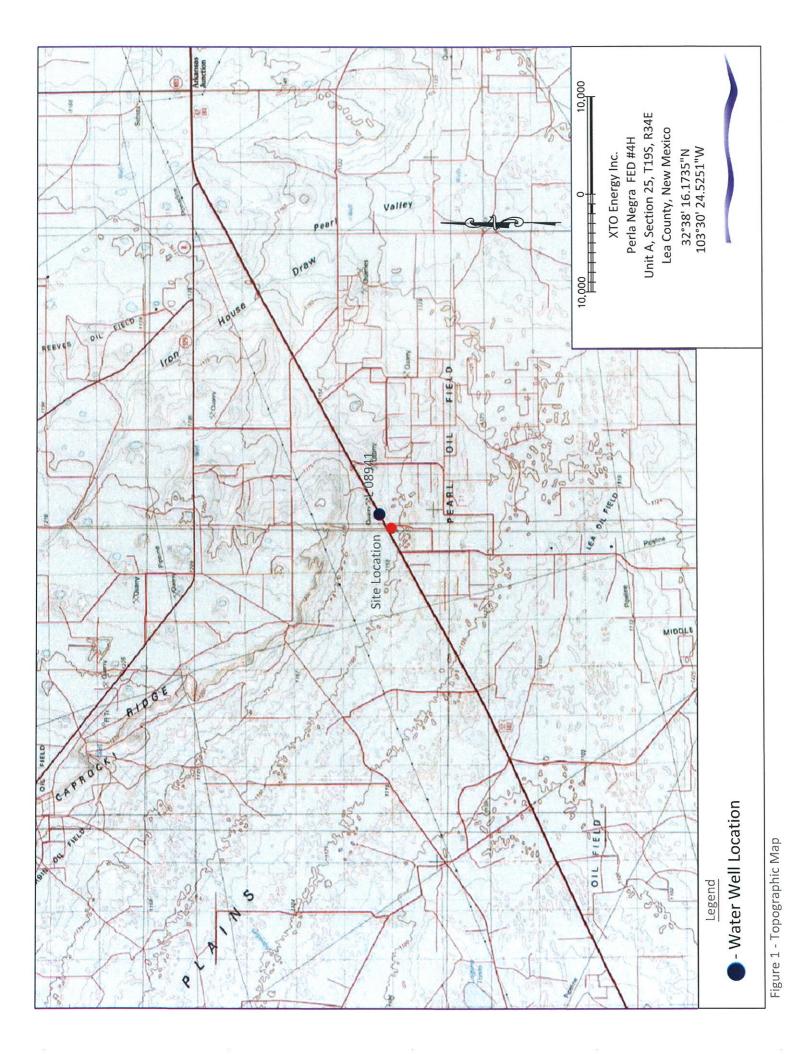
-5 med by made Analysis, Inc., Midial notes: Analysis peri and 300.0 (chloride)

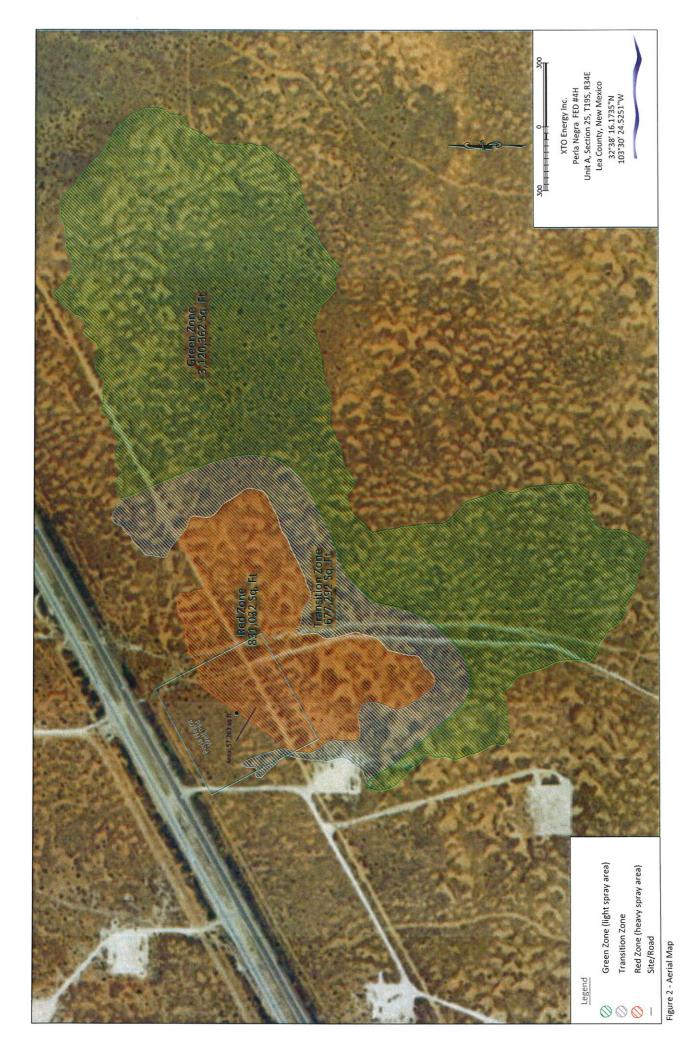
Depth in feet below ground surface (bgs) mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

--: Sample not analyzed

RRAL: Recommended Remediation Action Level (RRAL) calculated from OCD guidance document (August 13, 1993) *: Will be determined following boring for depth to groundwater **: OCD delineation level

FIGURES





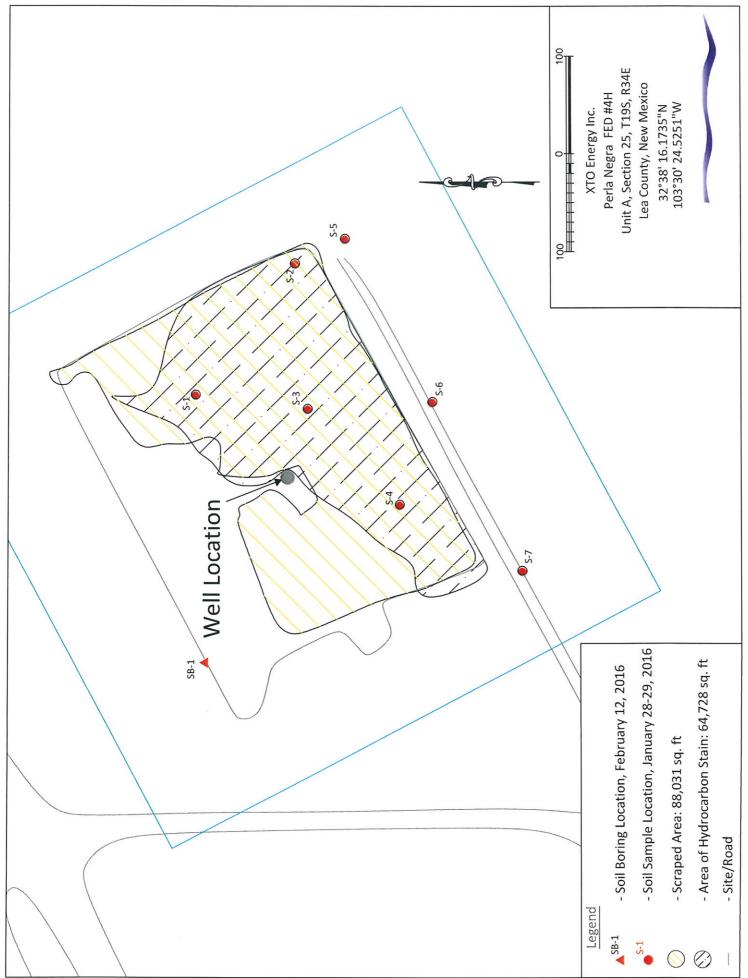


Figure 3 - Site Map

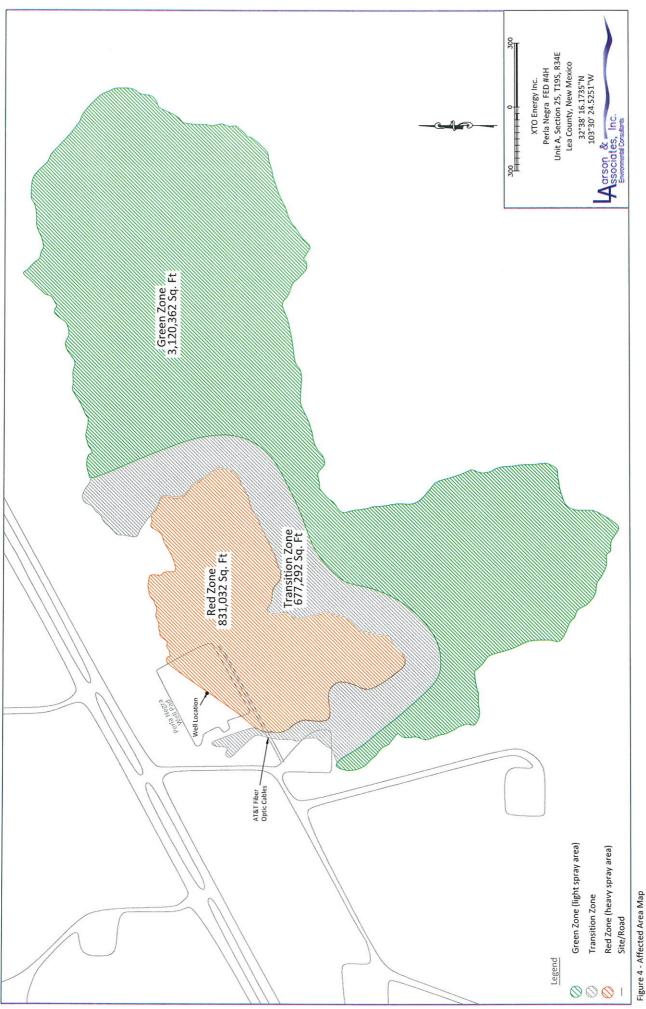
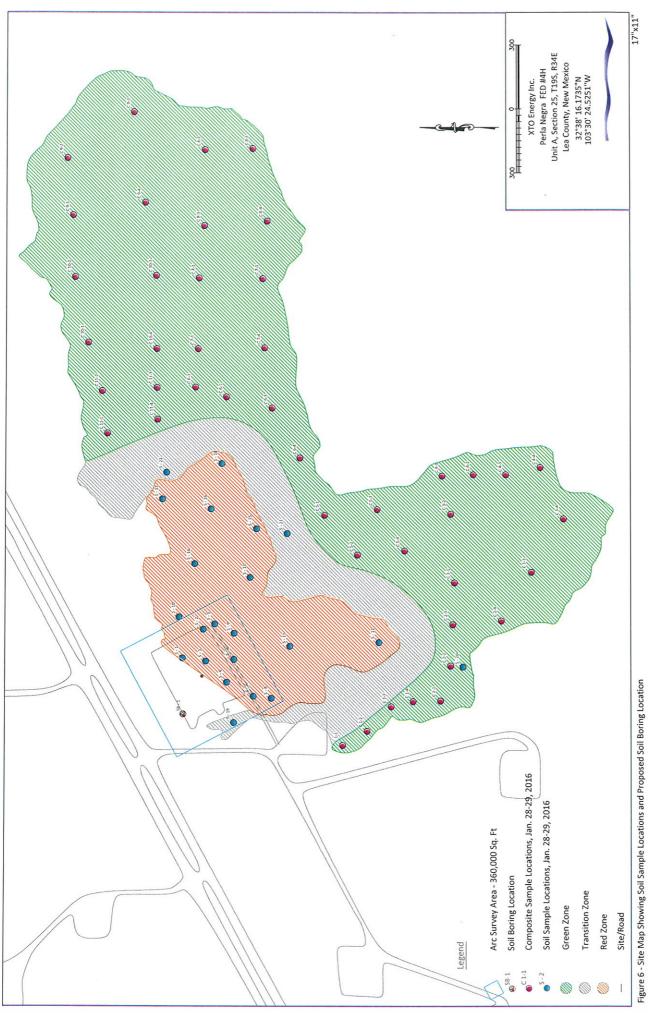




Figure 5 - Treated Area Map



APPENDIX A

Boring Log

| | | | | E | BORING | RECORD | | | | | | | | | | |
|---|----------------------|--|--|-----------|--|--------------|-----|----------------|--------------|------------|------|----|--------|-------------------------|-------------------|---------------------------|
| | | | | | NC | ő | | PID | REA | | IG | | SA | MPI | E | REMARKS |
| GEOLOGIC UNIT | DEPTH | DESCF | RIPTION LITHOLOG | IC | DESCRIPTION USCS | GRAPHIC LOG | 2 4 | PPN | 1 X_ 8 10 | NA 12_1 | 4 16 | 18 | NUMBER | PID READING RECOVERY | DEPTH | BACKGROUND PID READING |
| | 0 — | O and a Ta | | 0.5/0 | | | | | | | | | + | | 0 | 10:38 MST- |
| | 5 | | osoil, poorly sorted, 5 Yf Caliche Gravels, poorly s 5 YR 8/3 | | | 4 | | | | | | | | _/ | 45 | |
| | 10 | very fine Sanc | Sandy Caliche Gravel, poorly sorted 5 YR 8/4 | | GM | | | | | | | | | -/ | 9 10 | |
| | 15 | | v Caliche, poorly sorted, | | | 4 4 4 | | | | | | | | | 19 | |
| | 20— — — 25— | very fine San | and Silt, some Sandstor friable, 5 YR 6/6 Id and Silt, poorly sorted stone Quartz, 5 YR 6/4 | d, some | | | | | | | | | | | 20 24 25 | |
| | 30 | | | SM | | | | | | | | | -/ | 29 30 | 11:16 | |
| | poorly s | | Quartz Sandstone and Limestone, sorted, reddish brown, 5 YR 6/4 | | | | | | | | | | _/ | 34 35 39 | | |
| | 40 | poorly sor | rtz Sandstone and Lime ted, yellowish red, 5 YR | 8 5/6 | | | | | | | | | | | 40 | |
| | 45 | | Sandy Clay, well sorted brown, 2.5 YR 5/6 Sandy Clay, poorly sort | | | | | | | | | | | | 49 | |
| 55.0' | 55 | 2.5 YR 5/6 Silty Clay, well sorted, plastic, 2.5 YR 4/4 | | ′R 4/4 | CL | | | | | | | | _ | | 54 55 | - |
| | 60 | | some Sand, well sorted 2.5 YR 4/6 Fotal Depth : 61.8 | | | _ | | | | | | | _/ | 59 60 | | |
| | | | | | | | | | | | | | | | | - |
| | | OUS AUGER SAI | | VATER TAB | LE (TIME | OF BORING) | | | | | | | | | | TO Perla Negra #4 |
| | | NETRATION TES | | ABORATOR | | | | | | | | | | | | |
| | | | | | | NS/ SQ. FT) | | | | | | | | | | nty, New Mexico |
| | TER TABLE | | NR N | IO RECOVE | BORING N | | | A GEO RILLI | | | _ | | | | | MG SDC |
| Aarson & In Environmental Consultant | C. | | 02/19/2016 | | 10.2020/00000000000000000000000000000000 | SB - 1 | | RILLI | | | | | | | | Air Rotary |

Appendix B

Laboratory Reports



6701 Aberdeen Avenue, Suite 9 Lubbock. 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Texas 79424 El Paso, Texas 79922 Midland. Texas 79703 Carroliton, Texas 75006

E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

806+794+1296 FAX 806+794+1298 915-585-3443 FAX 915+585+4944 432+689+6301 FAX 432+689+6313 972-242-7750

Certifications

HUB NCTRCA DBE WBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Mark Larson Larson and Associates, Inc.

Report Date: February 11, 2016

P. O. Box 50685 Midland, TX, 79710

Work Order: 16020113

Project Name: XTO Perla Negra Project Number: 15-0167-01

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

| | | | Date | Time | Date |
|--------|-------------|-----------------------|------------|-----------------------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 413223 | S-1 (0-1) | soil | 2016-01-28 | 11:15 | 2016-02-01 |
| 413224 | S-1 (1-2) | soil | 2016-01-28 | 11:15 | 2016-02-01 |
| 413226 | S-2 (0-1) | soil | 2016-01-28 | 10:50 | 2016-02-01 |
| 413227 | S-2 (1-2) | soil | 2016-01-28 | 10:50 | 2016-02-01 |
| 413229 | S-3 (0-1) | soil | 2016-01-28 | 11:25 | 2016-02-01 |
| 413230 | S-3 (1-2) | soil | 2016-01-28 | 11:25 | 2016-02-01 |
| 413232 | S-4 (0-1) | soil | 2016-01-28 | 11:30 | 2016-02-01 |
| 413233 | S-4 (1-2) | soil | 2016-01-28 | 11:30 | 2016-02-01 |
| 413235 | S-5 (0-1) | soil | 2016-01-28 | 11:25 | 2016-02-01 |
| 413236 | S-5 (1-2) | soil | 2016-01-28 | 11:30 | 2016-02-01 |
| 413238 | S-6 (0-1) | soil | 2016-01-28 | 12:00 | 2016-02-01 |
| 413239 | S-6 (1-2) | soil | 2016-01-28 | 12:05 | 2016-02-01 |
| 413241 | S-7 (0-1) | soil | 2016-01-28 | 12:30 | 2016-02-01 |
| 413242 | S-7 (1-2) | soil | 2016-01-28 | 12:45 | 2016-02-01 |
| 413244 | S-8 (0-1) | soil | 2016-01-28 | 14:05 | 2016-02-01 |
| 413245 | S-8 (1-2) | soil | 2016-01-28 | 14:10 | 2016-02-01 |
| 413247 | S-9 (0-1) | soil | 2016-01-28 | 14:25 | 2016-02-01 |
| 413248 | S-9 (1-2) | soil | 2016-01-28 | 14:30 | 2016-02-01 |

| | | | Date | Time | Date |
|--------|-------------------------|-----------------------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 413250 | S-10 (0-1) | soil | 2016-01-28 | 15:30 | 2016-02-01 |
| 413251 | S-10 (1-2) | soil | 2016-01-28 | 15:35 | 2016-02-01 |
| 413253 | S-11 (0-1) | soil | 2016-01-28 | 14:45 | 2016-02-01 |
| 413254 | S-11 (1-2) | soil | 2016-01-28 | 14:50 | 2016-02-01 |
| 413256 | S-12 (0-1) | soil | 2016-01-28 | 15:05 | 2016-02-01 |
| 413257 | S-12 (1-2) | soil | 2016-01-28 | 15:10 | 2016-02-01 |
| 413259 | S-13 (0-1) | soil | 2016-01-28 | 17:00 | 2016-02-01 |
| 413260 | S-13 (1-2) | soil | 2016-01-28 | 17:05 | 2016-02-01 |
| 413262 | S-14 (0-1) | soil | 2016-01-28 | 15:55 | 2016-02-01 |
| 413263 | S-14 (1-2) | soil | 2016-01-28 | 16:00 | 2016-02-01 |
| 413265 | S-15(0-1) | soil | 2016-01-28 | 16:50 | 2016-02-01 |
| 413266 | S-15 (1-2) | soil | 2016-01-28 | 16:53 | 2016-02-01 |
| 413268 | S-16 (0-1) | soil | 2016-01-28 | 16:40 | 2016-02-01 |
| 413269 | S-16 (1-2) | soil | 2016-01-28 | 16:42 | 2016-02-01 |
| 413271 | S-17(0-1) | soil | 2016-01-28 | 16:10 | 2016-02-01 |
| 413272 | S-17 (1-2) | soil | 2016-01-28 | 16:15 | 2016-02-01 |
| 413274 | S-18 (0-1) | soil | 2016-01-28 | 16:25 | 2016-02-01 |
| 413275 | S-18 (1-2) | soil | 2016-01-28 | 16:30 | 2016-02-01 |
| 413277 | S-19 (0-1) | soil | 2016-01-28 | 13:20 | 2016-02-01 |
| 413278 | S-19 (1-2) | soil | 2016-01-28 | 13:22 | 2016-02-01 |
| 413280 | S-20 (0-1) | \mathbf{soil} | 2016-01-29 | 09:15 | 2016-02-01 |
| 413281 | S-20 (1-2) | soil | 2016-01-29 | 09:17 | 2016-02-01 |
| 413283 | S-21 (0-1) | soil | 2016-01-29 | 10.45 | 2016-02-01 |
| 413284 | S-21 (1-2) | soil | 2016-01-29 | 10:47 | 2016-02-01 |
| 413286 | S-22 (0-1) | soil | 2016-01-29 | 11:30 | 2016-02-01 |
| 413287 | S-22 (1-2) | soil | 2016-01-29 | 11:32 | 2016-02-01 |
| 413289 | Comp-1 | soil | 2016-01-29 | 13:40 | 2016-02-01 |
| 413290 | $\operatorname{Comp-2}$ | soil | 2016-01-29 | 09:45 | 2016-02-01 |
| 413291 | Comp-3 | soil | 2016-01-29 | 10:05 | 2016-02-01 |
| 413292 | Comp-4 | soil | 2016-01-29 | 10:20 | 2016-02-01 |
| 413293 | Comp-5 | soil | 2016-01-29 | 10:35 | 2016-02-01 |
| 413294 | Comp-6 | soil | 2016-01-29 | 13:00 | 2016-02-01 |
| 413295 | $\operatorname{Comp-7}$ | soil | 2016-01-29 | 12:50 | 2016-02-01 |
| 413296 | $\operatorname{Comp}-8$ | soil | 2016-01-29 | 12:40 | 2016-02-01 |
| 413297 | Comp-9 | soil | 2016-01-29 | 12:25 | 2016-02-01 |
| 413298 | Comp-10 | soil | 2016-01-29 | 12:05 | 2016-02-01 |
| 413299 | Comp-11 | soil | 2016-01-29 | 11:50 | 2016-02-01 |

Notes

• Work Order 16020113: Run (0-1) and (1-2). Hold (2-3)

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

Blain ferturich

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

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| QC Batch $127958 - CCV$ (1) QC Batch $127958 - CCV$ (2) | | | | | | | | |
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Case Narrative

Samples for project XTO Perla Negra were received by TraceAnalysis, Inc. on 2016-02-01 and assigned to work order 16020113. Samples for work order 16020113 were received intact at a temperature of 4.9 C.

| | | Prep | Prep | QC | Analysis |
|---------------|----------|--------|-----------------------|--------|-----------------------|
| Test | Method | Batch | Date | Batch | Date |
| BTEX | S 8021B | 108265 | 2016-02-01 at 13:17 | 127934 | 2016-02-02 at 18:00 |
| Chloride (IC) | E 300.0 | 108347 | 2016-02-02 at 13:15 | 127956 | 2016-02-03 at 14:21 |
| Chloride (IC) | E 300.0 | 108348 | 2016-02-02 at 13:15 | 127958 | 2016-02-03 at 14:21 |
| Chloride (IC) | E 300.0 | 108349 | 2016-02-02 at 13:15 | 127960 | 2016-02-03 at 14:21 |
| Chloride (IC) | E 300.0 | 108454 | 2016-02-02 at 13:15 | 128089 | 2016-02-09 at 16:56 |
| Chloride (IC) | E 300.0 | 108456 | 2016-02-02 at $13:15$ | 128090 | 2016-02-09 at 16:56 |
| Chloride (IC) | E 300.0 | 108471 | 2016-02-03 at 11:45 | 128108 | 2016-02-10 at 09:35 |
| TPH DRO | S 8015 D | 108331 | 2016-02-03 at $16:17$ | 127965 | 2016-02-04 at 10:49 |
| TPH DRO | S 8015 D | 108338 | 2016-02-04 at 08:38 | 127968 | 2016-02-04 at 11:17 |
| TPH DRO | S 8015 D | 108373 | 2016-02-05 at 08:49 | 127998 | 2016-02-05 at 10:37 |
| TPH GRO | S 8015 D | 108314 | 2016-02-02 at 15:00 | 127937 | 2016-02-03 at 13:28 |
| TPH GRO | S 8015 D | 108328 | 2016-02-03 at 14:44 | 127948 | 2016-02-04 at $08:06$ |
| TPH GRO | S 8015 D | 108337 | 2016-02-04 at 08:25 | 127990 | 2016-02-05 at $08:08$ |

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

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 16020113 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: 413223 - S-1 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 127956 108347 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-03 | Prep Method Analyzed By: Prepared By: | RĹ |
|--|--|------|--------------------------------------|--------|-----------------------|---|------|
| | | | | RL | | | |
| Parameter | | Flag | Cert | Result | Units | Dilution | RL |
| Chloride | | | 1,2,4 | 39.6 | mg/Kg | 1 | 25.0 |

Sample: 413223 - S-1 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | TPH DRO 127965 | | Date Ar | Analytical Method: Date Analyzed: Sample Preparation: | | S 8015 D 2016-02-04 2016-02-03 | | thod: N/A l By: JL l By: JL |
|--|-------------------|------------------|---------|---|----------|--------------------------------------|---------------------|-----------------------------------|
| | | | | | RL | | | |
| Parameter | | \mathbf{F} lag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | υ | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 45.7 | mg/Kg | 1 | 50.0 | 91 | 70 - 130 |

Sample: 413223 - S-1 (0-1)

| Analysis: QC Batch: | Midland TPH GRO 127937 108314 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|------------------------|--|------|------|---------|------------------------------------|---------------|----------|-----------------|--|--------------------|
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | | U | | 3 | | <4.00 | mg/k | g | 1 | 4.00 |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolue | ne (TFT) | | | | 1.63 | mg/Kg | 1 | 2.00 | 82 | 70 - 130 |
| | | | | | | | cont | inued | | |

| Report Date: February 11, 2016 15-0167-01 | | | | der: 16020 Perla Negra | Page Number: 10 of 95 | | | |
|--|------|------|--------|---------------------------|-----------------------|--------|----------|----------|
| sample continued | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| 4-Bromofluorobenzene (4-BFB) | | | 1.58 | mg/Kg | 1 | 2.00 | 79 | 70 ~ 130 |

Sample: 413224 - S-1 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Chloride (IC) 127956 | | Date Anal | al Method: E 300.0 alyzed: 2016-02-03 Preparation: | | | Prep Method: Analyzed By: Prepared By: | RĹ |
|--|-------------------------|------|-----------|--|-----|-----|--|------|
| | | | | RL | | | | |
| Parameter | | Flag | Cert | Result | Ur | its | Dilution | RL |
| Chloride | | | 1,2,4 | <25.0 | mg/ | Kg | 1 | 25.0 |

Sample: 413224 - S-1 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date Ar | eal Method: aalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Prepared | v |
|--|--|------|---------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| | | | |] | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | υ | 3 | <50 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | 8 | | 45.8 | mg/Kg | 1 | 50.0 | 92 | 70 - 130 |

Sample: 413224 - S-1 (1-2)

| Analysis: 1 QC Batch: 1 | Midland IPH GRO 127937 108314 | | Analytical M Date Analyz Sample Prep | | -03 | Prep Method: Analyzed By: Prepared By: | AK |
|----------------------------|--|------|--|-------------------------|-------|--|---------------------|
| | | | | RL | | | |
| Parameter | | Flag | Cert | Result | Units | Dilution | RL |
| GRO | | υ | 3 | <4.00 | mg/Kg | 1 | 4.00 |

| Report Date: February 11, 2016 15-0167-01 | | Work Order: 16020113 XTO Perla Negra | | | | | Page Number: 11 of 95 | | |
|--|------|---|--------|-------|----------|-----------------|-----------------------|--------------------|--|
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | |
| Trifluorotoluene (TFT) | | •••• | 1.68 | mg/Kg |]. | 2.00 | 84 | 70 - 130 | |
| 4-Bromofluorobenzene (4-BFB) | | | 1.85 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 | |

Sample: 413226 - S-2 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 127956 108347 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-03 | Prep Method: Analyzed By: Prepared By: | RĹ |
|--|--|------|--------------------------------------|--------------|-----------------------|--|------|
| Parameter | | Flag | Cert | RL Result | Units | Dilution | RL |
| Chloride | | | 1,2,4 | 31.5 | mg/Kg | 1 | 25.0 |

Sample: 413226 - S-2 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date Ar | cal Method: 1alyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | ł By: JĹ |
|--|--|------|----------------|---|--------------------------------------|-------------------------|---------------------------------|--------------------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | \mathbf{RL} |
| DRO | | U U | 3 | | 60.0 | mg/Kg | 1 | 50.0 |
| Surrogate n-Tricosane | Flag | Cert | Result 45.6 | Units mg/Kg | Dilution | Spike Amount 50.0 | Percent Recovery 91 | Recovery Limits 70 - 130 |

Sample: 413226 - S-2 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 127937 108314 | | Analytical M Date Analyz Sample Prep | | 2-03 | Prep Method: Analyzed By: Prepared By: | AK |
|--|--|------|--|-------------------------|-------|--|------|
| | | | | RL | | | |
| Parameter | | Flag | Cert | Result | Units | Dilution | RL |
| GRO | | υ | 3 | <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) | | | 1.64 | mg/Kg | 1 | 2.00 | 82 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.86 | mg/Kg | 1 | 2.00 | 93 | 70 - 130 |

Sample: 413227 - S-2 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 127956 108347 | | Analytical Date Anal Sample Pr | | E 300.0 2016-02-03 | | Prep Method: Analyzed By: Prepared By: | N/A RL RL |
|--|--|------|--------------------------------------|---------------------|-----------------------|------|--|-----------------|
| | | | | RL | | | | |
| Parameter | | Flag | Cert | Result | U | nits | Dilution | RL |
| Chloride | | | 1,2,4 | <25.0 | mg | /Kg | 1 | 25.0 |

Sample: 413227 - S-2 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date Ar | cal Method: aalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Prepared | l By: JL |
|--|--|------|-----------------------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| D. (| | | | | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | υ | 3 | <50 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | 1 108 | 0016 | | | 1 | | <u> </u> | |
| n- incosane | | | 44.4 | mg/Kg | 1 | 50.0 | | 70 - 130 |

Sample: 413227 - S-2 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 127937 108314 | | Analytical M Date Analyz Sample Prep | | 2-03 | Prep Method: Analyzed By: Prepared By: | AK |
|--|--|------|--|--------|-------|--|------|
| | | | | RL | | | |
| Parameter | | Flag | Cert | Result | Units | Dilution | RL |
| GRO | | U | 3 | <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) | | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.97 | mg/Kg | 1 | 2.00 | 98 | 70 - 130 |

Sample: 413229 - S-3 (0-1)

| Laboratory: Midland Analysis: BTEX QC Batch: 127934 Prep Batch: 108265 | | Date Ana | l Method: lyzed: reparation: | S 80211 2016-02 2016-02 | -02 | | Prep Method Analyzed By Prepared By | : AK |
|---|------|----------|------------------------------------|-------------------------------|------------|--------|---|----------|
| | | | | \mathbf{RL} | | | | |
| Parameter | Flag | Cert | | Result | Unit | s | Dilution | RL |
| Benzene | υ | 3 | < | 0.0200 | mg/Kį | y | 1 | 0.0200 |
| Toluene | | 3 | | 0.337 | mg/Kg | g | 1 | 0.0200 |
| Ethylbenzene | | 3 | | 0.305 | mg/Kg | | 1 | 0.0200 |
| Xylene | Je | 3 | | 2.38 | mg/K_{i} | g | 1 | 0.0200 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | 1.58 | mg/Kg | 1 | 2.00 | 79 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 2.55 | mg/Kg | 1 | 2.00 | 128 | 70 - 130 |

Sample: 413229 - S-3 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | analysis: Chloride (IC) 2C Batch: 127956 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-03 | | Prep Method: Analyzed By: Prepared By: | RL |
|--|---|------|--------------------------------------|--------|-----------------------|-------|--|------|
| | | | | RL | ı | | | |
| Parameter | | Flag | Cert | Result | ; T | Units | Dilution | RL |
| Chloride | | | 1,2,4 | 1800 | n mg | g/Kg | 5 | 25.0 |

Sample: 413229 - S-3 (0-1)

| Laboratory: | Midland | | | | |
|-------------|---------|---------------------|------------|--------------|------------|
| Analysis: | TPH DRO | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 127965 | Date Analyzed: | 2016-02-04 | Analyzed By: | $_{ m JL}$ |
| Prep Batch: | 108331 | Sample Preparation: | 2016-02-03 | Prepared By: | JL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perla | Page Number: 14 of 95 | | | | |
|--|-----|------|------|--------------------------|-----------------------|-----------|-----------------|---------------------|--------------------|
| Parameter | | | Flag | Cert | I Res | RL ult | Units | Dilution | RL |
| DRO | | | | 3 | 4 | 78 | mg/Kg | 1 | 50.0 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qsr | Qsr | | 67.1 | mg/Kg | 1 | 50.0 | 134 | 70 - 130 |

Sample: 413229 - S-3 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | Γ | Date Ana | al Method: alyzed: 'reparation | 2016-02 | 2-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|----------|--------------------------------------|---------|----------|-----------------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | F | lesult | Unit | s | Dilution | RL |
| GRO | | | 3 | | 132 | mg/K | g | 2 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 3.29 | mg/Kg | 2 | 4.00 | 82 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | Qsr | Qsr | | 6.49 | mg/Kg | 2 | 4.00 | 162 | 70 - 130 |

Sample: 413230 - S-3 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Chloride (IC) 127956 | | Date Anal | Analytical Method: Date Analyzed: Sample Preparation: | | | Prep Method: Analyzed By: Prepared By: | , |
|--|-------------------------|------|-----------|---|-----|-------|--|---------------------|
| | | | | RL | J | | | |
| Parameter | | Flag | Cert | Result | , | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <25.0 |) n | ng/Kg | 1 | 25.0 |

Sample: 413230 - S-3 (1-2)

| Laboratory: | Midland | | | | |
|-------------|---------|---------------------|------------|--------------|-------------|
| Analysis: | TPH DRO | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 127965 | Date Analyzed: | 2016-02-04 | Analyzed By: | JĹ |
| Prep Batch: | 108331 | Sample Preparation: | 2016-02-03 | Prepared By: | $_{\rm JL}$ |

| Report Date: Fel 15-0167-01 | oruary 11, 20 | 16 | | Work Order: XTO Perl | | | Page Num | ber: 15 of 95 |
|--------------------------------|---------------|------|--------|-------------------------|-----------|-----------------|---------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL ult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 49.1 | mg/Kg | 1 | 50.0 | 98 | 70 - 130 |

Sample: 413230 - S-3 (1-2)

| - , , | | | | | | | | | |
|--|------|--------|-----------------------|-----------------------------------|--------|----------|-----------------|--|--------------------|
| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Metho alyzed: Preparatio | 2016-0 | 2-03 | | Prep Metho Analyzed B Prepared B | y: AK |
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | ~ 1008 | | 1.68 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.92 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |

Sample: 413232 - S-4 (0-1)

| Laboratory: Midland Analysis: BTEX QC Batch: 127934 Prep Batch: 108265 | | Date Ana | l Method: lyzed: reparation | S 80211 2016-02 : 2016-02 | -02 | | Prep Method Analyzed By: Prepared By: | AK |
|---|------|-----------------------|-----------------------------------|---------------------------------|----------|--------|---|---------------|
| | | | | RL | | | | |
| Parameter | Flag | Cert | | Result | Unit | s | Dilution | \mathbf{RL} |
| Benzene | U | 3 | < | 0.0200 | mg/K | g | 1 | 0.0200 |
| Toluene | | 3 | C |).0473 | mg/K | g | 1 | 0.0200 |
| Ethylbenzene | | 3 | 0 |).0781 | mg/K | g | 1 | 0.0200 |
| Xylene | | 3 | | 0.295 | mg/K | | 1 | 0.0200 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Triffuorotoluene (TFT) | | | 1.55 | mg/Kg | 1 | 2.00 | 78 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 2.05 | mg/Kg | 1 | 2.00 | 102 | 70 - 130 |

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|--|---|-----------------------|
| Sample: 413232 - S-4 (0-1) | | |
| Laboratory: Lubbock | | |

| Chloride | | | 1,2,4 | 92.9 |) | mg/Kg | 1 | 25.0 |
|--|-------------------------|------|----------|--------------|-----------------------|-------|--|------|
| Parameter | | Flag | Cert | RL Result | | Units | Dilution | RL |
| Laboratory: Analysis: QC Batch: Prep Batch: | Chloride (IC) 127956 | | Date Ana | | E 300.0 2016-02-03 | 1 | Prep Method: Analyzed By: Prepared By: | RĹ |

Sample: 413232 - S-4 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | l By: JĹ |
|--|--|-------|-------------------------|---|--------------------------------------|-------------------------|---------------------------------|---------------------|
| D (| | 310.5 | | | RL | ** 1 | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | · | | 3 | <5 | 60.0 | mg/Kg | 1 | 50.0 |
| C . | Y ~ 1 | ~ | V 2. 1. | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 47.3 | m mg/Kg | 1 | 50.0 | 95 | 70 - 130 |

Sample: 413232 - S-4 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | Γ |)ate Ana | al Method: alyzed: Preparation | 2016-02 | 2-03 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|-------|------|----------|--------------------------------------|--------------|----------|-----------------|--|--------------------|
| Parameter | Flag | | Cert | n | RL lesult | Unit | 0 | Dilution | \mathbf{RL} |
| GRO | I lag | | 3 | 1 | 92.1 | mg/K | - | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.58 | mg/Kg | 1 | 2.00 | 79 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | Qsr | Qar | | 3.62 | mg/Kg | 1 | 2.00 | 181 | 70 - 130 |

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|---|------------------------------------|-----------|---------------------------------------|--|--|----------------|---|-------------------------------------|
| Sample: 41 | 3233 - S-4 (1-2) | | | | | | | |
| Laboratory: Analysis: | Lubbock Chloride (IC) | | Amalut | ical Mathead | E 300.0 | | Dum Math | |
| QC Batch: | 127956 | | | ical Method: analyzed: | 2016-02-0 | 13 | Prep Metho Analyzed B | , |
| Prep Batch: | 108347 | | | e Preparation | | | Prepared B | • |
| | | | | | RL | | | |
| Parameter | · | Flag | Cert | Res | | Units | Dilution | RL |
| | | | 1,2,4 | 30 | 0.5 | mg/Kg | 1 | 25.0 |
| Laboratory: | 3233 - S-4 (1-2) Midland | | 1,2,4 | | | <u> </u> | | |
| Sample: 41 | | | Analytic Date Ar | cal Method: | S 8015 D 2016-02-04 | i | Prep Metho Analyzed B Prepared B | y: JĹ |
| Sample: 41 Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 | Flor | Analytic Date Ar Sample | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 RL | į } | Analyzed B Prepared B | y: JĹ y: JL |
| Sample: 41 Laboratory: Analysis: QC Batch: | Midland TPH DRO 127965 | Flag v | Analytic Date Ar | cal Method: nalyzed: Preparation: Res | S 8015 D 2016-02-04 2016-02-03 RL | i | Analyzed B | y: JĹ |
| Sample: 41 Laboratory: Analysis: QC Batch: Prep Batch: Parameter | Midland TPH DRO 127965 | | Analytic Date Ar Sample Cert | cal Method: nalyzed: Preparation: Res | S 8015 D 2016-02-04 2016-02-03 RL rult | Units mg/Kg | Analyzed B Prepared B Dilution 1 | y: JL y: JL <u>RL</u> 50.0 |
| Sample: 41 Laboratory: Analysis: QC Batch: Prep Batch: Parameter | Midland TPH DRO 127965 | | Analytic Date Ar Sample Cert | cal Method: nalyzed: Preparation: Res | S 8015 D 2016-02-04 2016-02-03 RL rult | Units | Analyzed B Prepared B Dilution 1 | y: JĹ y: JL RI |

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 02-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|-------|------|---------|------------------------------------|--------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 4-Bromofluorobenzene (4 | -BFB) | | | 2.10 | mg/Kg | 1 | 2.00 | 105 | 70 - 130 |

| Report Date 15-0167-01 | : February 11 | , 2016 | | | Work Order XTO Per | | | Page Numl | per: 18 of 95 |
|--|--|--------|-------------|-----------------------|--|--------------------------------------|-----------------|---------------------------------|--------------------|
| Sample: 41 | 3235 - S-5 (| 0-1) | | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC 127958 108348 | 2) | | Date A | ical Method .nalyzed: : Preparatio | 2016-02-0 | 03 | Prep Me Analyzed Prepared | l By: RL |
| | | 1.11 | | <u> </u> | | RL | TT 1. | 1511 I | TO T |
| Parameter Chloride | | Fl | ag | Cert | | sult 7.2 | Units mg/Kg | Dilution 1 | RL 25.0 |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | | Date An | al Method: alyzed: Preparation | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | l By: JĹ |
| Parameter | | Fla | 9. <i>0</i> | Cert | | RL sult | Units | Dilution | RL |
| DRO | | | | 3 | | 530 | mg/Kg | 1 | 50.0 |
| Surrogate | F | `lag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qsr | Qsr | | 68.9 | mg/Kg | 1 | 50.0 | 138 | 70 - 130 |
| Sample: 41: Laboratory: Analysis: QC Batch: | 3 235 - S-5 (Midland TPH GRO 127937 | 0-1) | | Analytica Date Ana | l Method: | S 8015 D 2016-02-03 | | Prep Meth Analyzed l | |

| Prep Batch: 108314 | | Sample | Preparati | on: 2016-0 | | | Prepared B | v |
|------------------------------|------|---------------|-----------|------------|----------|-----------------|---------------------|--------------------|
| | | | | RL | | | | |
| Parameter | Flag | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | Fla | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | 1.19 | <u>s Cert</u> | 1.69 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 2.38 | mg/Kg | 1 | 2.00 | 119 | 70 - 130 |

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|--|--------------|-------|-------------------|--|---------------------------------------|----------------|---------------------------------|----------------------|
| Sample: 413236 - | S-5 (1-2) | | | | | | | |
| Laboratory: Lubbo Analysis: Chlori QC Batch: 127950 Prep Batch: 108347 | de (IC) | | Date A | ical Method: analyzed: Preparation | 2016-02-(|)3 | Prep Me Analyzed Prepared | l By: RL |
| T ¹ 2 | | 2723 | ~ | | RL | | | |
| Parameter | | Flag | Cert | Res <2 | | Units mg/Kg | Dilution 1 | RI |
| Chloride Sample: 413236 - | | | | | | | | |
| | id)RO | | Date Ar | cal Method: aalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Prepared | l By: JL |
| Sample: 413236 - Laboratory: Midlar Analysis: TPH I QC Batch: 127965 | id)RO | | Date Ar | alyzed: Preparation: | 2016-02-04 2016-02-03 | | Analyzed | l By: JL |
| Sample: 413236 - Laboratory: Midlar Analysis: TPH I QC Batch: 127965 Prep Batch: 108331 Parameter | id)RO | Flag | Date Ar | alyzed: Preparation: | 2016-02-04 2016-02-03 RL | | Analyzed | l By: JL |
| Sample: 413236 - Laboratory: Midlar Analysis: TPH I QC Batch: 127965 | id)RO | Flag | Date Ar Sample | alyzed: Preparation: I | 2016-02-04 2016-02-03 RL ult | 8 | Analyzed Prepared | ł By: JĹ ł By: JL |

| Analysis:TPH GROQC Batch:127937Prep Batch:108314 | | | Date An | al Method alyzed: Preparatio | 2016-0 | 2-03 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|-----------------------|------------------------------------|---------------|----------|--------|--|----------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/ŀ | (g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.58 | mg/Kg | 1 | 2.00 | 79 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |

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| | | |

Sample: 413238 - S-6 (0-1)

| Laboratory: Midland Analysis: BTEX QC Batch: 127934 Prep Batch: 108265 | | Date Ar | cal Method: aalyzed: Preparation | S 80211 2016-02 : 2016-02 | -02 | | Prep Method Analyzed By Prepared By: | AK |
|---|------|---------|--|---------------------------------|----------|--------|--|---------------|
| | | | | \mathbf{RL} | | | | |
| Parameter | Flag | Cert | ; | Result | Unit | s | Dilution | \mathbf{RL} |
| Benzene | U | 3 | < | :0.0200 | mg/K | g | 1 | 0.0200 |
| Toluene | | 3 | < | (0.0200 | mg/K | g | 1 | 0.0200 |
| Ethylbenzene | | 3 | (| 0.0229 | mg/K | g | 1 | 0.0200 |
| Xylene | | 3 | | 0.238 | mg/K | g | 1 | 0.0200 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Fla | g Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | 1.59 | mg/Kg | 1 | 2.00 | 80 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |

Sample: 413238 - S-6 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 127958 108348 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-03 | | Prep Method: Analyzed By: Prepared By: | |
|--|--|------|--------------------------------------|--------|-----------------------|-----|--|------|
| | | | | RL | | | | |
| Parameter | | Flag | Cert | Result | Un | its | Dilution | RL |
| Chloride | | | 1,2,4 | 148 | mg/l | Kg | 1 | 25.0 |

Sample: 413238 - S-6 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | TPH DRO 127965 | | Date A | cal Method: 1alyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | l By: JL |
|--|-------------------|------|--------|---|--------------------------------------|-----------------|---------------------------------|---------------------|
| n . | | 101 | | | RL | ¥.¥. 1. | | X - X |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | | 3 | 3 | 344 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 61.3 | mg/Kg | 1 | 50.0 | 123 | 70 - 130 |

| Report Date: February 11, 2016 15-0167-01 | Work Order: 16020113 XTO Perla Negra | Page Number: 21 of 95 |
|--|---|-----------------------|
| | | **** |

Sample: 413238 - S-6 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Method alyzed: Preparatic | 2016-0 | 02-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|---------|------------------------------------|---------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | | | 3 | | 11.3 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 2.30 | mg/Kg | 1 | 2.00 | 115 | 70 - 130 |

Sample: 413239 - S-6 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 127958 108348 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-03 | | Prep Method: Analyzed By: Prepared By: | , |
|--|--|------|--------------------------------------|--------|-----------------------|-----|--|------|
| | | | | RL | r | | | |
| Parameter | | Flag | Cert | Result | . Un | its | Dilution | RL |
| Chloride | | | 1,2,4 | 125 | mg/l | Kg | 1 | 25.0 |

Sample: 413239 - S-6 (1-2)

| n-Tricosane | 1.105 | 0010 | 49.9 | mg/Kg | 1 | 50,0 | 100 | 70 - 130 |
|--|--|------|---------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| DRO | | | 3 | 5 | 1.6 | mg/Kg | 1 | 50.0 |
| Parameter | | Flag | Cert | Res | RL sult | Units | Dilution | RL |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date A1 | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | l By: JĹ |

| Report Date: February 11, 2016 15-0167-01 | Work Order: 16020113 XTO Perla Negra | Page Number: 22 of 95 |
|--|---|-----------------------|
| | ***** | |

Sample: 413239 - S-6 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Methoo alyzed: Preparatio | 2016-0 | 2-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|-------|---------|------------------------------------|--------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | \mathbf{RL} |
| GRO | | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | ł | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | ~~~~~ | | 1.45 | mg/Kg | 1 | 2.00 | 72 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 2.21 | mg/Kg | 1 | 2.00 | 110 | 70 - 130 |

Sample: 413241 - S-7 (0-1)

| Laboratory: Midland Analysis: BTEX QC Batch: 127934 Prep Batch: 108265 | | Da | ate Anal | Method: yzed: eparation: | S 8021B 2016-02- 2016-02- | 02 | | Prep Method Analyzed By: Prepared By: | : AK |
|---|------|------|-----------------------|--------------------------------|---------------------------------|----------|--------|---|----------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | R | lesult | Units | | Dilution | RL |
| Benzene | | | 3 | 0 |).568 | mg/Kg | | 2 | 0.0200 |
| Toluene | | | 3 | | 13.1 | mg/Kg | | 2 | 0.0200 |
| Ethylbenzene | Je | | 3 | | 19.4 | mg/Kg | | 2 | 0.0200 |
| Xylene | Je | | 3 | | 54.4 | mg/Kg | | 2 | 0.0200 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | Qsr | Qsr | | 2.66 | mg/Kg | 2 | 4.00 | 66 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | Qsr | Qsr | | 17.2 | mg/Kg | 2 | 4.00 | 430 | 70 - 130 |

Sample: 413241 - S-7 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date 15-0167-01 | Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Perl | | Page Number: 23 of 95 | | |
|--|--|---------|------|----------|------------------------------------|--------------------------------------|-----------------------|---------------------------------------|--------------------|
| Parameter Chloride | | | Flag | Cert | Res | RL ault 3.2 | Units mg/Kg | Dilution1 | RL 25.0 |
| | | | | 1.2,4 | . | | ng/1xg | I | 20.0 |
| Sample: 41: Laboratory: Analysis: | 3241 - S- Midland TPH DR | 、 , | | Analytic | al Method: | S 8015 D | | Prep Me | thod: N/A |
| QC Batch: Prep Batch: | 127965 108331 | | | Date An | alyzed: Preparation: | | | Analyzed Prepared | l By: JĹ |
| Parameter | | | Flag | Cert | Res | RL | Units | Dilution | RL |
| DRO | | | 0 | 3 | | 90 | mg/Kg | 5 | 50.0 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qsr | Qsr | | 262 | mg/Kg | 5 | 50.0 | 524 | 70 - 130 |
| Sample: 413 | 3241 - S- | 7 (0-1) | | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GR 127937 108314 | .0 | | Date Ana | l Method: lyzed: reparation: | S 8015 D 2016-02-03 2016-02-02 | | Prep Meth Analyzed I Prepared I | Зу: АК |
| | | | | | | RL | | | |

| | | | | | RL | | | | |
|------------------------------|------|------|------|--------|------------------|----------|--------|----------|---------------------|
| Parameter | Flag | | Cert | F | Result | Unit | s | Dilution | RL |
| GRO | | | 3 | | 2790 | mg/K | g | 50 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 75.4 | mg/Kg | 50 | 100 | 75 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | Q≋r | Qár | | 134 | $\mathrm{mg/Kg}$ | 50 | 100 | 134 | 70 - 130 |

Sample: 413242 - S-7 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RĹ |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Numb | per: 24 of 95 | | |
|---|--|------|---------------------|-------------------------|------------------------|---------------|---------------------|----------|
| | | | |] | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| Chloride | | | 1,2,4 | 50 |).9 | mg/Kg | 1 | 25.0 |
| Sample: 413242 - S- | 7 (1-2) | | | | | | | |
| Laboratory: Midland Analysis: TPH DR QC Batch: 127965 | 0 | | Analytic Date An | al Method: | S 8015 D 2016-02-04 | 1 | Prep Mc Analyzed | |
| Prep Batch: 108331 | | | | Preparation: | 2016-02-03 | | Prepared | |
| | | | |] | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | | 3 | 42 | 30 | mg/Kg | 5 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | urrogate Flag Cert Result U | | | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane _{Qsr} | cosane _{Qsr Qsr} 190 mg/Kg 5 50.0 | | | | 50.0 | 380 | 70 - 130 | |

Sample: 413242 - S-7 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | Analytical Method: S 8015 D Date Analyzed: 2016-02-03 Sample Preparation: 2016-02-02 | | | | | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|--|------|--------|--------|----------|-----------------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | F | Result | Unit | \$ | Dilution | RL |
| GRO | | | 3 | | 2800 | mg/K | g | 50 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | <u>U</u> | | 81.4 | mg/Kg | 50 | 100 | 81 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | Qar | Qsr | | 132 | mg/Kg | 50 | 100 | 132 | 70 - 130 |

Sample: 413244 - S-8 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Page Numbe | r: 25 of 95 | | | |
|--|---|------|-------------|---|--------------------------------------|--------------------------|---|----------------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | riag | 1,2.4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3244 - S-8 (0-1) | I | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127965 108331 | | Date Ai | cal Method: 1alyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Meth Analyzed I Prepared I | 3y: JĹ |
| Parameter DRO | | Flag | Cert | Res | | Units | Dilution | RL |
| Surrogate | Flag | Cert | 3 Result | <o< td=""><td>0.0 Dilution</td><td>mg/Kg Spike Amount</td><td>1 Percent Recovery</td><td>50.0 Recovery Limits</td></o<> | 0.0 Dilution | mg/Kg Spike Amount | 1 Percent Recovery | 50.0 Recovery Limits |
| n-Tricosane | | | 51.9 | mg/Kg | 1 | 50.0 | 104 | 70 - 130 |
| Sample: 41 Laboratory: Analysis: QC Batch: Prep Batch: | 3244 - S-8 (0-1) Midland TPH GRO 127937 108314 | | Date Ana | al Method: alyzed: Preparation: | S 8015 D 2016-02-03 2016-02-02 | | Prep Methoo Analyzed By Prepared By | : AK |
| Parameter | | Flag | Cert | Res | RL sult | Units | Dilution | RL |
| GRO | | v | 3 | <4 | .00 | mg/Kg | 1 | 4.00 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT) | | | 1.42 | mg/Kg |] | 2.00 | 71 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.94 | mg/Kg | 1 | 2.00 | 97 | 70 - 130 |

Sample: 413245 - S-8 (1-2)

| T ala ana tana ta | Y ush h a sh | | | | |
|-------------------|---------------|---------------------|------------|--------------|---------------|
| Laboratory: | LUDDOCK | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 26 of 95 | | | |
|---|-----------|------|--------|-------------------------|------------------------|-----------------|--------------------------------|--------------------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| Chloride | | U | 1.2.4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413245 - : | S-8 (1-2) | | | | | | | |
| Laboratory: Midlan Analysis: TPH I QC Batch: 127965 | ORO | | Date A | 17 | S 8015 D 2016-02-04 | | Prep Me Analyzec Duenome | l By: JĹ |
| Prep Batch: 108331 | | | Sample | Preparation: | | 3 | Preparec | l By: JL |
| Parameter | | Flag | Cert | Res | RL sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| | ····· | | 44.8 | mg/Kg | | 50.0 | 90 | 70 - 130 |

Sample: 413245 - S-8 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Analytical Method: S 8015 D Date Analyzed: 2016-02-03 Sample Preparation: 2016-02-02 | | | | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|--|--------|--------|----------|-----------------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.66 | mg/Kg | 1 | 2.00 | 83 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.90 | mg/Kg | 1 | 2.00 | 95 | 70 - 130 |

Sample: 413247 - S-9 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 27 of 95 | | | |
|---|-------------|------|---------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413247 | - S-9 (0-1) | | | | | | | |
| Laboratory: Midl Analysis: TPH QC Batch: 1279 Prep Batch: 1083 | DRO 65 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Prepared | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| DRO | | v | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 41.5 | mg/Kg | 1 | 50.0 | 83 | 70 - 130 |

Sample: 413247 - S-9 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Analytical Method:S 8015 DDate Analyzed:2016-02-03Sample Preparation:2016-02-02 | | | | | | d: S 5035 y: AK y: AK |
|--|------|------|---|--------|--------|----------|-----------------|---------------------|-----------------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 0 | 2.510 | 1.67 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.98 | mg/Kg | 1 | 2.00 | 99 | 70 - 130 |

Sample: 413248 - S-9 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 28 of 95 | | | |
|---|-----------|------|---------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413248 - 5 | 8-9 (1-2) | | | | | | | |
| Laboratory: Midlan Analysis: TPH D QC Batch: 127965 Prep Batch: 108331 | RO | | Date Ar | cal Method: nałyzed: Preparation: | S 8015 D 2016-02-04 2016-02-03 | | Prep Me Analyzec Preparec | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| DRO | | v | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 41.5 | mg/Kg | 1 | 50.0 | 83 | 70 - 130 |

Sample: 413248 - S-9 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Method alyzed: Preparatio | 2016-0 | 2-03 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|---------|------------------------------------|---------------|----------|-----------------|--|--------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | ŀ | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | ····· | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 70 - 130 |

Sample: 413250 - S-10 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | | Page Number: 29 of 95 | | |
|--|--------------|------|-----------|---|------------------------------------|-----------------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | RL |
| Chloride | · · · | | 1.2.4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413250 | - S-10 (0-1 | .) | | | | | | |
| Laboratory: Mid Analysis: TPH QC Batch: 1279 Prep Batch: 1083 | I DRO 165 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Preparec | l By: JL |
| | | | | | RL | | | |
| Parameter DRO | | Flag | Cert 3 | | sult 182 | Units mg/Kg | Dilution 1 | RL 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | 0 | | 59.6 | mg/Kg | 1 | 50.0 | 119 | 70 - 130 |

Sample: 413250 - S-10 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127937Prep Batch:108314 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-03 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|---------|------------------------------------|--------|----------|-----------------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | s | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.63 | mg/Kg | 1 | 2.00 | 82 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.78 | mg/Kg | 1 | 2.00 | 89 | 70 - 130 |

Sample: 413251 - S-10 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108348 | Sample Preparation: | | Prepared By: | RL |

| Report Date: Februa 15-0167-01 | Report Date: February 11, 2016 15-0167-01 | | | Work Order: XTO Perl | Page Number: 30 of 95 | | | |
|---------------------------------------|--|------|---------|-------------------------|-----------------------|--------|----------|------------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| Chloride | | | 1.2,4 | <2 | 5.0 | mg/Kg | | 25.0 |
| Sample: 413251 - | S-10 (1-2 | :) | | | | | | |
| Laboratory: Midlar Analysis: TPH I | | | Anglati | cal Method: | S 8015 D | | Prep Me | ethod: N/A |
| QC Batch: 127968 | | | • | nalyzed: | 2016-02-0 | d | Analyze | , |
| Prep Batch: 108338 | | | | Preparation: | | | Prepareo | P . |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Surrogate | riag | | | | | | | |

Sample: 413251 - S-10 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127937 Prep Batch: 108314 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-03 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|-----------------------|------------------------------------|---------------------|----------|--------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Triffuorotoluene (TFT) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.90 | mg/Kg | 1 | 2.00 | 95 | 70 - 130 |

Sample: 413253 - S-11 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 15-0167-01 | 6 | | Work Order: XTO Perl | Page Number: 31 of 95 | | | | |
|---|----------|-------|-------------------------|---------------------------------------|--------------------------------------|---------------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Units | Dilution | RL | | |
| Chloride | | 1,2,4 | Res 28 | 8.7 | mg/Kg | 1 | 25.0 | |
| Sample: 413253 - S-1 | 11 (0-1) |) | | | | | | |
| Laboratory: Midland Analysis: TPH DR QC Batch: 127968 Prep Batch: 108338 | 0 | | Date An | al Method: alyzed: Preparation: | S 8015 D 2016-02-04 2016-02-04 | | Prep Me Analyzed Prepared | l By: JĹ |
| 1 | | | ~ ···· I ···· | | RL | - | 1 | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | | 3 | 2 | 52 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane Qsr | | | | | | ۲۵.0 | 142 | 70 - 130 |

Sample: 413253 - S-11 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127948Prep Batch:108328 | | | Analytic Date An Sample l | Prep Metho Analyzed B Prepared B | y: AK | | | | |
|--|------|------|---------------------------------|--|-------------------------|----------|-------------------------|----------|----------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.52 | mg/Kg | 1 | 2.00 | 76 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.72 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |

Sample: 413254 - S-11 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: Februa 15-0167-01 | Report Date: February 11, 2016 5-0167-01 | | | | Work Order: 16020113 XTO Perla Negra | | | | | | |
|-----------------------------------|---|-----------------------|------------------|-----------------------------|---|--------|----------|----------|--|--|--|
| | | | | | | | | | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL | | | |
| Chloride | | mg/Kg | 1 | 25.0 | | | | | | | |
| Sample: 413254 - S | 5-11 (1-2 | :) | | | | | | | | | |
| Laboratory: Midland | f | | | | | | | | | | |
| Analysis: TPH D | RO | | ~ | al Method: | S 8015 D | | Prep Me | , | | | |
| QC Batch: 127968 | | | Date An | • | 2016-02-0 | | Analyzec | • | | | |
| Prep Batch: 108338 | | | Sample | Preparation: | 2016-02-0 | 4 | Prepared | l By: JL | | | |
| | | | | | RL | | | | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL | | | |
| DRO | | U | 3 | <5 | 6.0 | mg/Kg | 1 | 50.0 | | | |
| | | | | | | Spike | Percent | Recovery | | | |
| Surrogate | Flag | Cert | Result Units Dil | | Dilution | Amount | Recovery | Limits | | | |
| ~ | | | | fricosane 48.5 mg/Kg 1 50.0 | | | | | | | |

Sample: 413254 - S-11 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Method alyzed: Preparatic | 2016-0 | 02-04 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|---------|------------------------------------|----------------|----------|-----------------|--|----------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | \mathbf{RL} |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | rag | Uert | 1.71 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB |) | | | 1.71 1.94 | mg/Kg mg/Kg | 1 | 2.00 2.00 | 97 | 70 - 130 70 - 130 |

Sample: 413256 - S-12 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | RL |

| Report Date 15-0167-01 | Report Date: February 11, 2016 15-0167-01 | | | Work Order: XTO Perl | Page Number: 33 of 95 | | | |
|--|--|------|---------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | Units | Dilution | RL | |
| Chloride | | | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3256 - S-12 (0-1 | L) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127968 108338 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzed Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 44.9 | mg/Kg | 1 | 50.0 | 90 | 70 - 130 |

Sample: 413256 - S-12 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | Γ | Date Ana | al Method alyzed: 'reparation | 2016-02 | 2-04 | Prep Metho Analyzed B Prepared B | y: AK | |
|--|------|------|----------|-------------------------------------|---------|----------|--|---------------------|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | F | lesult | Unit | S | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | Qsr | Qsr | | 1.34 | mg/Kg | | 2.00 | 67 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1 | | | 1.47 | mg/Kg | 1 | 2.00 | 74 | 70 - 130 |

Sample: 413257 - S-12 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | RL |

| 15-0167-01 | Report Date: February 11, 2016 5-0167-01 | | | Work Order: XTO Perl | | Page Number: 34 of 95 | | |
|--------------------------|---|-----------|----------------|-------------------------|--------------|-----------------------|---------------|---------------------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| Chloride | | U | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | .3257 - S-12 (1-2 | 2) | | | | | | |
| Laboratory: | Midland | | | | | | | |
| Analysis: | TPH DRO | | • | cal Method: | S 8015 D | | Prep Me | ' |
| QC Batch: | 127968 | | Date Ar | • | 2016-02-0 | | Analyze | |
| • | 100000 | | | | -901c 09.0 | 4 | Preparec | d By: JL |
| Prep Batch: | 108338 | | Sample | Preparation: | 2016-02-0 | | | |
| • | 108338 | | Sample | - | 2010-02-0 | | | |
| Prep Batch: Parameter | 108338 | Flag | Sample Cert | - | RL | Units | Dilution | RL |
| Prep Batch: Parameter | 108338 | Flag v | - | Res | RL | Units mg/Kg | - | - |
| • | 108338 | | Cert | Res | RL sult | mg/Kg | - | RL 50.0 |
| Prep Batch: Parameter | 108338 Flag | | Cert | Res | RL sult | | Dilution 1 | RL |

Sample: 413257 - S-12 (1-2)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 127948 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 02-04 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|--|------|------|---------|------------------------------------|---------------|----------|--------|--|----------|
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| a , | | | | ~ | | | | Spike | Percent | Recovery |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolue | ne (TFT) | | | | 1.76 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |
| 4-Bromofluoro | obenzene (4-BFB) | | | | 1.93 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |

Sample: 413259 - S-13 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RĹ |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 35 of 95 | | | |
|--|--|------|-----------|---------------------------------------|--------------------------------------|----------------|----------------------------------|-------------------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RI |
| Chloride | | | 1.2.4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Laboratory: Analysis: QC Batch: | 3259 - S-13 (0- Midland TPH DRO 127968 108338 | 1) | Date Ar | al Method: alyzed: Preparation: | S 8015 D 2016-02-04 2016-02-04 | | Prep Met Analyzed Prepared | By: JĹ |
| Prep Batch: | 200000 | | | | | | | |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | |
| Prep Batch: Parameter DRO | | Flag | Cert 3 | Res | | Units mg/Kg | Dilution 1 | |
| Parameter | Flag | Flag | | Res | ult | | | R 50. Recover Limits |

Sample: 413259 - S-13 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 02-04 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|---------|------------------------------------|---------------------|----------|--------|--|----------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.62 | mg/Kg | 1 | 2.00 | 81 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.76 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |

Sample: 413260 - S-13 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 36 of 95 | | | |
|--|--|------|---------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | RL |
| Chloride | | υ | 1,2,4 | <25.0 | | mg/Kg | 1 | 25.0 |
| Sample: 413 | 260 - S-13 (1-2 | 2) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127968 108338 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 60.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 47.4 | mg/Kg | 1 | 50.0 | 95 | 70 - 130 |

Sample: 413260 - S-13 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Analytic Date An Sample l | Prep Metho Analyzed By Prepared By | y: AK | | | | |
|--|------|----------|---------------------------------|--|---------------|----------|-----------------|---------------------|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | <u> </u> | | 1.73 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.63 | mg/Kg | 1 | 2.00 | 82 | 70 - 130 |

Sample: 413262 - S-14 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Perl | Page Number: 37 of 95 | | | |
|--|-----------|-------|-------------|---|------------------------------------|----------------|---------------------------------|------------|
| Dougranton | Flag | | Que | | RL | | D 0 | τ, r |
| Parameter Chloride | | r lag | <u>Cert</u> | Res <2 | 5.0 | Units mg/Kg | Dilution 1 | RL 25.0 |
| Sample: 413262 - | S-14 (0-1 | .) | | | | | | |
| Laboratory: Midla Analysis: TPH QC Batch: 12796 Prep Batch: 10833 | DRO 8 | | Date A1 | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzed Prepared | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 51.8 | mg/Kg | 1 | 50.0 | 104 | 70 - 130 |

Sample: 413262 - S-14 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127948Prep Batch:108328 | | Analytical Method:S 8015 DDate Analyzed:2016-02-04Sample Preparation:2016-02-03 | | | | | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|---|------|--------|---------------|----------|-----------------|--|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | • | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | | ···· | 1.69 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |

Sample: 413263 - S-14 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 38 of 95 | | | |
|--|-------------|------|---------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | | 1.2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413263 - | - S-14 (1-2 | 2) | | | | | | |
| Laboratory: Midla Analysis: TPH QC Batch: 12796 Prep Batch: 10833 | DRO 58 | | Date A1 | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | <u>~</u> | | 47.2 | mg/Kg | 1 | 50.0 | 94 | 70 - 130 |

Sample: 413263 - S-14 (1-2)

| Laboratory: Midland | | | | | | | | | |
|------------------------------|------|------|-----------------------|-------------------------|-----------|----------|--------|------------|---------------------|
| Analysis: TPH GRO | | | Analytic | al Method | l: S 8015 | 5 D | | Prep Metho | d: S 5035 |
| QC Batch: 127948 | | | Date An | | 2016-0 | 12-04 | | Analyzed B | |
| Prep Batch: 108328 | | | | Preparatio | | | | Prepared B | |
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.69 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) |) | | | 1.82 | mg/Kg | 1 | 2.00 | 91 | 70 - 130 |

Sample: 413265 - S-15 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perla | Page Number: 39 of 95 | | | |
|--|-----------|-----------|-----------------------|--------------------------|-----------------------|-------|----------|----------|
| | | | |] | RL | | | |
| Parameter | Flag | | Cert | Res | ult | Units | Dilution | RL |
| Chloride | | U | 1,2,4 | <25 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413265 - S | 3-15 (0-1 |) | | | | | | |
| Laboratory: Midland | d | | | | | | | |
| Analysis: TPH D | RO | | Analytic | al Method: | S 8015 D | | Prep Met | hod: N/A |
| QC Batch: 127968 | | | Date An | alyzed: | 2016-02-04 | 1 | Analyzed | • |
| Prep Batch: 108338 | | | Sample | Preparation: | 2016-02-04 | 1 | Prepared | By: JL |
| | | | |) | RL | | | |
| | | | ~ | 5 | 1. | Units | Dilution | RL |
| Parameter | | Flag | Cert | Res | ult | Units | DIRGION | 1.012 |
| Parameter DRO | | Flag v | Cert | | | mg/Kg | 1 | 50.0 |
| | | | | | | mg/Kg | | |
| | Flag | | | | | | 1 | 50.0 |

Sample: 413265 - S-15 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-04 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|------|---------|------------------------------------|---------------|----------|-----------------|--|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.57 | mg/Kg | 1. | 2.00 | 78 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.80 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |

Sample: 413266 - S-15 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 127960 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
| Prep Batch: | 108349 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 40 of 95 | | | |
|--|--|------|---------|--|--------------------------------------|-----------------|--------------------------------|--------------------|
| Parameter | | Flag | Cert | Re | Units | Dilution | RL | |
| Chloride | | | | | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3266 - S-15 (1-2 | 2) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127968 108338 | | Date Ar | cal Method: nalyzed: Preparation | S 8015 D 2016-02-04 2016-02-04 | | Prep Me Analyze Preparec | d By: JĹ |
| ~ | | | | | RL | | | |
| Parameter | | Flag | Cert | | sult | Units | Dilution | RL |
| ORO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 46.9 | mg/Kg | 1 | 50.0 | 94 | 70 - 130 |

| Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 |)2-04 | | Prep Metho Analyzed By Prepared By | y: AK |
|---|------|------|---------|------------------------------------|--------|----------|-----------------|--|--------------------|
| Demonstern | | | ~ | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/ł | ζg | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.68 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |

Sample: 413268 - S-16 (0-1)

| Laboratory: | Lubbock | | | | |
|---------------------------------------|-----------------------------------|---|-----------------------|--|----|
| Analysis: QC Batch: Prep Batch: | Chloride (IC) 128089 108454 | Analytical Method: Date Analyzed: Sample Preparation: | E 300.0 2016-02-09 | Prep Method: Analyzed By: Prepared By: | ŔĹ |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perla | Page Number: 41 of 95 | | | |
|---|-------------|------|-------------------------|--------------------------|------------------------|--------|---------------------|-----------------|
| | | | |] | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| Chloride | | U | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413268 - | · S-16 (0-1 | .) | | | | | | |
| Laboratory: Midla Analysis: TPH QC Batch: 12790 | DRO | | • | ical Method: nalyzed: | S 8015 D 2016-02-04 | 4 | Prep Me Analyzee | / |
| Prep Batch: 10833 | 38 | | | Preparation: | 2016-02-04 | | Prepareo | 1. ¹ |
| | | | | 1 | RL | | | |
| Parameter | | Flag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | U | 3 | <50 |).0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| | | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Surrogate n-Tricosane | Flag | Cert | nesun | Onno | 1.211(1)(1)(1) | | 100001019 | 111110.9 |

Sample: 413268 - S-16 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 02-04 | | Prep Metho Analyzed B Prepared By | y: AK |
|--|------|------|---------|------------------------------------|-------------------------|----------|-----------------|---|---------------------|
| ~ | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | | | 1.67 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.89 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 |

Sample: 413269 - S-16 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 42 of 95 | | | |
|---|-------------|------|--------------|-------------------------|------------------------|--------|---------------------|----------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413269 | - S-16 (1-2 | :) | | | | | | |
| Laboratory: Midl Analysis: TPE QC Batch: 1279 | DRO | | • | cal Method: nalyzed: | S 8015 D 2016-02-04 | 4 | Prep Me Analyzee | |
| Prep Batch: 1083 | 38 | | Sample | Preparation | 2016-02-0 | 4 | Preparec | ł By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| -Tricosane | | | 46.5 mg/Kg 1 | | 50.0 | 93 | 70 - 130 | |

Sample: 413269 - S-16 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | Alytical Method: S 8015 D Prep M e Analyzed: 2016-02-04 Analyz ple Preparation: 2016-02-03 Prepare | | | | | y: AK |
|--|------|------|---------|--|---------------------|----------|-----------------|---------------------|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 |

Sample: 413271 - S-17 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 43 of 95 | | | |
|---|-----------|-----------------------|-------------------------|-------------------------|------------------------|--------|---------------------|-------------------------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413271 - | S-17 (0-1 |) | | | | | | |
| Laboratory: Midlar Analysis: TPH I QC Batch: 127968 | DRO | | Analytic Date Ar | cal Method: nalyzed: | S 8015 D 2016-02-04 | 1 | Prep Me Analyzec | 1 |
| Prep Batch: 108338 | 3 | | Sample | Preparation | 2016-02-04 | 1 | Prepared | |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | ~ . | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |

Sample: 413271 - S-17 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Analytic Date An Sample l | Prep Metho Analyzed B Prepared B | y: AK | | | | |
|--|------|------|---------------------------------|--|--------|----------|-----------------|---------------------|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | \mathbf{RL} |
| GRO | U | | 3 | ····· | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolucne (TFT) | • | | | 1.71 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.90 | mg/Kg | 1 | 2.00 | 95 | 70 - 130 |

Sample: 413272 - S-17 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 44 of 95 | | | |
|--|--|-----------|-----------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | RL |
| Chloride | | υ | 3,2,4 | | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3272 - S-17 (1-2 | 2) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127968 108338 | | Date A | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Preparec | l By: JL |
| | | V | ~ | | RL | | | |
| Parameter DRO | | Flag v | Cert 3 | | sult. 60.0 | Units mg/Kg | Dilution 1 | RL 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 54.9 | mg/Kg | 1 | 50.0 | 110 | 70 - 130 |

Sample: 413272 - S-17 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoo alyzed: Preparatio | Prep Metho Analyzed B Prepared B | y: AK | | | |
|--|------|------|---------|------------------------------------|--|----------|-------------------------|----------|-------------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/k | g | 1 | 4.00 |
| a | | 77) | ~ | | ~~ . | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.73 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.86 | mg/Kg | 1 | 2.00 | 93 | 70 - 130 |

Sample: 413274 - S-18 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 45 of 95 | | | |
|--|--|------|--------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | | 1.2.4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413 | 274 - S-18 (0-1 | .) | | | | | | |
| Analysis: QC Batch: | Midland TPH DRO 127968 108338 | | Date A | cal Method: 1alyzed: Preparation: | S 8015 D 2016-02-0- 2016-02-0- | | Prep Me Analyzec Preparec | l By: JL |
| _ | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| DRO | | v | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 46.4 | mg/Kg | 1 | 50.0 | 93 | 70 - 130 |

Sample: 413274 - S-18 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 02-04 | | Prep Methc Analyzed B Prepared B | y: AK |
|--|------|------|-----------------------|------------------------------------|---------------|----------|--------|--|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| 0 | | ~~~ | ~ | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Triffuorotoluene (TFT) | | | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 70 ~ 130 |

Sample: 413275 - S-18 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 46 of 95 | | | |
|--|----------|------|----------|-----------------------|-----------------------|--------|----------|---------------------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413275 - S | -18 (1-2 | ;) | | | | | | |
| Laboratory: Midland |] | | | | | | | |
| Analysis: TPH D | RO | | Analytic | cal Method: | S 8015 D | | Prep Me | thod: N/A |
| QC Batch: 127968 | | | Date Ar | nalyzed: | 2016-02-04 | 4 | Analyzeo | |
| Prep Batch: 108338 | | | Sample | Preparation | : 2016-02-04 | 4 | Preparec | By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 50.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Junogato | | | | | | | | |

Sample: 413275 - S-18 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 | | | Analytic Date An | al Method | 1: S 8015 2016-0 | | | Prep Metho Analyzed B | |
|--|------|------|---------------------|------------|---------------------|----------|-----------------|--------------------------|---------------------|
| Prep Batch: 108328 | | | | Preparatic | | | | Prepared B | v |
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | | | 1.68 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB |) | | | 1.88 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 |

Sample: 413277 - S-19 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: 15-0167-01 | Report Date: February 11, 2016 5-0167-01 | | | Work Order XTO Per | Page Number: 47 of 95 | | | |
|--|---|------|---------|---|------------------------------------|-----------------|---------------------------------|---------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | RL |
| Chloride | | 0 | 1.2.4 | | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413 | 3277 - S-19 (0-1 | .) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127968 108338 | | Date Ar | cal Method: aalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Preparec | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | υ | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 51.8 | mg/Kg | 1 | 50.0 | 104 | 70 - 130 |

Sample: 413277 - S-19 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127948Prep Batch:108328 | Analytical Method:S 8015 DDate Analyzed:2016-02-04Sample Preparation:2016-02-03 | | | | | | | Prep Metho Analyzed B Prepared B | y: AK |
|--|---|------|------|--------|--------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | \mathbf{F} lag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | [g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.68 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |

Sample: 413278 - S-19 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128089 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108454 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Perl | Page Number: 48 of 95 | | | |
|--|------------------------------|-------|---------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | Units | Dilution | RL | |
| Chloride | | 1.108 | 1.2.4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413278 | 8 - S-19 (1-2 | 2) | | | | | | |
| Analysis: TP QC Batch: 127 | lland H DRO 968 338 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 52.0 | mg/Kg | 1 | 50.0 | 104 | 70 - 130 |

Sample: 413278 - S-19 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127948 Prep Batch: 108328 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 |)2-04 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|--------|---------|------------------------------------|-------------------------|----------|-----------------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 1 10.8 | Cert | 1.73 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 |

Sample: 413280 - S-20 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 49 of 95 | | | |
|--|-----------|----------------|-----------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | 1 148 | 1.2,4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413280 - | S-20 (0-1 | L) | | | | | | |
| Laboratory: Midla Analysis: TPH QC Batch: 12799 Prep Batch: 10837 | DRO 8 | | Date Ar | cal Method: aalyzed: Preparation: | S 8015 D 2016-02-0! 2016-02-0! | | Prep Me Analyzed Prepared | l By: JL |
| - | | 2012 N | | | RL | | | |
| Parameter DRO | | Flag B,Qr,U | Cert 3 | Res <5 | sult 0.0 | Units mg/Kg | Dilution 1 | RL 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 40.1 | mg/Kg | 1 | 50.0 | 80 | 70 - 130 |

Sample: 413280 - S-20 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127948Prep Batch:108328 | | | Analytic Date An Sample l | Prep Methc Analyzed B Prepared B | y: AK | | | | |
|--|------|------|---------------------------------|--|-------------------------|----------|-----------------|---------------------|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | υ | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.91 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |

Sample: 413281 - S-20 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 50 of 95 | | | |
|---|--|--------|---------|--------------------------------------|------------------------------------|--------|---------------------------------|---------------|
| *** | | | | | RL | | | |
| Parameter | | Flag | Cert | | sult | Units | Dilution | RL |
| Chloride | | υ | 1,2,4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 413 Laboratory: Analysis: QC Batch: Prep Batch: | 2 81 - S-20 (1- : Midland TPH DRO 127998 108373 | 2) | Date An | al Method: alyzed: Preparation | S 8015 D 2016-02-0 2016-02-0 | - | Prep Me Analyzec Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | \mathbf{RL} |
| DRO | | B.Qr,U | 3 | <5 | 50.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 44.9 | mg/Kg | 1 | 50.0 | 90 | 70 - 130 |

Sample: 413281 - S-20 (1-2)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127948Prep Batch:108328 | | Analytical Method:S 8015 DDate Analyzed:2016-02-04Sample Preparation:2016-02-03 | | | | | | | od: S 5035 y: AK y: AK |
|--|------------------|---|-----------------------|-------------------------|------------------|----------|--------|----------|------------------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | \mathbf{F} lag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qs,U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| ~ | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.67 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.90 | $\mathrm{mg/Kg}$ | 1 | 2.00 | 95 | 70 - 130 |

Sample: 413283 - S-21 (0-1)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: 15-0167-01 | eport Date: February 11, 2016 -0167-01 | | | Work Order XTO Perl | Page Num | ber: 51 of 95 | | |
|----------------------------|---|--------|---------|---------------------------------------|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL sult | Units | Dilution | RL |
| Chloride | | U U | 1.2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 4132 | 283 - S-21 (0-1 | .) | | | | | | |
| Analysis: 7 QC Batch: 1 | Midland FPH DRO 127998 108373 | | Date Ar | al Method: alyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Preparec | ł By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B.Qr.U | 3 | <5 | 50.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 45.7 | mg/Kg | 1 | 50.0 | 91 | 70 - 130 |

Sample: 413283 - S-21 (0-1)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | Da | ate Anal | Method: yzed: reparation | S 8015 2016-02 2016-02 | -05 | | Prep Metho Analyzed By Prepared By | 7: AK |
|--|------------|------|----------|--------------------------------|------------------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | \mathbf{R} | esult | Units | 3 | Dilution | RL |
| GRO | Qr,U | | 3 | < | 4.00 | mg/Kg | 5 | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.40 | mg/Kg | 1 | 2.00 | 70 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1 Qsr | Qsr | | 1.17 | mg/Kg | 1 | 2.00 | 58 | 70 - 130 |

Sample: 413284 - S-21 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date 15-0167-01 | bort Date: February 11, 2016 0167-01 | | | Work Order XTO Per | Page Num | ber: 52 of 95 | | |
|--|---|--------|---------|---|------------------------------------|-----------------|--------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | 1 mg | 1.2,4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3284 - S-21 (1-2 | 2) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127998 108373 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyze Preparec | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | | sult | Units | Dilution | RL |
| DRO | | B.Qr.U | 3 | < | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 47.2 | mg/Kg | 1 | 50.0 | 94 | 70 - 130 |

Sample: 413284 - S-21 (1-2)

| | Da | te Anal | yzed: | 2016-02 | -05 | | Analyzed By | /: AK |
|------------------|------|----------------------------------|--|---|---|--|--|---|
| | | | | RL | | | | |
| Flag | | Cert | \mathbf{R} | esult | Units | | Dilution | RL |
| Qr,U | | 3 | < | 4.00 | mg/Kg | | 1 | 4.00 |
| | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| 2 _{Oxr} | Over | | $1.50 \\ 1.37$ | mg/Kg mg/Kg | 1 | 2.00 | 75 | 70 - 130 70 - 130 |
| | Qr,U | Da Sa Flag qr.u Flag | Date Anal Sample Pr Flag Cert gr.u 3 Flag Cert | Flag Cert Radian Qr,U 3 < | Date Analyzed: 2016-02 Sample Preparation: 2016-02 RL Flag Cert Result Qr.U 3 <4.00 Flag Cert Result Units 1.50 mg/Kg | Date Analyzed: 2016-02-05 Sample Preparation: 2016-02-04 RL Flag Cert Result Units Qr.U 3 <4.00 mg/Kg Flag Cert Result Units Dilution 1.50 mg/Kg 1 | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |

Sample: 413286 - S-22 (0-1)

| Laboratory: | Lubbock | | | | |
|---------------------------------------|-----------------------------------|---|-----------------------|--|----|
| Analysis: QC Batch: Prep Batch: | Chloride (IC) 128090 108456 | Analytical Method: Date Analyzed: Sample Preparation: | E 300.0 2016-02-09 | Prep Method: Analyzed By: Prepared By: | RĹ |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Num | oer: 53 of 95 | | |
|--|-------------|--------|-------------------|--|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | | RL | Units | Dilution | RL |
| Chloride | | | 1.2.4 <25.0 mg/Kg | | | | 1 | 25.0 |
| Sample: 413286 | - S-22 (0-3 | 1) | | | | | | |
| v v | | | Date Ar | al Method: alyzed: Preparation | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Preparec | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B,Qr.U | 3 | </td <td>60.0</td> <td>mg/Kg</td> <td>1</td> <td>50.0</td> | 60.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | 1 198 | | 47.5 | mg/Kg | 1 | 50.0 | 95 | 70 - 130 |

Sample: 413286 - S-22 (0-1)

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127990Prep Batch:108337 | | Da | nte Anal | Method: yzed: reparation | 2016-02 | -05 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------------|----------|----------|--------------------------------|---------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | R | esult | Units | 5 | Dilution | RL |
| GRO | Qr,U | | 3 | < | (4.00 | mg/Kg | °) | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | <u> </u> | | 1.44 | mg/Kg | 1 | 2.00 | 72 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 3 Qsr | Qsr | | 1.37 | mg/Kg | 1 | 2.00 | 68 | 70 - 130 |

Sample: 413287 - S-22 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | RL |

| Report Date: Februar 15-0167-01 | teport Date: February 11, 2016 5-0167-01 | | | Work Order XTO Peri | Page Numl | ber: 54 of 95 | | |
|---|---|--------|---------|---|------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | U U | 1,2,4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413287 - S | -22 (1-2 | 2) | | | | | | |
| Laboratory: Midland Analysis: TPH DI QC Batch: 127998 Prep Batch: 108373 | - | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-0 2016-02-0 | | Prep Me Analyzec Prepared | l By: JĹ |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B.Qr.U | 3 | <5 | i0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 45.7 | mg/Kg | 1 | 50.0 | 91 | 70 - 130 |

Sample: 413287 - S-22 (1-2)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | | Date An | al Methoo alyzed: Preparatio | 2016-0 |)2-05 | | Prep Metho Analyzed B Prepared B | y: AK |
|--|------|----------|---------|------------------------------------|---------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qr.U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | <u>_</u> | | 1.50 | mg/Kg | 1 | 2.00 | 75 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.40 | mg/Kg | 1 | 2.00 | 70 | 70 - 130 |

Sample: 413289 - Comp-1

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Per | Page Number: 55 of 95 | | | |
|--|--|--------|----------|--|--|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Re | RL sult | Units | Dilution | RL |
| Chloride | | |).2,4 | | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3289 - Comp-1 | | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127998 108373 | | Date A | cal Method: nalyzed: Preparation | S 8015 D 2016-02-0! : 2016-02-0! | | Prep Me Analyzec Preparec | ł By: JĹ |
| Parameter | | Flag | Cert | Be | RL sult | Units | Dilution | RL |
| DRO | | B.Qr.U | 3 | | 50.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 44.8 | mg/Kg | 1 | 50.0 | 90 | 70 - 130 |
| Sample: 41 Laboratory: Analysis: | 3289 - Comp-1 Midland TPH GRO | | Analytic | al Method: | S 8015 D | | Prep Meth | od: S 5035 |

| QC Batch: 127990 Prep Batch: 108337 | Analytical Method: S 8015 D Date Analyzed: 2016-02-05 Sample Preparation: 2016-02-04 | | | | | | | Prep Metho Analyzed B Prepared By | y: AK |
|--|--|------|------|--------|-------------------------|----------|-----------------|---|--------------------|
| Yo | 1.21 | | ~ | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qr,U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.76 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.48 | mg/Kg | 1 | 2.00 | 74 | 70 - 130 |

Sample: 413290 - Comp-2

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 56 of 95 | | | |
|--|------------------------|--------|---------|-------------------------|-----------------------|--------|---------------------|----------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| Chloride | de u 1.2.4 <25.0 mg/Kg | | | | | | | 25.0 |
| Sample: 413290 | - Comp-2 | | | | | | | |
| QC Batch: 1279 | H DRO 198 | | Date Ar | | S 8015 D 2016-02-0 | - | Prep Me Analyzeo | l By: JĹ |
| Prep Batch: 1083 | 373 | | Sample | Preparation: | 2016-02-0 | 5 | Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | B,Qr.U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 50.9 | mg/Kg | 1 | 50.0 | 102 | 70 - 130 |

Sample: 413290 - Comp-2

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | Da | ate Anal | Method: yzed: reparation | 2016-02 | -05 | | Prep Metho Analyzed By Prepared By | r: AK |
|--|---------------------|------|----------|--------------------------------|------------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | R | esult | Units | ; | Dilution | RL |
| GRO | Qr,U | | 3 | < | <4.00 | mg/Kg | , , | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.47 | mg/Kg | 1 | 2.00 | 74 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB | $)$ $\frac{4}{Qsr}$ | Qsr | | 1.17 | mg/Kg | 1 | 2.00 | 58 | 70 - 130 |

Sample: 413291 - Comp-3

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | RL |

| Dilution RL 1 25.0 |
|--|
| |
| |
| |
| Prep Method: N/A Analyzed By: JL Prepared By: JL |
| |
| Dilution RL |
| 1 50.0 |
| ike Percent Recovery ount Recovery Limits |
| 0.0 97 70 - 130 |
| |

| Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | | Date An | al Methoo alyzed: Preparatio | 2016-0 | 2-05 | | Prep Methoo Analyzed By Prepared By | : AK |
|---|------|------|---------|------------------------------------|--------|----------|--------|---|----------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qr.U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| <i>a</i> | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.62 | mg/Kg | 1 | 2.00 | 81 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.39 | mg/Kg | 1 | 2.00 | 70 | 70 - 130 |

Sample: 413292 - Comp-4

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128090 | Date Analyzed: | 2016-02-09 | Analyzed By: | RL |
| Prep Batch: | 108456 | Sample Preparation: | | Prepared By: | \mathbf{RL} |

| Report Date: February 11, 201 15-0167-01 | 6 | 6 Work Order: 16020113 XTO Perla Negra | | | | | | | | Page Number: 58 of 95 | | |
|--|-------------------------|---|----------------|------------------------------------|-------------------------------|----------------------------------|-----------------------|-------------------------|---------------------------------------|--------------------------------|--|--|
| Parameter | Flag | | Cert | | RL Result | Result | | 3 | Dilution | RL | | |
| Chloride | | | 1,2.4 | | <25.0 | | mg/K | Š | 1 | 25.0 | | |
| Sample: 413292 - Comp-4 | | | | | | | | | | | | |
| Laboratory: Midland Analysis: TPH DRO QC Batch: 127998 Prep Batch: 108373 | | | Date A | cal Metho nalyzed: Preparati | 20 | 8015 D 016-02-05 016-02-05 | | | Prep Met Analyzed Prepared | By: JĹ | | |
| D | ×21 | | ~ | | RL | | . | | | | | |
| Parameter DRO | Flag B.Qr,U | | Cert 3 | | $\frac{\text{Result}}{<50.0}$ | | Unit mg/K | | Dilution 1 | RL 50.0 | | |
| Surrogate Flag n-Tricosane | Cert | | Result 47.7 | Units mg/Kg | | Dilution | An | oike iount 0.0 | Percent Recovery 95 | Recovery Limits 70 - 130 | | |
| Sample: 413292 - Comp-4 | | | | | | | | | | | | |
| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | | Date An | al Method alyzed: Preparatic | 20 | 8015 D 16-02-05 16-02-04 | | | Prep Meth Analyzed I Prepared E | By: AK | | |
| Parameter | Flor | | Cert | | RL | | Unit | | Dilution | τσ | | |
| GRO | Flag _{Qr,U} | | | | $\frac{\text{Result}}{<4.00}$ | | $\frac{0000}{mg/K_1}$ | | 1 | RL 4.00 | | |
| Surrogate Trifluorotoluene (TFT) | | Flag | Cert | Result 1.67 | Unit mg/I | | ution | Spike Amount 2.00 | Percent Recovery 84 | Recovery Limits 70 - 130 | | |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.40 | ng/I | 40 | 1 | 2.00 | 70 | 70 - 130 | | |

Sample: 413293 - Comp-5

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 20 15-0167-01 | 016 | | Page Number: 59 of 95 | | | | | |
|---|--------|----------|------------------------|--------------------|------------|-----------------|--------------------------|---------------------|
| D | YON | <u>_</u> | | RL | | | | |
| Parameter Chloride | Flag | Cert | | lesult | Uni | | Dilution | RL |
| Chloride | | 1,2,4 | < | <25.0 | mg/k | .g | | 25.0 |
| Sample: 413293 - Comp-5 | | | | | | | | |
| Laboratory: Midland | | 4 1 | 124.1 | 0.004 | * 5 | | | |
| Analysis: TPH DRO | | | cal Method | | | | Prep Met | , |
| QC Batch: 127998 Prep Batch: 108373 | | | nalyzed: Duoponotio | 2016- | | | Analyzed | |
| riep batch: 106375 | | Sample | Preparatio | m: 2016- | 02-05 | | Prepared | By: JL |
| Parameter | Flag | Cert | T | RL lesult | Uni | ± | Dilution | \mathbf{RL} |
| DRO | | | | $\frac{1}{< 50.0}$ | 0m mg/F | | 1 | 50.0 |
| | B.Qr.U | 3 | • | < 00.0 | mg/r | <u>vg</u> | 1 | |
| | | | | | S | Spike | Percent | Recovery |
| Surrogate Flag | Cert | Result | Units | Dilut | tion Ai | mount | Recovery | Limits |
| n-Tricosane | | 44.9 | mg/Kg | 1 | | 50.0 | 90 | 70 - 130 |
| Sample: 413293 - Comp-5 Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 | | Date An | | 2016-0 | 2-05 | | Prep Metho Analyzed E | By: AK |
| Prep Batch: 108337 | | Sample I | Preparation | n: 2016-0 | 2-04 | | Prepared B | y: AK |
| Parameter | Flag | Cert | מ | RL lesult | Uni | 10 | Dilution | RL |
| GRO | Gr,U | | | <4.00 | mg/k | | 1 | 4.00 |
| **** | | | | _ 1.00 | | <u>.</u> 9 | | 1.00 |
| Surrogate | Fla | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Irifluorotoluene (TFT) | | Y.F | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| 1 Promothorohovana (1 PFI | 2) | | 1 55 | | | 0.00 | 70 | 70 100 |

Sample: 413294 - Comp-6

4-Bromofluorobenzene (4-BFB)

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | RL |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

1.55

mg/Kg

1

2.00

78

70 - 130

| Report Date: February 11, 20, 15-0167-01 | | Work Orde XTO Pei | Page Number: 60 of 95 | | | | | |
|---|----------------|----------------------|--|---------------|---------------|-------------------------|--|--------------------------------|
| Parameter | Flag | Cert | Re | RL | ${ m Unit}$ | s | Dilution | RL |
| Chloride | U | 1.2.4 | < | 25.0 | mg/K_{i} | g | 1 | 25.0 |
| Sample: 413294 - Comp-6 | | | | | | | | |
| Laboratory: Midland Analysis: TPH DRO QC Batch: 127998 Prep Batch: 108373 | | Date A | cal Method: nalyzed: Preparation | 2016-02 | -05 | | Prep Met Analyzed Prepared | By: JL |
| | | ~ | _ | RL | | | | |
| Parameter DRO | Flag B,Qr.U | Cert 3 | | esult 50.0 | Unit mg/K | | Dilution 1 | RL 50.0 |
| Surrogate Flag n-Tricosane | Cert | Result 44.9 | Units mg/Kg | Dilutio 1 | n An | pike nount 0.0 | Percent Recovery 90 | Recovery Limits 70 - 130 |
| Sample: 413294 - Comp-6 Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | Date An | al Method: alyzed: Preparation: | | 05 | | Prep Metho Analyzed E Prepared B | y: AK |
| Parameter | Flag | Cert | Re | RL sult | Unit | s | Dilution | RL |
| GRO | Qr,U | 3 | | 4.00 | mg/K | g | 1 | 4.00 |
| Surrogate Trifluorotoluene (TFT) | Fla | g Cert | | ng/Kg | Dilution 1 | Spike Amount 2.00 | Percent Recovery 86 | Recovery Limits 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | ng/Kg | 1 | 2.00 | 78 | 70 - 13 |

Sample: 413295 - Comp-7

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | RL |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order XTO Perl | Page Number: 61 of 95 | | | |
|--|------------|--------|----------|--|-----------------------|--------|----------|-----------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | | Units | Dilution | RL |
| Chloride | | U | 1.2,4 | <2 | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 41329 | 6 - Comp-7 | | | | | | | |
| Laboratory: Mi | lland | | | | | | | |
| v | H DRO | | Analytic | al Method: | S 8015 D | | Prep Me | thod: N/A |
| 0 | 998 | | Date Ar | | 2016-02-0 | 5 | Analyzed | |
| Prep Batch: 108 | 373 | | | Preparation | 2016-02-0 | 5 | Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B,Qr,U | 3 | </td <td>50.0</td> <td>mg/Kg</td> <td>1</td> <td>50.0</td> | 50.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 48.9 | mg/Kg | 1 | 50.0 | 98 | 70 - 130 |

Sample: 413295 - Comp-7

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | | Date An | al Method alyzed: Preparatio | 2016-0 | 2-05 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|---------|------------------------------------|------------------|-----------------|--------|--|---------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | Qr,U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| <i>a</i> | | ~ 1 | ~ | | ** (| 10 11 11 | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | I | | | 1.44 | $\mathrm{mg/Kg}$ | 1 | 2.00 | 72 | 70 - 130 |

Sample: 413296 - Comp-8

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | RL |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 62 of 95 | | | |
|--|-------|--------|----------|-------------------------|-----------------------|--------|----------|----------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | | Units | Dilution | RL |
| Chloride | | | 1,2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413296 - C | omp-8 | | | | | | | |
| Laboratory: Midland | | | | | | | | |
| Analysis: | 10 | | Analytic | al Method: | S 8015 D | | Prep Me | • |
| QC Batch: 127998 | | | Date An | alyzed: | 2016-02-03 | õ | Analyzeo | • |
| Prep Batch: 108373 | | | Sample | Preparation: | 2016-02-0 | 5 | Prepared | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B,Qr,U | 3 | <5 | 60.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 41.1 | mg/Kg | 1 | 50.0 | 82 | 70 - 130 |

Sample: 413296 - Comp-8

| Laboratory: Midland Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-05 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|---------|------------------------------------|---------------|----------|-----------------|--|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qr,U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |
| 4-Bromofluorobenzene (4-Bl | FB) | | | 1.48 | mg/Kg | 1 | 2.00 | 74 | 70 - 130 |

Sample: 413297 - Comp-9

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

| Report Date: February 11, 2016 15-0167-01 | | | | Work Order: XTO Perl | Page Number: 63 of 95 | | | |
|--|------------------|--------|----------|-------------------------|-----------------------|--------|----------------------|----------|
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| Chloride | | | 3.2,4 | <2 | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 413 | 297 - Comp-9 | | | | | | | |
| v | Midland | | | | | | | |
| L7 | TPH DRO | | | al Method: | S 8015 D | - | Prep Me | • |
| • | 127998 108373 | | Date An | N | 2016-02-0 | | Analyzec Preparec | v. |
| r tep baten. | 100070 | | sample . | Preparation: | 2010-02-08 | | rieparec | LDY. JD |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Re | sult | Units | Dilution | RL |
| DRO | | B,Qr,U | 3 | <5 | 50.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 45.2 | mg/Kg | 1 | 50.0 | 90 | 70 - 130 |

Sample: 413297 - Comp-9

| Laboratory: Analysis: QC Batch: | Midland TPH GRO 127990 | | | Analytic Date An | al Method alyzed: | l: S 8015 2016-0 | | | Prep Metho Analyzed B | |
|---------------------------------------|------------------------------|-------|-------|---------------------|----------------------|---------------------|----------|-----------------|--------------------------|--------------------|
| Prep Batch: | 108337 | | | Sample l | Preparatio | n: 2016-0 |)2-04 | | Prepared By | y: AK |
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert |] | Result | Unit | s | Dilution | RL |
| GRO | | Qr, U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotolue | ene (TFT) | | 1 108 | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 |
| | obenzene (4-BFB) | | | | 1.47 | mg/Kg | 1 | 2.00 | 74 | 70 - 130 |

Sample: 413298 - Comp-10

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | \mathbf{RL} |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | \mathbb{RL} |

| Report Date 15-0167-01 | port Date: February 11, 2016 -0167-01 | | | Work Order XTO Per | Page Number: 64 of 95 | | | |
|--|--|--------|--------|--|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | | RL sult | Units | Dilution | RL |
| Chloride | | U | 1.2,4 | | 25.0 | mg/Kg | 1 | 25.0 |
| Sample: 41 | 3298 - Comp-10 |) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 127998 108373 | | Date A | cal Method: nalyzed: Preparation | S 8015 D 2016-02-03 2016-02-03 | | Prep Me Analyzec Preparec | l By: JL |
| Parameter | | Flag | Cert | Re | RL sult | Units | Dilution | RL |
| DRO | | B,Qr.U | 3 | | 50.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 48.2 | mg/Kg | 1 | 50.0 | 96 | 70 - 130 |

| Analysis: TPH GRO QC Batch: 127990 Prep Batch: 108337 | | Da | ate Anal | Method: yzed: reparation: | S 8015 2016-02 2016-02 | -05 | | Prep Methoo Analyzed By Prepared By | : AK |
|---|---------------|---------------|----------|---------------------------------|------------------------------|----------|-----------------|---|----------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | Re | esult | Units | | Dilution | RL |
| GRO | Qr, U | | 3 | < | 4.00 | mg/Kg | | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | $5_{\rm Qsr}$ | Qsr | | $1.68 \\ 1.30$ | mg/Kg mg/Kg | 1 1 | 2.00 2.00 | 84 65 | 70 - 130 70 - 130 |

Sample: 413299 - Comp-11

| Laboratory: | Lubbock | | | | |
|-------------|---------------|---------------------|------------|--------------|---------------------|
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 128108 | Date Analyzed: | 2016-02-10 | Analyzed By: | RL |
| Prep Batch: | 108471 | Sample Preparation: | | Prepared By: | RL |

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|------------------------------|---|--------|---------|---|--------------------------------------|-----------------|---------------------------------|--------------------|
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | RL |
| Chloride | | 0 | 1,2.4 | | 5.0 | mg/Kg | 1 | 25.0 |
| Sample: 41329 | 99 - Comp-11 | L | | | | | | |
| Analysis: T QC Batch: 12 | lidland PH DRO 27998 08373 | | Date A1 | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-08 2016-02-08 | | Prep Me Analyzec Preparec | l By: JL |
| | | | | | RL | | | |
| Parameter | | Flag | Cert | Res | sult | Units | Dilution | RL |
| DRO | | B,Qr,U | 3 | <5 | i0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | 44.2 | mg/Kg | 1 | 50.0 | 88 | 70 - 130 |

Sample: 413299 - Comp-11

| Laboratory:MidlandAnalysis:TPH GROQC Batch:127990Prep Batch:108337 | | | Date An | al Methoo alyzed: Preparatio | 2016-0 | 02-05 | | Prep Metho Analyzed By Prepared By | 7: AK |
|--|---------|------|---------|------------------------------------|---------------|----------|--------|--|---------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | Qr,Qs,U | | 3 | | <4.00 | mg/ł | (g | 1 | 4.00 |
| 0 | | 171 | | D. 1 | ¥ 7 . • / | D'last 1 | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.79 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BF | B) | | | 1.64 | m mg/Kg | 1 | 2.00 | 82 | 70 ~ 130 |

Method Blanks

| Method Blank (1) QC Batch | h: 127934 | | | | | | | |
|------------------------------|-----------|--------|-------------|-------------------------|------------------------------------|-----------------|------------------------------|---|
| QC Batch: 127934 | | Date A | .nalyzed: | 2016-02-0 |)2 | | Analyzed | By: AK |
| Prep Batch: 108265 | | | eparation: | 2016-02-0 |)1 | | Prepared | |
| | | | | | MDL | | | |
| Parameter | Flag | | Cert | | Result | | Units | RL |
| Benzene | | | 3 | | < 0.0100 | r | ng/Kg | 0.02 |
| Toluene | | | 3 | | < 0.0156 | | ng/Kg | 0.02 |
| Ethylbenzene | | | 3 | | < 0.0151 | | ng/Kg | 0.02 |
| Xylene | | | 3 | | < 0.00430 | 1 | ng/Kg | 0.02 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | 1.84 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 70 - 130 |
| Method Blank (1) QC Batc | h: 127937 | | | | | | | |
| QC Batch: 127937 | | Date A | .nalyzed: | 2016-02-0 |)3 | | Analyzed | By: AK |
| Prep Batch: 108314 | | QC Pr | eparation: | 2016-02-0 |)2 | | Prepared | By: AK |
| | | | | | | | | <i>MJ</i> · · · · · · · · · · · · · · · · · · · |
| | | | | | MDL | | | L |
| Parameter | Flag | | Cert | | MDL Result | | Units | RL |
| Parameter GRO | Flag | | Cert 3 | | MDL | | Units mg/Kg | L |
| GRO | | | 3 | | MDL Result <1.76 | Spike | mg/Kg Percent | RL 4 Recovery |
| GRO Surrogate | Flag | Cert | 3 Result | Units | MDL Result <1.76 Dilution | Spike Amount | mg/Kg Percent Recovery | RL 4 Recovery Limits |
| GRO | | Cert | 3 | Units mg/Kg mg/Kg | MDL Result <1.76 | Spike | mg/Kg Percent | RL 4 Recovery |

| Method Blan | k (1) | QC Batch: | 127948 |
|-------------|-------|-----------|--------|
|-------------|-------|-----------|--------|

| QC Batch: | 127948 | Date Analyzed: | 2016-02-04 | Analyzed By: | AK |
|-------------|--------|-----------------|------------|--------------|----|
| Prep Batch: | 108328 | QC Preparation: | 2016-02-03 | Prepared By: | AK |

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|--|-----|-----------------------------------|----------------------------|------------------------|-------------------------|---------------------------|---------------------|---------------------|
| Parameter Fl. | ag | Cert | | MDL Result <1.76 | | Units mg/Kg | | RL 4 |
| Surrogate Fl Trifluorotoluene (TFT) | lag | Cert Result 1.65 | mg/Kg | Dilution 1 | Spike Amount 2.00 | Percent Recovery 82 | Reco Lin 70 - | very nits 130 |
| 4-Bromofluorobenzene (4-BFB) | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 70 - | 130 |
| Method Blank (1) QC Batch: 127 | 956 | | | | | | | |
| QC Batch: 127956 Prep Batch: 108347 | | Date Analyzed: QC Preparation: | 2016-02-03 2016-02-02 | | | Analyzed I Prepared I | | RL RL |
| Parameter Fla | ag | Cert | | MDL Result <8.34 | | Units mg/Kg | | RL 25 |
| | | | | | | | | |
| Method Blank (1)QC Batch: 1279QC Batch:127958Prep Batch:108348 | 958 | Date Analyzed: QC Preparation: | 2016-02-03 2016-02-02 | | | Analyzed I Prepared I | | RL RL |
| Parameter Fla | ag | Cert | | MDL Result | | Units | | RL |
| Chloride | | 1,2,4 | | <8.34 | | mg/Kg | | 25 |
| Method Blank (1) QC Batch: 127 | 960 | | | | | | | |
| QC Batch: 127960 Prep Batch: 108349 | | Date Analyzed: QC Preparation: | 2016-02-03 2016-02-02 | | | Analyzed 1 Prepared I | | RL RL |
| Parameter Fla | ag | Cert | | MDL Result <8.34 | | Units mg/Kg | | RL 25 |
| | | 1,2,4 | | \0.34 | | mg/ rcg | | 20 |

| Report Date: Februar 15-0167-01 | ry 11, 201 | .6 | | | er: 1602011 erla Negra | 3 | | Page Numb | er: 68 of 9 |
|---|------------|---------------|--------|--------------------------|---------------------------|------------------------|-----------------|----------------------|-------------------|
| Method Blank (1) | QC I | Batch: 12796 | 5 | | | | | | |
| QC Batch: 127965 Prep Batch: 108331 | | | | Analyzed: reparation: | 2016-02-0 2016-02-0 | | | Analyze Prepare | |
| Parameter | | Flag | | Cert 3 | | MDL Result <7.41 | | Units mg/Kg | R1 50 |
| Surrogate | Flag | Cert | Result | Units | Diluti | | Spike mount | Percent Recovery | Recover Limits |
| n-Tricosane | | | 46.5 | mg/Kg | 1 | | 50.0 | 93 | 70 - 130 |
| Method Blank (1) | QC I | Batch: 127968 | 8 | | | | | | |
| QC Batch: 127968 Prep Batch: 108338 | | | | Analyzed: reparation: | 2016-02-0- 2016-02-0- | | | Analyze Prepare | • |
| Parameter | | Flag | | Cert | | MDL Result | | Units | RI |
| DRO | | | | 3 | | <7.41 | | mg/Kg | . 50 |
| Surrogate | Flag | Cert | Result | Units | Diluti | | Spike mount | Percent Recovery | Recover Limits |
| n-Tricosane | | | 47.8 | mg/Kg | 1 | | 50.0 | 96 | 70 - 130 |
| Method Blank (1) QC Batch: 127990 Prep Batch: 108337 | QC E | Batch: 12799 | Date A | Analyzed: eparation: | 2016-02-05 2016-02-04 | | | Analyzee Preparec | |
| Parameter | | Flag | | Cert | | MDL Result | | Units | R |
| GRO | ,·, | | | 3 | | <1.76 | | mg/Kg | 4 |
| Surrogate Irifluorotoluene (TFT | 1 | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recover Limits |
| | | | | 1.72 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |

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|--|--------------|----------------------|---------|------------------------|--------------------------|------------------------|--------------------------|----------------------|-----------------------|
| Method Blank (1) | QC Ba | atch: 127998 | 3 | | | | | | |
| QC Batch: 127998 Prep Batch: 108373 | | | | nalyzed: eparation: | 2016-02-05 2016-02-05 | | Analyz Prepar | | IL IL |
| Parameter | | Flag | | Cert | | MDL Result | Units | | RL |
| DRO | В | В | | 3 | | 7.78 | mg/Kg | | 50 |
| Surrogate | Flag | Cert | Result | Units | Dilutio | Spike n Amount | Percent Recovery | Recove Limit | ts |
| n-Tricosane | | | 48.4 | mg/Kg | 1 | 50.0 | 97 | 70 - 1 | 30 |
| QC Batch: 128089 Prep Batch: 108454 | | | | nalyzed: paration: | 2016-02-09 2016-02-02 | | Analyz Prepare | | |
| | | | | a . | | MDL | • | v | |
| Parameter Chloride | | Flag | | Cert | | MDL Result <8.34 | Units mg/Kg |) | |
| | · | Flag .tch: 128090 | Date Ai | 1,2,4 | 2016-02-09 2016-02-02 | Result | Units | ed By: F | RL RL |
| Chloride Method Blank (1) QC Batch: 128090 | · | | Date Ai | 1,2,4 | | Result | Units mg/Kg Analyz | ed By: F ed By: F | {L <u>RL</u> 25 |

| Method Bla | ank (1) | QC Batch: 128108 | | | | |
|-------------|---------|------------------|-----------------|------------|--------------|----|
| QC Batch: | 128108 | | Date Analyzed: | 2016-02-10 | Analyzed By: | RL |
| Prep Batch: | 108471 | | QC Preparation: | 2016-02-03 | Prepared By: | RL |

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|--|------|------------------------------|----------------------|-------|----|--|
| Parameter | Flag | Cert | MDL Result | Units | RL | |
| Chloride | | 1,2,4 | <8.34 | mg/Kg | 25 | |

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

| QC Batch: 1279 Prep Batch: 1082 | | Date Analyzed: QC Preparation: | | Analyzed By: Prepared By: | |
|------------------------------------|----|-----------------------------------|---------------------------|------------------------------|--------------|
| Param | 17 | LCS C Result U | Spike nits Dil. Amount | | Rec. imit |

| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
|--------------|--------------|---|--------|---------|------|--------|-----------|------|----------|
| Benzene | | 3 | 1.89 | mg/Kg | 1 | 2.00 | < 0.0100 | 94 | 70 - 130 |
| Toluene | | 3 | 1.76 | mg/Kg | 1 | 2.00 | < 0.0156 | 88 | 70 - 130 |
| Ethylbenzene | | 3 | 1.74 | m mg/Kg | 1 | 2.00 | < 0.0151 | 87 | 70 - 130 |
| Xylene | | 3 | 5.15 | mg/Kg | 1 | 6.00 | < 0.00430 | 86 | 70 - 130 |

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

| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|--------------|---|--------|-------|------|-------------------------|-------------------------|------|----------|----------------------|------------------------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | | 3 | 1.91 | mg/Kg | 1 | 2.00 | < 0.0100 | 96 | 70 - 130 | 1 | 20 |
| Toluene | | 3 | 1.78 | mg/Kg | 1 | 2.00 | < 0.0156 | 89 | 70 - 130 | 1 | 20 |
| Ethylbenzene | | 3 | 1.73 | mg/Kg | 1 | 2.00 | < 0.0151 | 86 | 70 - 130 | 1 | 20 |
| Xylene | | 3 | 5.24 | mg/Kg | 1 | 6.00 | < 0.00430 | 87 | 70 - 130 | 2 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|--------|------|--------|------|------|----------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Triffuorotoluene (TFT) | 1.57 | 1.67 | nıg/Kg | 1 | 2.00 | 78 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.70 | 1.79 | mg/Kg | 1 | 2.00 | 85 | 90 | 70 - 130 |

Laboratory Control Spike (LCS-1)

| QC Batch: 1 Prep Batch: 1 | | | ate Analyz C Prepara | ed: 2016- tion: 2016- | | | | • | By: AK By: AK |
|------------------------------|--------------|--------------|-------------------------|--------------------------|------|--------|--------|------|------------------|
| | | | LCS | | | Spike | Matrix | | Rec. |
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| GRO | | 3 | 19.8 | mg/Kg | 1 | 20.0 | <1.76 | 99 | 70 - 130 |

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

 $continued \dots$

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|--|--|------------|--|--|--|---|---------------------------------------|--|--|--|--|-------|--|
| control spikes continued | | | | | | | | | | | | | |
| T | | ~ | LCSD | ر بونو | | Spike | | latrix | | Re | | | RPD |
| Param | F | C | Result | Units | Dil. | . Amour | nt R | tesult I | Rec. | Lin | nit . | RPD | Limit |
| | | | LCSD | | | Spike | М | latrix | | Re | ec. | | RPD |
| Param | F | С | Result | Units | Dil. | | | | Rec. | Lin | | RPD | Limit |
| GRO | | 3 | 20.5 | mg/Kg | 1 | 20.0 | < | <1.76 | 102 | 70 - | 130 | 4 | 20 |
| Percent recovery is based on the s | spike | resu | lt. RPD i | s based o | n the | spike and | spike | duplicat | e res | ult. | | | |
| | | | LC | 5 LCS | רדי | | | Coollec | | LCS | LCS | T) | Dee |
| Surrogate | | | Resu | | | Units | Dil. | Spike Amoui | | Rec. | Rec | | Rec. Limit |
| Trifluorotoluene (TFT) | | | 1.75 | | | mg/Kg | 1 | 2.00 | | 86 | 86 | • | $\frac{11111}{70 - 130}$ |
| 4-Bromofluorobenzene (4-BFB) | | | 1.82 | | | mg/Kg | 1 | 2.00 | | 91 | 90 | | 70 - 130 70 - 130 |
| Laboratory Control Spike (Le QC Batch: 127948 Prep Batch: 108328 | CS-1 |) | | Analyzed reparatio | | 016-02-04 016-02-03 | | | | | Analyz Prepar | | |
| QC Batch: 127948 Prep Batch: 108328 | | | QC P | reparatio LCS | n: 20 | 016-02-03 | | Spike | | atrix | Prepar | ed B | y: AK Rec. |
| QC Batch: 127948 Prep Batch: 108328 Param | |) F | QC P I C R | reparatio LCS esult | n: 20 Unit | 016-02-03 s Dil. | | mount | R | atrix esult | Prepar Rec | ed By | y: AK Rec. Limit |
| QC Batch: 127948 Prep Batch: 108328 Param GRO | | F | QC P | reparatio LCS esult 23.9 | n: 24 Unit: mg/K | $\begin{array}{c} 016-02-03\\ \text{s} \qquad \text{Dil.}\\ \frac{1}{2} \end{array}$ | A | imount 20.0 | R | atrix esult | Prepar | ed By | y: AK Rec. Limit |
| QC Batch: 127948 Prep Batch: 108328 Param GRO | | F | QC P | reparatio LCS esult 23.9 | n: 24 Unit: mg/K | $\begin{array}{c} 016-02-03\\ \text{s} \qquad \text{Dil.}\\ \frac{1}{2} \end{array}$ | A | imount 20.0 | R | atrix esult | Prepar Rec | ed By | y: AK Rec. Limit |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s | spike | F | QC P I C R 3 S It. RPD i LCSD | reparatio LCS esult 23.9 | n: 24 Unit: mg/K | $\begin{array}{c} 016-02-03\\ \text{s} \qquad \text{Dil.}\\ \frac{1}{2} \end{array}$ | A spike | imount 20.0 | R | atrix esult | Prepar Rec 120 | ed By | y: AK Rec. Limit 70 - 130 |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s | | F | QC P C R 3 2 lt. RPD i LCSD Result | reparatio LCS esult 23.9 s based of Units | n: 24 Unit: mg/K | 016-02-03 s Dil. (g 1 spike and Spike Amour | A spike M nt R | amount 20.0 duplicat latrix tesult H | R < e res Rec. | atrix esult (1.76 alt. Re Lir | Prepar Rec 120 ec. nit | ed By | y: AK Rec. Limit 70 - 130 RPD |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s Param GRO | spike F | F resul | $\begin{array}{c c} QC P \\ \hline \\ C \\ \hline \\ R \\ \hline \\ R \\ \hline \\ R \\ C \\ \hline \\ R \\ C \\ C \\ R \\ C \\ C \\ R \\ C \\ C \\ C$ | reparatio LCS esult 23.9 s based o: Units mg/Kg | n: 20 <u>Unit</u> mg/K n the <u>Dil.</u> | 016-02-03 <u>s</u> Dil. <u>Spike and</u> Spike and <u>Spike</u> <u>Amour</u> 20.0 | A spike M nt R < | amount 20.0 duplicat latrix cesult H <1.76 | R e resRec.105 | atrix esult 1.76 sult. Re Lir 70 - | Prepar Rec 120 ec. nit | ed B | y: AK Rec. |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s Param GRO | spike F | F resul | $\begin{array}{c c} QC P \\ \hline \\ C \\ \hline \\ R \\ \hline \\ R \\ \hline \\ R \\ C \\ \hline \\ R \\ C \\ C \\ R \\ C \\ C \\ R \\ C \\ C \\ C$ | reparatio LCS esult 23.9 s based o: Units mg/Kg | n: 20 <u>Unit</u> mg/K n the <u>Dil.</u> | 016-02-03 <u>s</u> Dil. <u>Spike and</u> Spike and <u>Spike</u> <u>Amour</u> 20.0 | A spike M nt R < | amount 20.0 duplicat latrix cesult H <1.76 | R e resRec.105 | atrix esult 1.76 sult. Re Lir 70 - | Prepar Rec 120 ec. nit | ed By | y: AK Rec. Limit 70 - 130 RPD Limit |
| QC Batch: 127948 | spike F | F resul | QC P C R 3 2 It. RPD i LCSD Result 21.0 It. RPD i | reparatio LCS esult 23.9 s based of Units mg/Kg s based of | n: 20 <u>Unit</u> mg/K n the <u>Dil.</u> 1 n the | 016-02-03 <u>s</u> Dil. <u>Spike and</u> Spike and <u>Spike</u> <u>Amour</u> 20.0 | A spike M nt R < | amount 20.0 duplicato latrix cesult H <1.76 duplicato | R e res Rec. 105 e res | atrix esult 1.76 alt. Re Lir 70 - | Prepar Rec 120 ec. nit 130 | RPD | y: AK Rec. Limit 70 - 130 RPD Limit 20 |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s Param GRO Percent recovery is based on the s | spike F | F resul | $\begin{array}{c c} QC P \\ \hline \\ C \\ \hline \\ R \\ \hline \\ R \\ \hline \\ R \\ C \\ \hline \\ R \\ C \\ C \\ R \\ C \\ C \\ R \\ C \\ C \\ C$ | reparatio LCS esult 23.9 s based of <u>Units</u> mg/Kg s based of S LCS | n: 20 <u>Unit</u> mg/K n the Dil. 1 n the | 016-02-03 <u>s</u> Dil. <u>Spike and</u> Spike and <u>Spike</u> <u>Amour</u> 20.0 | A spike M nt R < spike | amount 20.0 duplicat latrix cesult H <1.76 | R e res Rec. 105 e res | atrix esult 1.76 sult. Re Lir 70 - | Prepar Rec 120 ec. nit | ed By | y: AK Rec. Limit 70 - 130 RPD Limit 20 Rec. |
| QC Batch: 127948 Prep Batch: 108328 Param GRO Percent recovery is based on the s Param GRO | spike F | F resul | QC P C R 3 2 C R 1 1 1 1 1 1 1 1 | reparatio LCS esult 23.9 s based of <u>Units</u> mg/Kg s based of <u>B</u> LCS lt Resu | n: 20 <u>Unit</u> mg/K n the Dil. 1 n the | 016-02-03 s Dil. (g 1 spike and Spike Amour 20.0 spike and | A spike M nt R < spike | amount 20.0 duplicate latrix cesult H <1.76 duplicate Spike | R e res Rec. 105 e res e nt | atrix esult (1.76 alt. Re Lir 70 - cult. LCS | Prepar Rec 120 ec. nit 130 LCS | ed By | y: AK Rec. Limit 70 - 130 RPD Limit 20 |

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| control spikes continued | | | | | | | | | | | |
| Param | | \mathbf{F} | С | LCS Result | Units | Dil. | Spike Amount | | trix sult R | .ec. | Rec. Limit |
| | | | | LCS | | | Spike | Ma | trix | | Rec. |
| Param | | F | С | Result | Units | Dil. | Amount | | | lec. | Limit |
| Chloride | | | 1,2,4 | 256 | <8 | 3.34 1 | 02 | 90 - 110 | | | |
| Percent recovery is based on the | spike | e resul | t. RPD | is based o | n the sp | ike and spi | ike duplica | te resu | lt. | | |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | - | 1.2.4 | 255 | mg/Kg | | 250 | <8.34 | 102 | 90 - 110 | 0 | 20 |
| Laboratory Control Spike (L QC Batch: 127958 Prep Batch: 108348 | CS- | 1) | | Analyzed ² reparatio | | 3-02-03 3-02-02 | 0." | 2.6 | Prep | lyzed B bared B | y: RL |
| Param | | F | С | LCS Result | Units | Dil. | Spike Amount | | ıtrix sult R | lec. | Rec. Limit |
| Chloride | | - - | 1,2,4 | 256 | mg/Kg | 1 | 250 | | | | 90 - 110 |
| Percent recovery is based on the | spike | e resul | t. RPD i | is based or | | ike and spi | | | | | |
| U I | . 1 | | | | | - | - | | | | מחת |
| Param | \mathbf{F} | С | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| Chloride | Τ. | 1,2,4 | 259 | mg/Kg | | 250 | <8.34 | 104 | 90 - 110 | $\frac{\Gamma D}{1}$ | 20 |
| Percent recovery is based on the | enile | | | | | | | ., | | <u>ب</u> | |
| Laboratory Control Spike (L QC Batch: 127960 Prep Batch: 108349 | | | Date | Analyzed Preparatio | : 2016 | 5-02-03 3-02-02 | - | | Ana | lyzed E pared B | • |
| Powers | | 12 | 0 | LCS | ¥7*/ | ניבו | Spike | Ma | itrix | | Rec. |

Limit

90 - 110

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

Result

263

Units

mg/Kg

Dil.

1

Amount

250

Result

<8.34

Rec.

105

 \mathbf{C}

1,2,4

 \mathbf{F}

Param

Chloride

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|-------------------------------|--------------------|-------|------------------|------------|-----------------------|-----------------|------------------|------|---------------|---------|--------------|
| Param | F | С | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| Chloride | | 1,2,4 | 260 | mg/Kg | 1 | 250 | <8.34 | 104 | 90 - 110 | 1 | 20 |
| Laboratory Co | ntrol Spike (LCS-1 |) | | | | | | | | | |
| QC Batch: 12 | 7965 | | Date | Analyzed: | 201 | 6-02-04 | | | Ana | lyzed B | v: JL |
| • | 3331 | | | reparation | | 6-02-03 | | | | pared B | |
| | | | | ~~ | | | <i>(</i> 1, 1) | | | | T |

| | | | LCS | | | Spike | Matrix | | Rec. |
|-------|---|---|--------|-------|------|--------|--------|------|----------|
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| DRO | | 3 | 263 | mg/Kg | 1 | 250 | <7.41 | 105 | 70 - 130 |

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

| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
|-------|--------------|---|--------|-------|------|--------|----------|------|----------|----------------------|-------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | | 3 | 250 | mg/Kg | 1 | 250 | <7.41 | 100 | 70 - 130 | 5 | 20 |
| | | | | | | | ******** | | | | |

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

| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|-------------|--|---|-------|------|-----------------|-------------|--------------|---------------|
| n-Tricosane | 52.1 | 51.0 | mg/Kg | 1 | 50.0 | 104 | 102 | 70 - 130 |

Laboratory Control Spike (LCS-1)

| QC Batch: Prep Batch: | | |)ate Analyz)C Prepara | zed: 2016 tion: 2016 | -02-04 -02-04 | | | · | l By: JL l By: JL |
|--------------------------|--------------|---|---------------------------|-------------------------|------------------|-------------------------|-------------------------|------|------------------------|
| | | | LCS | | | Spike | Matrix | | Rec. |
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| DRO | | 3 | 245 | mg/Kg | 1 | 250 | <7.41 | 98 | 70 - 130 |

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

| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
|-------|---|--------------|--------|-------|------|--------|--------|------|----------|-----|------------------------|
| Param | F | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | | 3 | 268 | mg/Kg | 1 | 250 | <7.41 | 107 | 70 - 130 | 9 | 20 |

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

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|---|---|------------|--|--|--|---|---|--|---|-----------------------------|---|
| Surrogate n-Tricosane | LC Resu 50. | alt | LCSI Resu 54.2 | lt. l | Jnits | Dil. | Spike Amount 50.0 | LCS Rec. | LCSD Rec. 108 |) | Rec. |
| II-THOSANC | | 1 | | 11 | ıg/Kg | 1 | 50.0 | 100 | 108 | (\ |) - 130 |
| Laboratory Control Spike (L | CS-1) |) | | | | | | | | | |
| QC Batch: 127990 Prep Batch: 108337 | , | | | Analyze Preparat | | 6-02-05 6-02-04 | | | Analyz Prepar | | AK AK |
| D | | | | LCS | ~~ . | | Spike | Matri | | | Rec. |
| Param | | F | | Result | Units | Dil. | Amount | Resu | | | Limit |
| GRO | | | | 21.4 | mg/Kg | 1 | 20.0 | <1.7 | | 70 |) - 130 |
| Percent recovery is based on the s | spike 1 | resul | t. RPD | is based | on the sp | ike and s | pike duplica | te result. | | | |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | | | RPD | Limit |
| GRO | | 3 | 23.7 | mg/Kg | | 20.0 | <1.76 | | 0 - 130 | 10 | 20 |
| Percent recovery is based on the s | spike 1 | esul | t. RPD | is based | on the sp | ike and s | pike duplica | te result. | | | |
| Surrogate | | | LC Resi | | CSD sult U | Jnits I | Spil Dil. Amo | | | | Rec. Limit |
| Trifluorotoluene (TFT) | | | 1.7 | 2 1 | .75 m | g/Kg | 1 2.0 | 0 80 | 3 88 | 70 |) - 130 |
| 4-Bromofluorobenzene (4-BFB) | <u></u> | | 1.8 | 6 1 | .91 m | g/Kg | 1 2.0 | 0 93 | 3 96 | 70 |) - 130 |
| | | | | | | | | | | | |
| QC Batch: 127998 | CS-1) | | | e Analyze Preparat | | .6-02-05 6-02-05 | | | | zed By red By | |
| QC Batch: 127998 Prep Batch: 108373 | | | QC I | Preparat LCS | ion: 201 | 6-02-05 | Spike | Matr | Prepa | red By | : JL Rec. |
| QC Batch: 127998 Prep Batch: 108373 Param | | (1 | QC I | Preparat LCS Result | ion: 201 Units | 6-02-05 Dil. | Amount | Resu | Prepa ix lt Rec | red By | : JL Rec. Limit |
| QC Batch: 127998 Prep Batch: 108373 Param DRO | I | Ĩ. | QC I | Preparat LCS Result 264 | ion: 201 Units mg/Kg | 6-02-05 Dil. | Amount 250 | Resu 7.78 | Prepa ix lt Rec 102 | red By | : JL Rec. |
| QC Batch: 127998 Prep Batch: 108373 Param DRO | I | Ĩ. | QC I | Preparat LCS Result 264 | ion: 201 Units mg/Kg | 6-02-05 Dil. | Amount 250 | Resu 7.78 | Prepa ix lt Rec 102 | red By | : JL Rec. Limit |
| QC Batch: 127998 Prep Batch: 108373 Param DRO | I | Ĩ. | QC I | Preparat LCS Result 264 | ion: 201 Units mg/Kg | 6-02-05 Dil. 1 ike and s | Amount 250 pike duplica | Resu 7.78 | Prepa ix lt Rec 102 | red By | : JL Rec. <u>Limit</u> <u>) - 130</u> |
| QC Batch: 127998 Prep Batch: 108373 Param DRO Percent recovery is based on the s | I | Ĩ. | QC $\frac{1}{3}$ t. RPD | Preparat LCS Result 264 | ion: 201 Units mg/Kg on the sp | 6-02-05 Dil. | Amount 250 | Result. | Prepa ix lt Rec Rec. | red By | : JL Rec. Limit |
| QC Batch: 127998 Prep Batch: 108373 Param DRO Percent recovery is based on the s Param | I spike r | result | QC I C F 3 t. RPD 1 LCSD | Preparat LCS Result 264 is based | ion: 201 Units mg/Kg on the sp Dil. | 6-02-05 Dil. 1 ike and s Spike | Amount 250 pike duplica Matrix | Result 7.78 ate result. Rec. | Prepa ix lt Rec Rec. | red By | : JL Rec. <u>Limit</u> <u>0 - 130</u> RPD |
| • | I spike r F | result | QC I C F ³ t. RPD LCSD Result 255 | Preparat LCS Tesult 264 is based Units mg/Kg | ion: 201 Units mg/Kg on the sp Dil. g 1 | 6-02-05 Dil. 1 ike and s Spike Amount 250 | Amount 250 pike duplica Matrix Result 7.78 | Result. 7.78 ate result. Rec. 99 7 | Prepa ix lt Rec Rec. Limit 0 - 130 | red By :. 2 70 RPD | : JL Rec. Limit 0 - 130 RPD Limit |

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|--|--|---|--|---|--|--|--|--------------------------------|--|
| control spikes continued | | | | | | | | | |
| Curromato | LCS | LCSI | | Dil | Spike | LCS | LCSI |) | Rec. Limit |
| Surrogate | Result | Resu | lt Units | Dil. | Amount | Rec. | Rec. | | Linne |
| | LCS | LCSI |) | | Spike | LCS | LCSI |) | Rec. |
| Surrogate | Result | Resu | | Dil. | Amount | Rec. | Rec. | | Limit |
| n-Tricosane | 52.6 | 50.6 | mg/Kg | 1 | 50.0 | 105 | 101 | 7 | 0 - 130 |
| Laboratory Control Spike (L | CS-1) | | | 0010 00 00 | | | | | τī |
| QC Batch: 128089 Prep Batch: 108454 | | | L' | 2016-02-09 2016-02-02 | | | • | rzed By ured By | |
| D | ~ | ~ | LCS | | Spike | Mat | | | Rec. |
| Param Chloride | F | ······································ | | nits Dil. /Kg 1 | Amount 250 | Rest <8.3 | | | Limit 0 - 110 |
| | | 1,2,4 | 01 | | | | | 10 a | <i>i</i> 0 - 110 |
| Percent recovery is based on the | spike resu | lt. RPD | is based on the | e spike and sj | pike duplica | te result | 4. | | |
| | | LCSD | | Spike | Matrix | | Rec. | | RPD |
| Param | $\mathbf{F} = \mathbf{C}$ | Result | Units D | il. Amount | Result | Rec. | Limit | RPD | Limit |
| | | | | | | | | | |
| Chloride | 1,2,4 | | | 1 250 | <8.34 | 102 | 90 - 110 | 1 | 20 |
| Chloride Percent recovery is based on the | | | | | | 102 | | | |
| Percent recovery is based on the | spike resu | | | | | 102 | | | |
| Percent recovery is based on the Laboratory Control Spike (L | spike resu | lt. RPD | is based on the | e spike and sj | | 102 | | 1 | 20 |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 | spike resu | lt. RPD Date | Analyzed: | | | 102 | , Analy | | 20 7: RL |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 | spike resu | lt. RPD Date | Analyzed: Preparation: | e spike and sp 2016-02-09 | pike duplica | 102 S |). Analy Prepa | 1 yzed By | 20 7: RL 7: RL |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 Prep Batch: 108456 | spike resu | lt. RPD Date QC I | Analyzed: Preparation: LCS | e spike and sj 2016-02-09 2016-02-02 | pike duplica Spike | 102 9 ate result Mat | ,, Analy Prepa rix | l yzed By ared By | 20 7: RL 7: RL Rec. |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 Prep Batch: 108456 | spike resu CS-1) | lt. RPD Date QC I | Analyzed: Preparation: LCS Result Ur | e spike and sj 2016-02-09 2016-02-02 | pike duplica | 102 9 ate result Mat | , Analy Prepa rix ult Ro | 1 yzed By ared By sc. | 20 7: RL 7: RL |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 Prep Batch: 108456 Param Chloride | spike resu CS-1) F | lt. RPD Date QC I C | Analyzed: Preparation: LCS Result Ur 271 mg, | e spike and sp 2016-02-09 2016-02-02 hits Dil. /Kg 1 | pike duplica Spike Amount 250 | 102 S tte result Mat Res <8. | Analy Prepa rix ult Re 34 10 | 1 yzed By ared By sc. | 20 7: RL 7: RL Rec. Limit |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 Prep Batch: 108456 Param Chloride | spike resu CS-1) F | lt. RPD Date QC I <u>C</u> 1.2.4 lt. RPD | Analyzed: Preparation: LCS Result Ur 271 mg, | e spike and sp 2016-02-09 2016-02-02 hits Dil. /Kg 1 e spike and sp | pike duplica Spike Amount 250 pike duplica | 102 S tte result Mat Res <8. | Analy Prepa rix ult Ro 34 10 | 1 yzed By ared By sc. | 20 7: RL 7: RL Rec. Limit 20 - 110 |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 Prep Batch: 108456 Param Chloride Percent recovery is based on the | spike resu CS-1) F spike resu | lt. RPD Date QC l <u>C</u> 1.2.4 lt. RPD LCSD | Analyzed: Preparation: LCS Result Ur 271 mg, is based on the | e spike and sp 2016-02-09 2016-02-02 hits Dil. /Kg 1 e spike and sp Spike | pike duplica Spike Amount 250 pike duplica Matrix | 102 S tte result Mat Res <8. tte result | Analy Prepa rix ult Ro 34 10 t. Rec. | 1 yzed By ared By ec. | 20 7: RL 7: RL Rec. Limit 90 - 110 RPD |
| Percent recovery is based on the Laboratory Control Spike (L QC Batch: 128090 | spike resu CS-1) F | lt. RPD Date QC I 1,2,4 It. RPD LCSD Result | Analyzed: Preparation: LCS Result Ur 271 mg, is based on the Units D | e spike and sp 2016-02-09 2016-02-02 hits Dil. /Kg 1 e spike and sp | pike duplica Spike Amount 250 pike duplica Matrix | 102 S ate result Mat Res <8. ate result Rec. | Analy Prepa rix ult Ro 34 10 | 1 yzed By ared By sc. | 20 7: RL 7: RL Rec. Limit |

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|--|---------|-------|----------|------------------------------------|------------------------|--------------------|-----------------------|----------|----------------|----------------------|---------------|
| Laboratory Control Spike (L | CS-1) |) | | | | | | | | | |
| QC Batch: 128108 Prep Batch: 108471 | | | | Analyzed [•] reparatio | | 3-02-10 3-02-03 | | | | alyzed B epared B | 0 |
| Param | 1 | F | С | LCS Result | Units | Dil. | Spike Amount | | atrix esult | Rec. | Rec. Limit |
| Chloride | | | 1,2,4 | 254 | mg/Kg | 1 | 250 | < | 8.34 | 102 | 90 - 110 |
| Percent recovery is based on the s | spike i | resul | t. RPD i | is based o | n the spi | ike and spi | ike duplica | ite resi | ılt. | | |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | | 1.2,4 | 254 | mg/Kg | 1 | 250 | <8.34 | 102 | 90 - 11 | 0 0 | 20 |

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

Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 413176

| QC Batch: | 127934 | Date Analyzed: | 2016-02-02 | Analyzed By: | AK |
|-------------|--------|-----------------|------------|--------------|----|
| Prep Batch: | 108265 | QC Preparation: | 2016-02-01 | Prepared By: | AK |

| | | | MS | | | Spike | Matrix | | Rec. |
|--------------|--------------|---|--------|-------|------|--------|-----------|------|----------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Benzene | | 3 | 1.51 | mg/Kg | 1 | 2.00 | < 0.0100 | 76 | 70 - 130 |
| Toluene | | 3 | 1.52 | mg/Kg | 1 | 2.00 | < 0.0156 | 76 | 70 - 130 |
| Ethylbenzene | | 3 | 1.55 | mg/Kg | 1 | 2.00 | < 0.0151 | 78 | 70 - 130 |
| Xylene | | 3 | 4.64 | mg/Kg | 1 | 6.00 | < 0.00430 | 77 | 70 - 130 |

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

| | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|--------------|--------------|-------------------------|-------|------|--------|-----------|------|------------------------|-----|-------|
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | | 3 | 1.63 | mg/Kg | 1 | 2.00 | < 0.0100 | 82 | 70 - 130 | 8 | 20 |
| Toluene | | 3 | 1.68 | mg/Kg | 1 | 2.00 | < 0.0156 | 84 | 70 - 130 | 10 | 20 |
| Ethylbenzene | | 3 | 1.78 | mg/Kg | 1 | 2.00 | < 0.0151 | 89 | 70 - 130 | 14 | 20 |
| Xylene | | 3 | 5.26 | mg/Kg | 1 | 6.00 | < 0.00430 | 88 | 70 - 130 | 12 | 20 |

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

| | MS | MSD | | | Spike | MS | MSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 1.60 | 1.83 | mg/Kg | 1 | 2 | 80 | 92 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.78 | 1.93 | mg/Kg | 1 | 2 | 89 | 96 | 70 - 130 |

Matrix Spike (MS-1) Spiked Sample: 413251

| QC Batch: Prep Batch: | 127937 108314 | | |)ate Analyz)C Prepara | zed: 2016 tion: 2016 | -02-03 -02-02 | | | • | By: AK By: AK |
|--------------------------|------------------|--------------|--------------|---------------------------|-------------------------|------------------|--------|--------|------|------------------|
| | | | | MS | | | Spike | Matrix | | R.ec. |
| Param | | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| GRO | | | 3 | 18.7 | mg/Kg | 1 | 20.0 | <1.76 | 94 | 70 - 130 |

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 | \mathbf{F} | С | MSD Result | Units | Dil. | Spike Amount | Matr Resu | | Rec. Limit | RPD | RPD Limit |
| | 1 | | | QIIIts | DII. | Amount | 1(650 | | | | |
| Davayy | T. | C | MSD Damit | TTutto | 12:1 | Spike | Matr | | Rec. | יותמ | RPD |
| Param GRO | F | C3 | Result 9.56 | Units mg/Kg | $\frac{\text{Dil.}}{1}$ | Amount 20.0 | Resu <1.7 | | Limit 70 - 13 | $\frac{RPE}{0 65}$ | Limit 20 |
| Percent recovery is based on the | snike | | | | | | | | | | |
| receivery is based on the | Spine | repui | | | | opine and o | pine du | • | | | |
| Provente | | | MS | | | Tinter | D:1 | Spike | MS Daa | MSD | Rec. |
| Surrogate Trifluorotoluene (TFT) | | | Resu 1.75 | | | Units mg/Kg | $\frac{\text{Dil.}}{1}$ | Amount2 | Rec. 88 | Rec. 67 | Limit 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 2.1 | | | mg/Kg | 1 | 2 | 106 | 86 | 70 - 130 |
| Param | | F | C F | MS Result | Unit | ts Dil. | - | | fatrix Result | Rec. | Rec. |
| GRO | Qs | Qx | | | | | | | | nec. | Limit |
| J100 | | | 3 | 8.80 | mg/I | | 20 |).0 < | <1.76 | 44 | |
| | spike | | | | | Kg 1 | | | <1.76 | | |
| | spike | | t. RPD is | | | Kg 1 spike and s | pike du | plicate re | <1.76 sult. | | 70 - 130 |
| Percent recovery is based on the : | spike F | resul | | | | Kg 1 spike and s Spike | spike du Mat | plicate res | <1.76 | 44 | 70 - 130 RPD |
| Percent recovery is based on the s Param GRO Qs | F Qs | resul C 3 | t. RPD is MSD Result 10.6 | s based or Units mg/Kg | n the Dil 1 | Kg 1 spike and s Spike . Amount 20.0 | spike du Mat t Res <1. | plicate res rix ult Rec. 76 53 | <1.76 sult. Rec. Limit 70 - 13 | 44 RPI | 70 - 130 RPD |
| Percent recovery is based on the s Param GRO Qs | F Qs | resul C 3 | t. RPD is MSD Result 10.6 | s based or Units mg/Kg | n the Dil 1 | Kg 1 spike and s Spike . Amount 20.0 | spike du Mat t Res <1. | plicate res rix ult Rec. 76 53 | <1.76 sult. Rec. Limit 70 - 13 | 44 RPI | 70 - 130 RPD D Limit |
| Percent recovery is based on the s Param GRO Qs | F Qs | resul C 3 | t. RPD is MSD Result 10.6 | s based or Units mg/Kg s based or | n the Dil 1 n the | Kg 1 spike and s Spike . Amount 20.0 | spike du Mat t Res <1. | plicate res rix ult Rec. 76 53 | <1.76 sult. Rec. Limit 70 - 13 | 44 RPI | 70 - 130 RPD D Limit |
| Percent recovery is based on the s Param GRO Qs Percent recovery is based on the s Surrogate | F Qs | resul C 3 | t. RPD is MSD Result 10.6 t. RPD is MS Resu | s based on Units mg/Kg s based on S MS ilt Res | Dil Dil 1 n the D ult | Kg 1 spike and s Spike . Amount 20.0 spike and s Units | pike du Mat t Resu <1. spike du Dil. | plicate res rix ult Rec. 76 53 plicate res Spike Amount | <1.76 sult. Limit 70 - 13 sult. MS Rec. | 44 | 70 - 130 RPD Limit 20 Rec. Limit |
| Percent recovery is based on the s Param GRO Qs Percent recovery is based on the s Surrogate Trifluorotolucne (TFT) | F Qs | resul C 3 | t. RPD is MSD Result 10.6 t. RPD is MS Resu 1.69 | s based on Units mg/Kg s based on S MS alt Resu | Dil Dil 1 n the D ult 8 | Kg 1 spike and s Spike . Amount 20.0 spike and s Units mg/Kg | ppike du Mat t Res <1. spike du Dil. 1 | plicate res rix ult Rec. 76 53 plicate res Spike Amount 2 | <1.76 sult. Limit 70 - 13 sult. MS Rec. 84 | 44 RPI 50 19 MSD Rec. 84 | 70 - 130 RPD Limit 20 Rec. Limit 70 - 130 |
| Percent recovery is based on the s Param GRO Qs Percent recovery is based on the s Surrogate Trifluorotolucne (TFT) | F Qs | resul C 3 | t. RPD is MSD Result 10.6 t. RPD is MS Resu | s based on Units mg/Kg s based on S MS alt Resu | Dil Dil 1 n the D ult 8 | Kg 1 spike and s Spike . Amount 20.0 spike and s Units | pike du Mat t Resu <1. spike du Dil. | plicate res rix ult Rec. 76 53 plicate res Spike Amount | <1.76 sult. Limit 70 - 13 sult. MS Rec. | 44 | 70 - 130 RPD Limit 20 Rec. Limit |
| Percent recovery is based on the s Param GRO Qs Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | F spike | C 3 resul | t. RPD is MSD Result 10.6 t. RPD is MS Resu 1.69 | s based on Units mg/Kg s based on S MS alt Resu | Dil Dil 1 n the D ult 8 | Kg 1 spike and s Spike . Amount 20.0 spike and s Units mg/Kg | ppike du Mat t Res <1. spike du Dil. 1 | plicate res rix ult Rec. 76 53 plicate res Spike Amount 2 | <1.76 sult. Limit 70 - 13 sult. MS Rec. 84 | 44 RPI 50 19 MSD Rec. 84 | 70 - 130 RPD Limit 20 Rec. Limit 70 - 130 |
| Percent recovery is based on the s Param GRO Qs Percent recovery is based on the s Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | F spike | C 3 resul | t. RPD is MSD Result 10.6 t. RPD is MS Resu 1.69 1.75 413236 Date | s based on Units mg/Kg s based on S MS alt Resu | Dil Dil 1 n the D ult 8 0 | Kg 1 spike and s Spike . Amount 20.0 spike and s Units mg/Kg | ppike du Mat t Res <1. spike du Dil. 1 | plicate res rix ult Rec. 76 53 plicate res Spike Amount 2 | <1.76 sult. Limit 70 - 13 sult. MS Rec. 84 88 | 44 RPI 50 19 MSD Rec. 84 | 70 - 130 RPD Limit 20 Rec. Limit 70 - 130 70 - 130 |

continued ...

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|---|------------------------|--------------|------------------|---------------------------|-----------------------|----------------------------------|--------------------------------|------------------------------|----------|------------------|---------------|
| natrix spikes continued | | | | MO | | | Custlere | Matui | | | Rec. |
| Param | | F | С | MS Result | Units | Dil. | Spike Amount | Matrib Result | | с. | Rec. Limit |
| | | | | MS | | | Spike | Matrix | x | | Rec. |
| Param | | F | С | Result | Units | Dil. | Amount | Result | | с. | Limit |
| Chloride | | | 1.2,4 | 268 | mg/Kg | 1 | 250 | 15.9 | 10 | 1 8 | 80 - 120 |
| Percent recovery is based on the | spike | e resul | t. RPI |) is based o | m the sp | ike and spi | ke duplica | te result. | | | |
| | | | MSI |) | | Spike | Matrix | | Rec. | | RPD |
| Param | F | С | Resu | | Dil. | Amount | Result | | limit | RPD | Limit |
| Chloride | | 1,2.4 | 272 | mg/Kg | ; 1 | 250 | 15.9 | 102 80 |) - 120 | 2 | 20 |
| QC Batch: 127958 Prep Batch: 108348 | | | | te Analyzed Preparatio | | 6-02-03 6-02-02 | 01 | 3 f | Prepa | vzed B ared B | |
| Param | | F | С | MS Result | Units | Dil. | Spike Amount | Matri Resul | | ec. | Limit |
| Chloride | | <u>.</u> | 1,2,4 | 271 | mg/Kg | | 250 | 20 | 10 | | 80 - 120 |
| Percent recovery is based on the | spike | e resul | lt. RPI | D is based o | on the sp | ike and sp | ike duplica | te result. | | | |
| | | | MSI | 5 | | Spike | Matrix | | Rec. | | RPL |
| Param | \mathbf{F} | \mathbf{C} | Resu | | Dil. | Amount | Result | | Limit | RPD | Limi |
| | | 1,2,4 | 266 | mg/Ka | ç 1 | 250 | 20 | 98 80 |) - 120 | 2 | 20 |
| Chloride | | | | | | | | | | | |
| | spike | e resul | lt. RPI |) is based o | on the sp | ike and sp | ike duplica | te result. | | | |
| Chloride Percent recovery is based on the | - | | lt. RPI 41326 | | on the sp | ike and sp | ike duplica | te result. | | | |
| Chloride Percent recovery is based on the | - | | 413260 Da | | l: 201 | ike and sp 6-02-03 6-02-02 | ike duplica | te result. | | yzed B ared B | y: RL |
| Chloride Percent recovery is based on the Matrix Spike (MS-1) Spike QC Batch: 127960 | - | | 413260 Da | 3 te Analyzeo | l: 201 | 6-02-03 | ike duplica Spike Amount | te result. Matri Resul | Prepa | ared B | y: RL |

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

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|--|---|---|---------------|-------|------|-----------------|------------------|------|-----------------------|-----|--------------|--|
| Param | F | С | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit | |
| Chloride | | 1.2.4 | 259 | mg/Kg | 1 | 250 | 9.24 | 100 | 80 - 120 | 6 | 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: 413464

| QC Batch: | 127965 | Date Analyzed: | 2016-02-04 | Analyzed By: | $_{\rm JL}$ |
|-------------|--------|-----------------|------------|--------------|-------------|
| Prep Batch: | 108331 | QC Preparation: | 2016-02-03 | Prepared By: | JL |

| | | | MS | | | Spike | Matrix | | Rec. |
|-------|--------------|---|--------|---------|------|--------|--------|------|----------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| DRO | | 3 | 254 | m 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.

| | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
|-------|--------------|--------------|--------|-------|------|--------|--------|------|----------|-----|----------------------|
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | | 3 | 282 | mg/Kg | 1 | 250 | <7.41 | 113 | 70 - 130 | 10 | 20 |
| | | | | | | | | | | | |

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

| Survogato | MS Bosult | MSD Bosult | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|-------------|--------------|---------------|-------|------|-----------------|------------|-------------|---------------|
| n-Tricosane | 52.7 | 54.7 | mg/Kg | 1 | 50 | 105 | 109 | 70 - 130 |

Matrix Spike (xMS-1) Spiked Sample: 413465

| QC Batch: | 127968 | Date Analyzed: | 2016-02-04 | Analyzed By: | JL |
|-------------|--------|-----------------|------------|--------------|---------------------|
| Prep Batch: | 108338 | QC Preparation: | 2016-02-04 | Prepared By: | JL |

| | | | MS | | | Spike | Matrix | | Rec. |
|-------|--------------|---|--------|-------|------|--------|--------|------|----------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| DRO | | 3 | 626 | mg/Kg | 1 | 250 | 451 | 70 | 70 - 130 |
| | | | | | | | | | |

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

| | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
|-------|--------------|---|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | | 3 | 644 | mg/Kg | 1 | 250 | 451 | 77 | 70 - 130 | 3 | 20 |

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

| Report Date: February 11, 2016 15-0167-01 | | V | Vork Order: XTO Perla | Page Number: 82 of 95 | | | | |
|---|-------------|---------------------------------|--------------------------|------------------------|------------------|----------------|---------------------------|-----------------|
| Surrogate n-Tricosane _{Qer} _{Qer} | MS Resul | | Units | Dil. | Spike Amount | MS Rec. | MSD <u>Rec.</u> 169 | Rec. |
| n-Tricosane _{Qsr Qsr} | 81.9 | 84.4 | mg/Kg | 1. | 50 | 164 | 109 | 70 - 130 |
| Matrix Spike (MS-1) Spiked | Sample: | 413299 | | | | | | |
| QC Batch: 127990 Prep Batch: 108337 | | Date Ana QC Prep | • | 16-02-05 16-02-04 | | | Analyzec Prepared | |
| Param | F | MS C Resu | | a Dil. | Spike Amount | Matr Resu | | Rec. Limit |
| GRO Qa | Qs | 3 11.0 | | | 20.0 | <1.7 | | 70 - 130 |
| Percent recovery is based on the sp | | | | _ | | | | |
| v . | | MSD | | Spike | - | | Rec. | RPD |
| Param | F | C Result | Units D | | | Rec. | | PD Limit |
| GRO qr.qr | Qr,Qs | з 8.23 | mg/Kg | 1 20.0 | <1.76 | 41 | 70 - 130 | 34 20 |
| Percent recovery is based on the sp | ike resul | t. RPD is ba | ased on the s | spike and sp | oike duplica | te result. | | |
| | | MS | MSD | | Spi | ke N | IS MSD | Rec. |
| Surrogate | | Result | Result | Units 1 | Dil. Amo | | ec. Rec. | Limit |
| Irifluorotoluene (TFT) | | 1.66 | | mg/Kg | 1 2 | 8 | 33 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | 1.62 | 1.62 | mg/Kg | 1 2 | 8 | 31 81 | 70 - 130 |
| Matrix Spike (xMS-1) Spiked QC Batch: 127998 Prep Batch: 108373 | ł Sample | :: 413460 Date An QC Prep | • |)16-02-05)16-02-05 | | | Analyze Prepare | ÷ |
| Saram | F | MS C Resul | t Units | Dil. | Spike Amount | Matri Resul | | Rec. Limit |
| DRO | | з 274 | mg/Kg | g 1 | 250 | 12.5 | 105 | 70 - 130 |
| Percent recovery is based on the sp | ike resul | t. RPD is ba | used on the s | pike and sp | oike duplica | te result. | | |
| | FC | MSD Result U | Jnits Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit R | RPD PD Limit |
| Jaram | r C | nesuit (| JILLIS I. I.I. | Amount | nesuu | nec. | Linne R | TTT THHE |
| Param DRO or | | | | | | 82 7 | 0 - 130 ' | 23 20 |
| Param DRO Qr Percent recovery is based on the sp | Qr 3 | 217 m | g/Kg 1 | 250 | 12.5 | | | 23 20 |

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| Report Date: February 11, 15-0167-01 | 2016 | | Work Order: 1 XTO Perla | Page Number: 83 of 95 | | | | | |
|--|--|--|--|---|--|--------------------------------------|---|-------------------------|--|
| matrix spikes continued | | | | | | 2.60 | Mar | | D |
| Surrogate | ${ m MS}$ Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | | Rec. Limit |
| | | | | | | | | | D |
| Surrogate | MS Result | ${ m MSD}$ Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | | Rec. Limit |
| n-Tricosane | 52.4 | 46.2 | mg/Kg | 1 | 50 | 105 | 92 | | 0 - 130 |
| , | Spiked Sample: | | | | | | , , | | DI |
| QC Batch: 128089 Prep Batch: 108454 | | Date An QC Pre _l | | 16-02-09 16-02-02 | | | | zed By red By: | |
| | | М | S | | Spike | Mat | | | Rec. |
| Param | F | C Res | | | Amount | Rest | | | Limit |
| Chloride | | 1,2.4 28 | , | | 250 | 13. | | 8 8 | 0 - 120 |
| Percent recovery is based or | n the spike result | . RPD is b | ased on the s | pike and sp | oike duplica | te result | | | |
| | | | | | | | | | |
| | | MSD | | Spike | Matrix | | Rec. | | RPD |
| | F C | Result | Units Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | 1,2,4 | Result 274 r | ng/Kg 1 | Amount 250 | Result 13.2 | 104 | Limit 80 - 120 | RPD 3 | |
| Param Chloride Percent recovery is based or Matrix Spike (MS-1) QC Batch: 128090 Prep Batch: 108456 | 1,2,4 | Result 274 r 5. RPD is b 413292 Date Ar | ng/Kg 1 ased on the s nalyzed: 20 | Amount 250 | Result 13.2 | 104 | Limit 80 - 120 Analy | | Limit 20 : RL |
| Chloride Percent recovery is based or Matrix Spike (MS-1) QC Batch: 128090 Prep Batch: 108456 Param | 1,2,4 1 the spike result | Result 274 r 274 r 274 r 274 r 275 r | ng/Kg 1 ased on the s nalyzed: 20 paration: 20 S sult Units | Amount 250 pike and sp 16-02-09 16-02-02 | Result 13.2 bike duplica Spike Amount | 104 te result Mat Res | Limit 80 - 120 Prepa rix ult Re | 3 vzed By ured By | Limit 20 : RL : RL Rec. Limit |
| Chloride Percent recovery is based or Matrix Spike (MS-1) QC Batch: 128090 Prep Batch: 108456 | 1,2,4 n the spike result Spiked Sample: | Result 274 r 274 r 2. RPD is b 413292 Date Ar QC Prep M | ng/Kg 1 ased on the s nalyzed: 20 paration: 20 S sult Units | Amount 250 pike and sp 16-02-09 16-02-02 Dil. | Result 13.2 bike duplica Spike | 104 te result Mat | Limit 80 - 120 Prepa rix ult Re | 3 vzed By ured By | Limit 20 : RL : RL Rec. |
| Chloride Percent recovery is based or Matrix Spike (MS-1) QC Batch: 128090 Prep Batch: 108456 Param Chloride | 1,2,4 n the spike result Spiked Sample: F | Result 274 r 274 r | ng/Kg 1 ased on the s nalyzed: 20 paration: 20 S sult Units 3 mg/K | Amount 250 pike and sp 16-02-09 16-02-02 Dil. g 1 | Result 13.2 pike duplica Spike Amount 250 | 104 te result Mat Res 19 | Limit 80 - 120 Prepa rix ult Re .6 9 | 3 vzed By ured By | Limit 20 : RL : RL Rec. Limit |
| Chloride Percent recovery is based or Matrix Spike (MS-1) QC Batch: 128090 Prep Batch: 108456 | 1,2,4 n the spike result Spiked Sample: F | Result 274 r 274 r 274 r x RPD is b 413292 Date Ar QC Prep M C Res 1,2.4 26 x RPD is b MSD | ng/Kg 1 ased on the s nalyzed: 20 paration: 20 S sult Units 3 mg/K | Amount 250 pike and sp 16-02-09 16-02-02 Dil. g 1 | Result 13.2 pike duplica Spike Amount 250 | 104 te result Mat Res 19 | Limit 80 - 120 Prepa rix ult Re .6 9 | 3 vzed By ured By | Limit 20 : RL : RL Rec. Limit |

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|--|--------------|--------------|-----------------------------|------------------------|--------------------|-------------|--------------|----------|--------------------|----------|
| Matrix Spike (MS-1) Spike | ed Samp | le: 41329 | 9 | | | | | | | |
| QC Batch: 128108 Prep Batch: 108471 | | | te Analyzed) Preparatic | | 6-02-10 6-02-03 | | | | yzed By ared By | |
| | | <i>د</i> و (| | /11. 2011 | 0.02.00 | | | 1 10]. | | |
| | | | MS | | | Spike | Ma | atrix | | Rec. |
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | \mathbf{R} | sult R | ec. | Limit |
| Chloride | | 1,2,4 | 263 | mg/Kg | 1 | 250 | 1 | 6.1 | 99 8 | 80 - 120 |
| Percent recovery is based on the | spike re | sult. RPl |) is based o | n the sp | ike and sp | ike duplica | te resu | ilt. | | |
| | | MSI | D | | Spike | Matrix | | Rec. | | RPD |
| Param | F (| C Resu | lt Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | 1, | 2,4 260 | 6 mg/Kg | 1 | 250 | 16.1 | 100 | 80 - 120 | 1 | 20 |

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

Calibration Standards

Standard (CCV-2)

| QC Batch: 127934 | | | Date An | Analyzed By: AK | | | | |
|------------------|------|-----------------------|---------|-----------------------|--------|----------|----------|------------|
| | | | | CCVs | CCVs | CCVs | Percent | Date |
| | | | | True | Found | Percent | Recovery | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 3 | mg/kg | 0.100 | 0.0910 | 91 | 80 - 120 | 2016-02-02 |
| Toluene | | 3 | mg/kg | 0.100 | 0.0854 | 85 | 80 - 120 | 2016-02-02 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.0870 | 87 | 80 - 120 | 2016-02-02 |
| Xylene | | 3 | mg/kg | 0.300 | 0.247 | 82 | 80 - 120 | 2016-02-02 |

Standard (CCV-3)

| QC Batch: 127934 | | | Analyzed By: AK | | | | | |
|------------------|------|------|-----------------|-------|--------|----------|----------|------------|
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 3 | mg/kg | 0.100 | 0.0991 | 99 | 80 - 120 | 2016-02-02 |
| Toluene | | 3 | mg/kg | 0.100 | 0.0921 | 92 | 80 - 120 | 2016-02-02 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.0892 | 89 | 80 - 120 | 2016-02-02 |
| Xylene | | 3 | mg/kg | 0.300 | 0.257 | 86 | 80 - 120 | 2016-02-02 |

Standard (CCV-1)

| QC Batch: | ch: 127937 | | Date | Analyzed: | 2016-02-03 | | Analyzed By: AK | |
|-----------|------------|------|-------|--------------|-----------------------------|-----------------------|---------------------|------------|
| | | | | CCVs True | CCVs Found | CCVs | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | 3 | mg/Kg | 1.00 | 0.921 | 92 | 80 - 120 | 2016-02-03 |

Standard (CCV-2)

QC Batch: 127937

Date Analyzed: 2016-02-03

Analyzed By: AK

| Report Date: February 11, 2016 15-0167-01 | | | | Work Ore XTO I | Page Number: 86 of 95 | | | | | |
|--|-------|--------|----------------|---------------------------|------------------------|-----------------------------|-------------------------------|------------------|--|--|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed | | |
| GRO | | 3 | mg/Kg | 1.00 | 0.802 | 80 | 80 - 120 | 2016-02-03 | | |
| Standard (C | | | | | | | | | | |
| Standard (CCV-3) QC Batch: 127937 | | | Date | Date Analyzed: 2016-02-03 | | | | Analyzed By: AK | | |
| | | | | CCVs | CCVs | CCVs | Percent | | | |
| _ | | | | True | Found | Percent | Recovery | Date | | |
| Param GRO | Flag | Cert 3 | Units mg/Kg | <u>Conc.</u> 1.00 | Conc. 1.17 | Recovery 117 | Limits 80 - 120 | Analyzed | | |
| Standard (C | CV-1) | | | | | | | | | |
| QC Batch: 127948 | | Date | Analyzed: | 2016-02-04 | | Analy | zed By: AK | | | |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date | | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | | |
| GRO | | 3 | mg/Kg | 1.00 | 1.17 | 117 | 80 - 120 | 2016-02-04 | | |
| Standard (C | CV-2) | | | | | | | | | |
| QC Batch: 12 | 27948 | | Date | Analyzed: | 2016-02-04 | | Analy | zed By: AK | | |

| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
|-------|------|------|-------|--------------|---------------|-----------------|---------------------|------------|
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | 3 | mg/Kg | 1.00 | 0.859 | 86 | 80 - 120 | 2016-02-04 |

Standard (CCV-3)

QC Batch: 127948 Date Analyzed: 2016-02-04 Analyzed By: AK

| Report Date: 15-0167-01 | February 11, | 2016 | | | rder: 16020113 Perla Negra | | Page Nu | mber: 87 of 95 |
|----------------------------|--------------|-------|-------|-----------------------|-------------------------------|-----------------------------|-------------------------------|------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| GRO | | 3 | mg/Kg | 1.00 | 0.984 | 98 | 80 - 120 | 2016-02-04 |
| Standard (C | CV-1) | | | | | | | |
| QC Batch: 1 | 27956 | | Date | Analyzed: | 2016-02-03 | | Analy | zed By: RL |
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Chloride | 1 105 | 3,2,4 | mg/Kg | 25.0 | 25.4 | 102 | 90 - 110 | 2016-02-03 |
| Standard (C QC Batch: 1 | · | | Date | Analyzed: | 2016-02-03 | | Analy | yzed By: RL |
| | | | | CCVs | CCVs | CCVs | Percent | T |
| Param | Flag | Cert | Units | True Conc. | Found Conc. | Percent Recovery | Recovery Limits | Date Analyzed |
| Chloride | 0 | 1,2,4 | mg/Kg | 25.0 | 25.9 | 104 | 90 - 110 | 2016-02-03 |
| Standard (C | CV-1) | | | | | | | |
| QC Batch: 1 | 27958 | | Date | Analyzed: | 2016-02-03 | | Anal | yzed By: RL |
| _ | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 25.9 | 104 | 90 - 110 | 2016-02-03 |

| QC Batch: | 127958 | Date Analyzed: | 2016-02-03 | Analyzed By: | RL |
|-----------|--------|----------------|------------|--------------|----|
|-----------|--------|----------------|------------|--------------|----|

| Report Date: 1 15-0167-01 | February 11, 2 | 2016 | | | der: 16020113 Perla Negra | | Page Nu | nber: 88 of 95 |
|------------------------------|----------------|-----------------------|--------|-----------------------|------------------------------|-----------------------------|-------------------------------|------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 25.8 | 103 | 90 - 110 | 2016-02-03 |
| Standard (CC | CV-1) | | | | | | | |
| QC Batch: 12 | 7960 | | Date . | Analyzed: | 2016-02-03 | | Analy | zed By: RL |
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 25.8 | 103 | 90 - 110 | 2016-02-03 |
| Standard (CC | CV-2) | | | | | | | |
| QC Batch: 12 | 7960 | | Date . | Analyzed: | 2016-02-03 | | Analy | zed By: RL |
| | | | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Param | Flag | Cert | | | CONC. | recovery | LIIIII05 | Anaryzeu |

| QC Batch: | 127965 | | Date | Analyzed: | 2016-02-04 | | Anal | yzed By: JL |
|-----------|--------|------|-------|-----------|------------|----------|----------|-------------|
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | 3 | mg/Kg | 250 | 257 | 103 | 80 - 120 | 2016-02-04 |

QC Batch: 127965 Date Analyzed: 2016-02-04 Analyzed By: JL

| Report Date: 15-0167-01 | February 11, | 2016 | | | der: 16020113 Perla Negra | | Page Nu | mber: 89 of 95 |
|----------------------------|--------------|-----------|----------------|-----------------------|------------------------------|-----------------------------|-------------------------------|---------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| DRO | | 3 | mg/Kg | 250 | 234 | 94 | 80 - 120 | 2016-02-04 |
| Standard (C | CCV-3) | | | | | | | |
| QC Batch: 1 | 127965 | | Date | Analyzed: | 2016-02-04 | | Anal | yzed By: JL |
| D | ורד | | ¥¥ | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param DRO | Flag | Cert 3 | Units mg/Kg | <u>Conc.</u> 250 | <u>Conc.</u> 224 | Recovery 90 | Limits 80 - 120 | Analyzed 2016-02-04 |
| Standard (C QC Batch: 1 | , | | Date | Analyzed: | 2016-02-04 | | Anal | yzed By: JL |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| | | 3 | mg/Kg | 250 | 224 | 90 | 80 - 120 | 2016-02-04 |

Analyzed By: JL QC Batch: 127968 Date Analyzed: 2016-02-04 CCVs CCVs CCVs Percent True Found Percent Recovery Date Param Flag Cert Units Analyzed Conc. Conc. Recovery Limits DRO mg/Kg 250 264 106 80 - 120 2016-02-04 3

Standard (CCV-3)

QC Batch: 127968

Date Analyzed: 2016-02-04

Analyzed By: JL

| Report Date: 15-0167-01 | : February 11, | 2016 | | | rder: 16020113 Perla Negra | | Page Nu | mber: 90 of 95 |
|--|------------------------------------|-----------|---------------------------------|---|---|-----------------------------------|--|--|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| DRO | | 3 | mg/Kg | 250 | 264 | 106 | 80 - 120 | 2016-02-04 |
| Standard (C | CCV-1) | | | | | | | |
| QC Batch: | 127990 | | Date | Analyzed: | 2016-02-05 | | Analy | zed By: AK |
| Param | ۲۳1 | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| raran | FIRG | | | COnc. | Conc. | recovery | Linnes | |
| GRO | Flag | 3 | mg/Kg | 1.00 | 0.900 | 90 | 80 - 120 | 2016-02-0 |
| | CCV-2) | | mg/Kg | 1.00 Analyzed: | 0.900 2016-02-05 | 90 | | 2016-02-05 zed By: AK |
| GRO Standard (C | CCV-2) | | mg/Kg | Analyzed: CCVs | 2016-02-05 CCVs | CCVs | Analy Percent | zed By: AK |
| GRO Standard (C | C CV-2) 127990 | | mg/Kg | Analyzed: CCVs True | 2016-02-05 CCVs Found | CCVs Percent | Analy Percent Recovery | zed By: AK Date |
| GRO Standard (C QC Batch: 1 | CCV-2) | 3 | mg/Kg Date | Analyzed: CCVs | 2016-02-05 CCVs | CCVs | Analy Percent | zed By: AK |
| GRO Standard (C QC Batch: 1 QC Batch: 1 GRO | CCV-2) 127990 Flag | 3 Cert | mg/Kg Date Units | Analyzed: CCVs True Conc. | 2016-02-05 CCVs Found Conc. | CCVs Percent Recovery | Analy Percent Recovery Limits | zed By: AK Date Analyzed |
| GRO Standard (C QC Batch: 1 Param | CCV-2) 127990 Flag CCV-3) | 3 Cert | mg/Kg Date Units mg/Kg | Analyzed: CCVs True Conc. | 2016-02-05 CCVs Found Conc. | CCVs Percent Recovery | Analy Percent Recovery Limits 80 - 120 | zed By: AK Date <u>Analyzed</u> 2016-02-0! |
| GRO Standard (C QC Batch: 1 Param GRO Standard (C | CCV-2) 127990 Flag CCV-3) | 3 Cert | mg/Kg Date Units mg/Kg | Analyzed: CCVs True Conc. 1.00 Analyzed: CCVs | 2016-02-05 CCVs Found Conc. 0.878 2016-02-05 CCVs | CCVs Percent Recovery 88 | Analy Percent Recovery Limits 80 - 120 Analy Percent | zed By: AK Date Analyzed 2016-02-05 zed By: AK |
| GRO Standard (C QC Batch: 1 Param GRO Standard (C | CCV-2) 127990 Flag CCV-3) | 3 Cert | mg/Kg Date Units mg/Kg | Analyzed: CCVs True Conc. 1.00 Analyzed: | 2016-02-05 CCVs Found Conc. 0.878 2016-02-05 | CCVs Percent Recovery 88 | Analy Percent Recovery Limits 80 - 120 Analy | zed By: AK Date Analyzed 2016-02-09 |

QC Batch: 127998

Date Analyzed: 2016-02-05

Analyzed By: JL

| Report Date: 15-0167-01 | February 11, | 2016 | | | der: 16020113 Perla Negra | | Page Nu | mber: 91 of 95 |
|----------------------------|--------------|-----------|----------------|-----------------------|------------------------------|-----------------------------|-------------------------------|------------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| DRO | | 3 | mg/Kg | 250 | 263 | 105 | 80 - 120 | 2016-02-05 |
| Standard (C | CV-2) | | | | | | | |
| QC Batch: 1 | 27998 | | Date | Analyzed: | 2016-02-05 | | Anal | yzed By: JL |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param DRO | Flag | Cert 3 | Units mg/Kg | Conc. 250 | Conc. 252 | Recovery 101 | Limits 80 - 120 | Analyzed 2016-02-05 |
| Standard (C QC Batch: 1 | , | | Date | Analyzed: | 2016-02-05 | | Anal | yzed By: JL |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | 3 | mg/Kg | 250 | 281 | 112 | 80 - 120 | 2016-02-05 |
| Standard (C | CV-1) | | | | | | | |
| QC Batch: 12 | 28089 | | Date | Analyzed: | 2016-02-09 | | Analy | zed By: RL |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 25.6 | 102 | 90 - 110 | 2016-02-09 |

QC Batch: 128089

Date Analyzed: 2016-02-09

Analyzed By: RL

| 15-0167-01 | February 11, 2 | 2016 | | | der: 16020113 Perla Negra | | Page Nu | mber: 92 of 95 |
|--|--------------------------------|---------------|-----------------------------------|---|--|---|--|---|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 26.3 | 105 | 90 - 110 | 2016-02-09 |
| Standard (CC | CV-1) | | | | | | | |
| QC Batch: 12 | 8090 | | Date 4 | Analyzed: | 2016-02-09 | | Analy | zed By: RL |
| Daugus | []] | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Param | riag | A DETE | | | | | | mayzou |
| Param Chloride Standard (CC | Flag | 1.2,4 | mg/Kg | 25.0 | 26.3 | 105 | 90 - 110 | 2016-02-09 |
| Chloride Standard (CC | SV-2) | | mg/Kg | | | | 90 - 110 | 2016-02-09 vzed By: RL |
| Chloride Standard (CC | SV-2) | | mg/Kg | 25.0 Analyzed: CCVs | 26.3 2016-02-09 CCVs | 105 CCVs | 90 - 110 Analy Percent | vzed By: RL |
| Chloride Standard (CC QC Batch: 128 | 2 V-2) 3090 | 1.2,4 | mg/Kg Date 4 | 25.0 Analyzed: CCVs True | 26.3 2016-02-09 CCVs Found | 105 CCVs Percent | 90 - 110 Analy Percent Recovery | rzed By: RL Date |
| Chloride Standard (CC QC Batch: 128 Param | SV-2) | | mg/Kg | 25.0 Analyzed: CCVs | 26.3 2016-02-09 CCVs | 105 CCVs | 90 - 110 Analy Percent | rzed By: RL Date Analyzed |
| Chloride Standard (CC QC Batch: 128 Param Chloride | 2 V-2) 3090 Flag |).2,4 Cert | mg/Kg Date 4 Units | 25.0 Analyzed: CCVs True Conc. | 26.3 2016-02-09 CCVs Found Conc. | 105 CCVs Percent Recovery | 90 - 110 Analy Percent Recovery Limits | vzed By: RL |
| Chloride Standard (CC QC Batch: 128 Param Chloride Standard (CC | 2 V-2) 3090 Flag |).2,4 Cert | mg/Kg Date 4 Units mg/Kg | 25.0 Analyzed: CCVs True Conc. | 26.3 2016-02-09 CCVs Found Conc. | 105 CCVs Percent Recovery | 90 - 110 Analy Percent Recovery Limits 90 - 110 | vzed By: RL Date Analyzed |
| | 2 V-2) 3090 Flag |).2,4 Cert | mg/Kg Date 4 Units mg/Kg | 25.0 Analyzed: CCVs True Conc. 25.0 Analyzed: CCVs | 26.3 2016-02-09 CCVs Found Conc. 26.1 2016-02-10 CCVs | 105 CCVs Percent Recovery 104 CCVs | 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy Percent | vzed By: RL Date Analyzed 2016-02-09 |
| Chloride Standard (CC QC Batch: 128 Param Chloride Standard (CC | 2 V-2) 3090 Flag |).2,4 Cert | mg/Kg Date 4 Units mg/Kg | 25.0 Analyzed: CCVs True Conc. 25.0 Analyzed: | 26.3 2016-02-09 CCVs Found Conc. 26.1 2016-02-10 | 105 CCVs Percent Recovery 104 | 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy | zed By: RL Date Analyzed 2016-02-09 |

QC Batch: 128108

Date Analyzed: 2016-02-10

Analyzed By: RL

| Report Date: 1 15-0167-01 | February 11, 2 | 016 | | | er: 16020113 erla Negra | | Page Nu | mber: 93 of 95 |
|------------------------------|----------------|-----------------------|-------|--------------|----------------------------|-----------------|---------------------|----------------|
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Chloride | | 1.2,4 | mg/Kg | 25.0 | 25.1 | 100 | 90 - 110 | 2016-02-10 |

Appendix

Report Definitions

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

Laboratory Certifications

| | Certifying | Certification | Laboratory |
|---|------------|---------------------|---------------|
| С | Authority | Number | Location |
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| ~ | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | LELAP | LELAP-02003 | Lubbock |
| 2 | NELAP | T104704219-15-11 | Lubbock |
| 3 | NELAP | T104704392-14-8 | Midland |
| 4 | | 2015-066 | 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

- 1 No sample left for re-analysis.
- 2 No sample left for re-analysis.
- 3 No sample left for re-analysis.
- 4 No sample left for re-analysis.
- 5 No sample left for re-analysis.

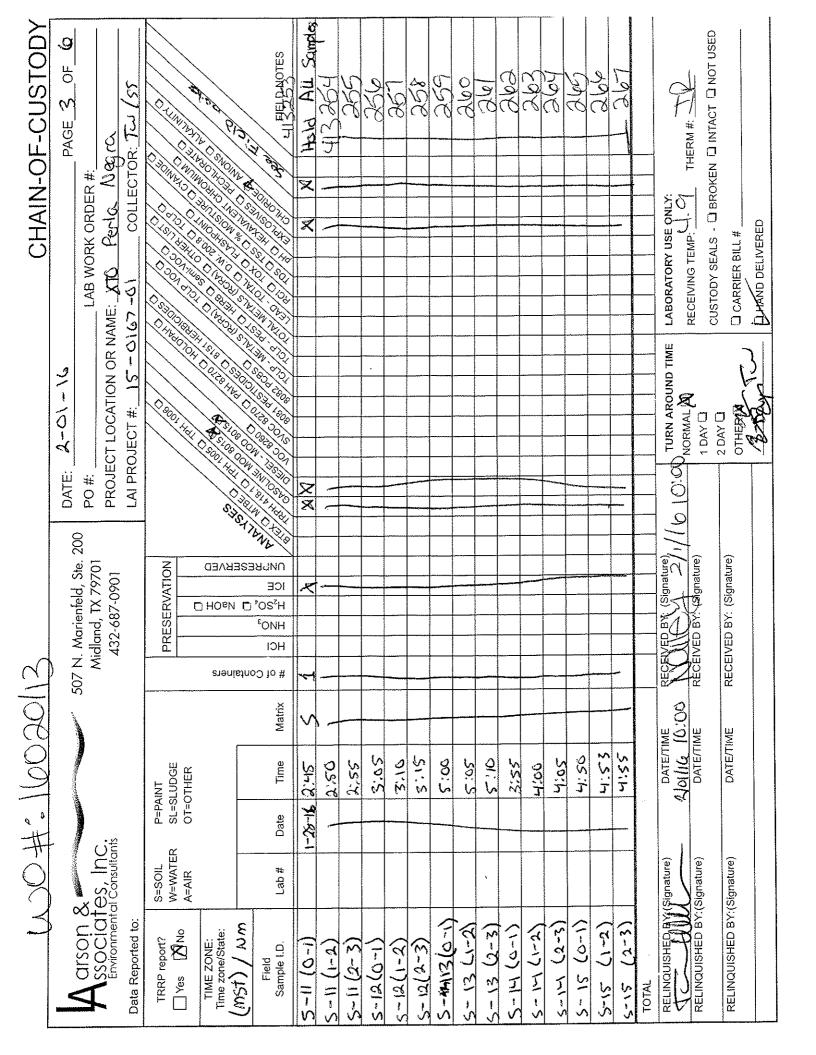
Attachments

The scanned attachments will follow this page.

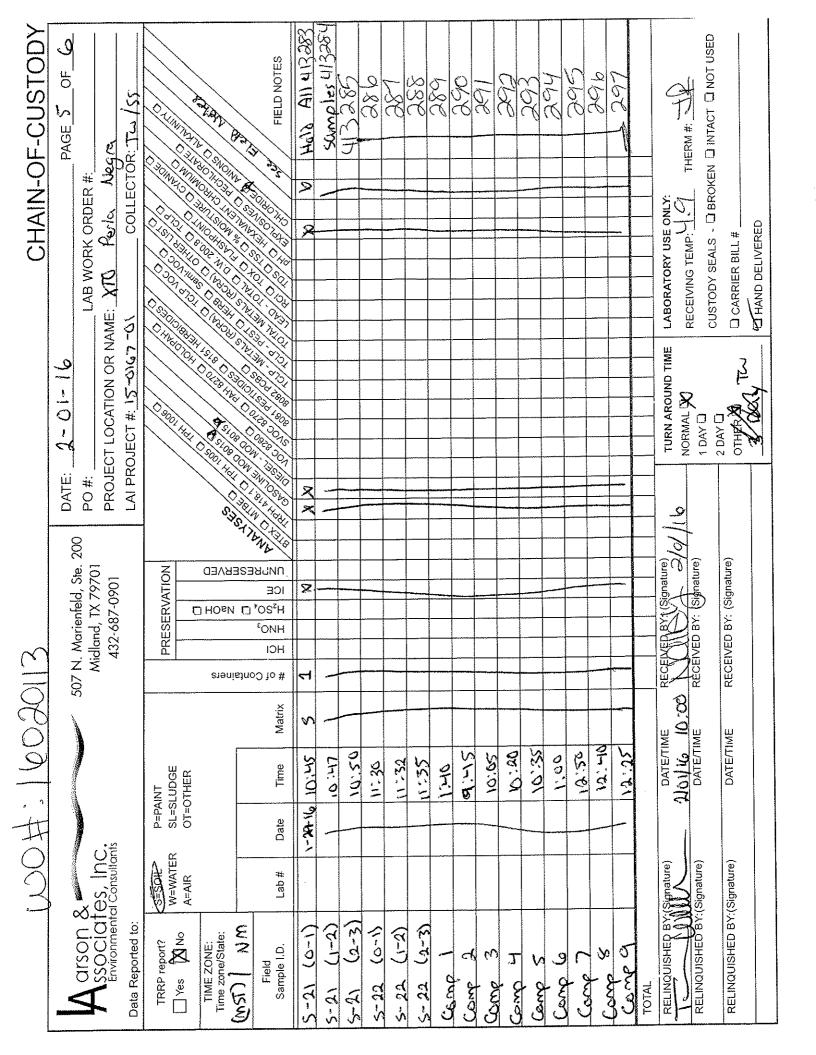
Please note, each attachment may consist of more than one page.

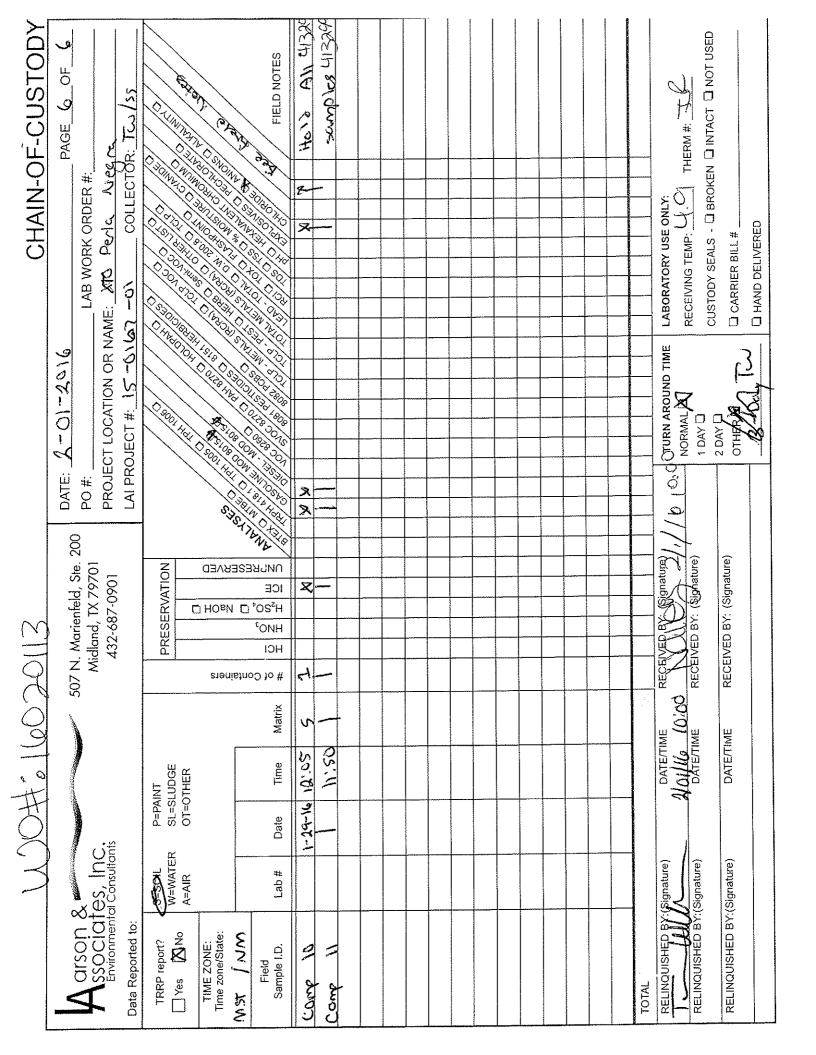
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| 5-1(2-3) | | | | | | 1335 |
| 5-2(0-1) 10: | 5:50 | | | | | 326 |
| 5-2(1-2) | | | | | | 1331 |
| 5-2(2-3) | | | | | | 846 |
| S-3 (c-1) | W:25 | | × | | | 339 |
| 5-3(1-2) | | | | | | 330 |
| 5~3(2-3) | | | | | | 3 |
| N []]]]]]]]]]]]]]]]]] | 1,35 | | × | | | 233 |
| 5 - 41 (i - 2) | | | | | | 1333 266 |
| 5-4 (2-3) | | | | | | <u>Day</u> |
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| S-5(1-2) 11 | 11.:36 | | | | | See 1 |
| ۲-۶ (۲-3) W. | N: 45 | | | | | ES. |
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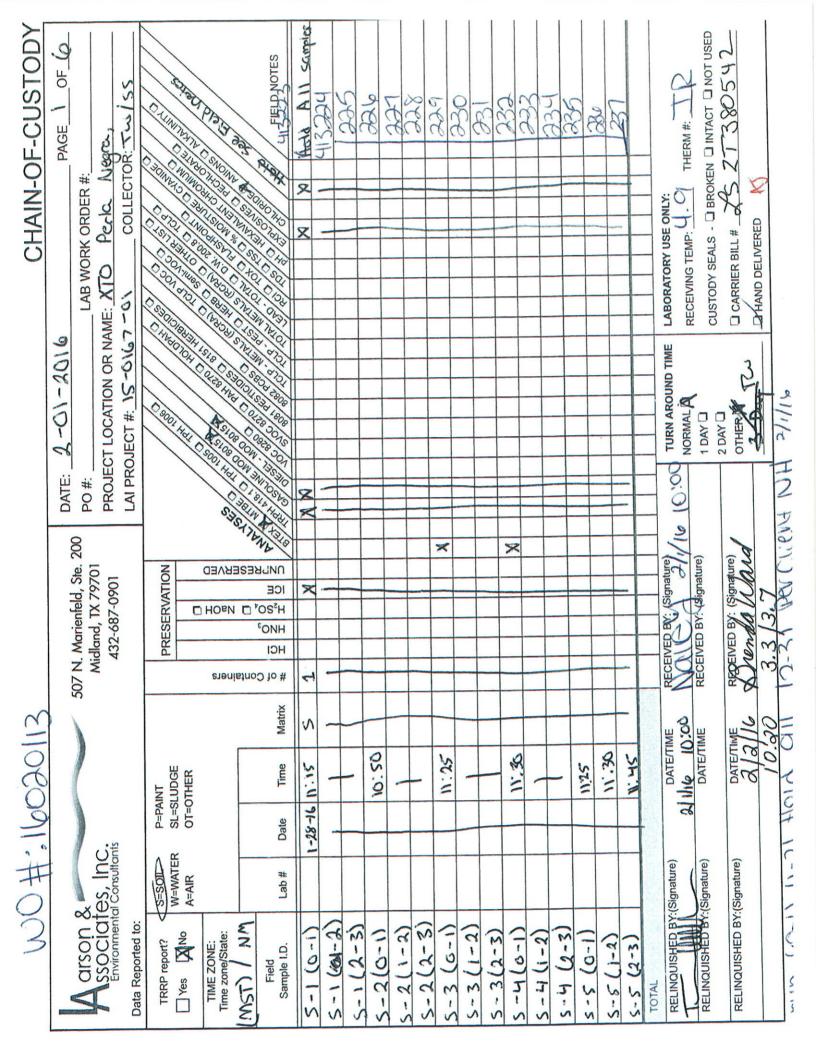
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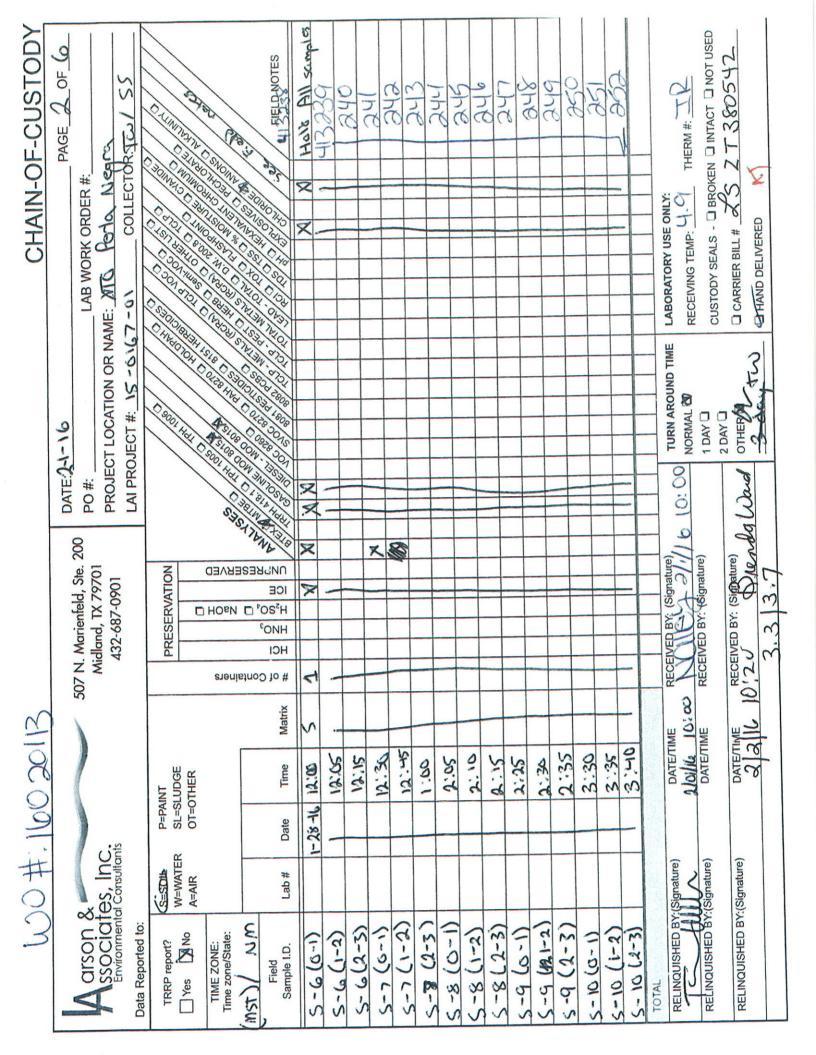


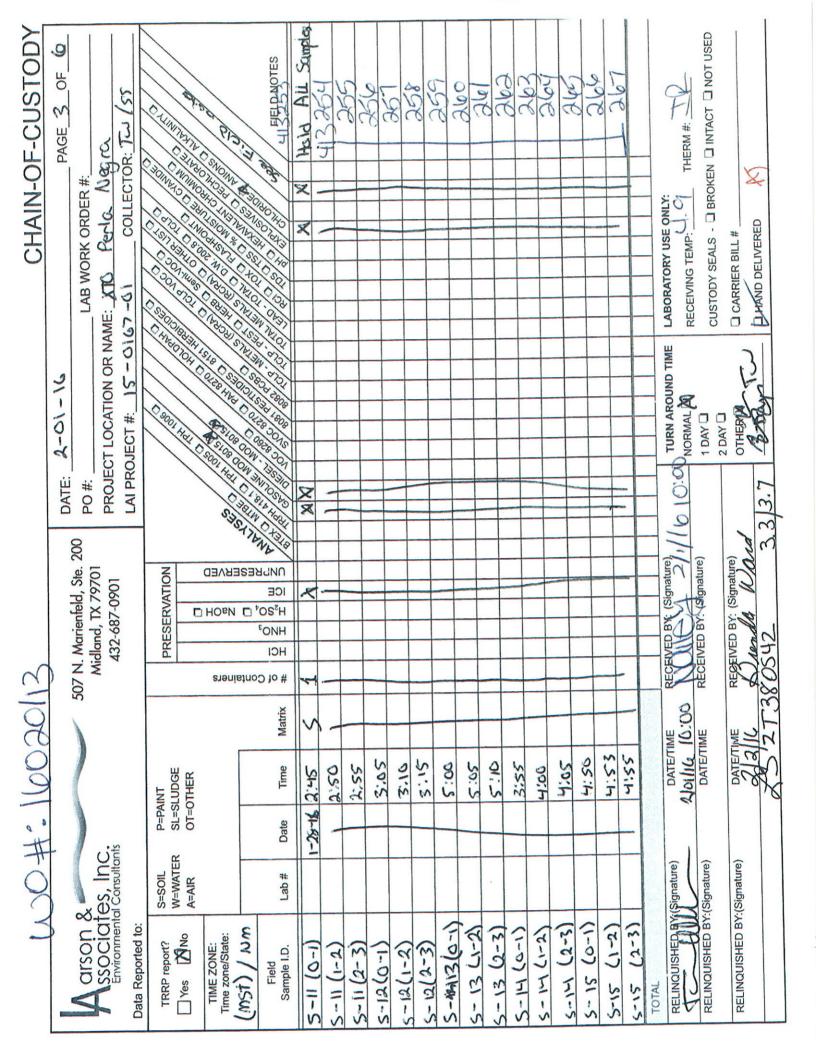
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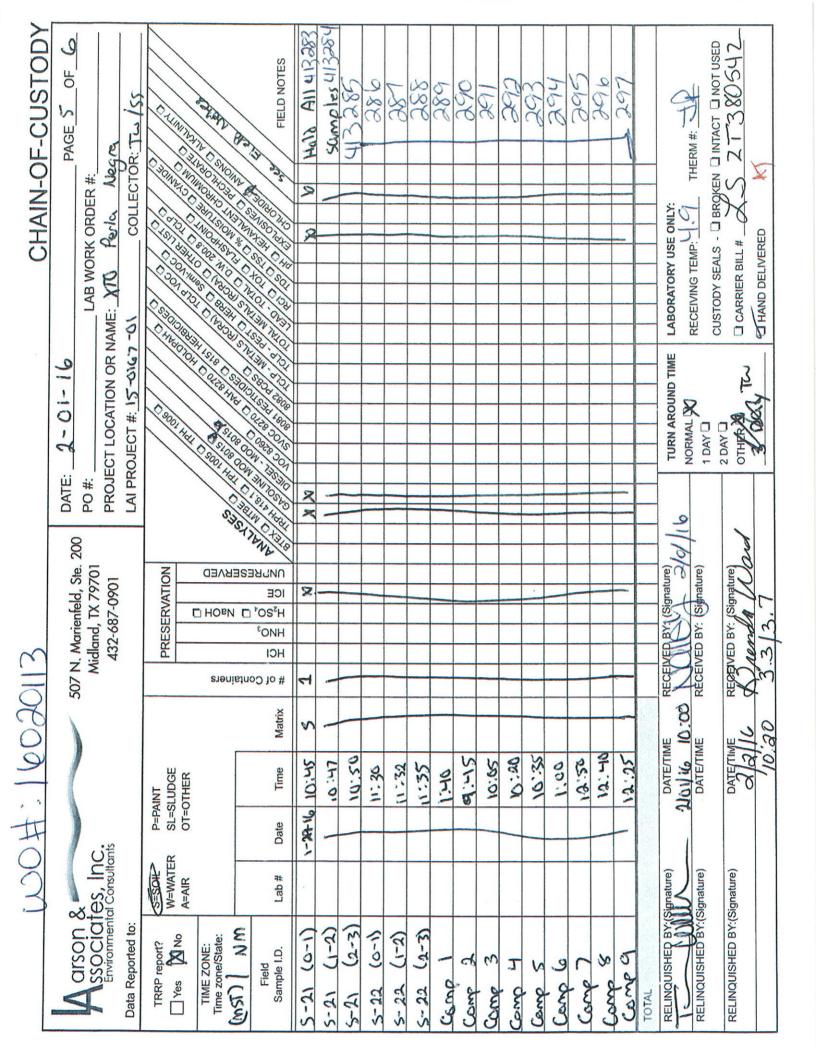








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6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424 El Paso. Texas 79922 Midland, Texas 79703 Carroliton. Texas 75006 E-Mail: lab@traceanalysis.com WEB www.traceanalysis.com

800-378-1296

806-794-1296

915-585-3443

432+689+6301

972-242-7750

Certifications

NELAP DoD LELAP WBE HUB NCTRCA DBE ISO 17025 Kansas Oklahoma

Analytical and Quality Control Report

Sarah Shissler Larson and Associates. Inc.

Report Date: February 24, 2016

FAX 806+794+1298

FAX 915+585+4944

FAX 432-689-6313

P. O. Box 50685 Midland, TX, 79710

Work Order: 16021901

Project Name: XTO Perla Negra Project Number: 15-0167-01

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

| | | | Date | Time | Date |
|--------|--------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 414630 | DP-S-7 (2-3) | soil | 2016-02-18 | 10:25 | 2016-02-19 |
| 414631 | DP-S-7 (3-4) | soil | 2016-02-18 | 10:25 | 2016-02-19 |
| 414632 | DP-S-7 (4-5) | soil | 2016-02-18 | 10:30 | 2016-02-19 |
| 414633 | DP-S-7 (5-6) | soil | 2016-02-18 | 10:30 | 2016-02-19 |
| 414634 | DP-S-7 (6-7) | soil | 2016-02-18 | 10:30 | 2016-02-19 |

Notes

• Work Order 16021901: Changed to 3-Day rush 02/22/2016 NH

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

Blain Leptinich

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

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Case Narrative

Samples for project XTO Perla Negra were received by TraceAnalysis, Inc. on 2016-02-19 and assigned to work order 16021901. Samples for work order 16021901 were received intact at a temperature of 4.3 C.

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

| | | Prep | Prep | $\rm QC$ | Analysis |
|---------------|----------|--------|-----------------------|----------|---------------------|
| Test | Method | Batch | Date | Batch | Date |
| BTEX | S 8021B | 108704 | 2016-02-22 at 14:35 | 128396 | 2016-02-23 at 13:48 |
| Chloride (IC) | E 300.0 | 108739 | 2016-02-23 at $10:00$ | 128416 | 2016-02-23 at 10:08 |
| Chloride (IC) | E 300.0 | 108741 | 2016-02-23 at 10:00 | 128417 | 2016-02-23 at 10:08 |
| TPH DRO | S 8015 D | 108737 | 2016-02-24 at 08:58 | 128423 | 2016-02-24 at 10:21 |
| TPH GRO | S 8015 D | 108704 | 2016-02-22 at 14:35 | 128397 | 2016-02-23 at 13:49 |

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 16021901 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: 414630 - DP-S-7 (2-3)

| Laboratory: Midland Analysis: BTEX QC Batch: 128396 Prep Batch: 108704 | | Analytical Date Anal Sample Pr | yzed: | 2016-02 | -23 | | Prep Methoo Analyzed By Prepared By | r: AK |
|---|----------------------|--------------------------------------|---------------------------------------|---------------------|----------|-----------------|---|---------------------|
| | | | | RL | | | | |
| Parameter | Flag | Cert | | Result | Uni | s | Dilution | RL |
| Benzene | Qr.Qs.U | 3 | 4 | < 0.0200 | mg/K | g | 1 | 0.0200 |
| Toluene | $Qr.Q\varepsilon, U$ | з | ~ | < 0.0200 | mg/K | g | 1 | 0.0200 |
| Ethylbenzene | Qr,Qs,U | 3 | < | < 0.0200 | mg/K | g | 1 | 0.0200 |
| Xylene | Qr,Qs,U | 3 | · · · · · · · · · · · · · · · · · · · | <0.0200 | mg/K | g | 1 | 0.0200 |
| Surrogate | Flag | g 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) | | | 1.92 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |
| Sample: 414630 - DP-S-7 (2 Laboratory: Lubbock | -3) | | | | | | | |

| Analysis: QC Batch: Prep Batch: | Chloride (IC) 128416 108739 | | Analytical Date Anal Sample Pr | | E 300.0 2016-02-23 | Prep Method: Analyzed By: Prepared By: | $\hat{\mathrm{RL}}$ |
|---------------------------------------|-----------------------------------|--------------------------|--------------------------------------|--------|-----------------------|--|---------------------|
| | | | | RL | 4 | | |
| Parameter | | $\mathbf{F}\mathbf{lag}$ | Cert | Result | Units | Dilution | RL |
| Chloride | | Qr | 1,2,4 | 55.4 | mg/Kg | 1 | 25.0 |

Sample: 414630 - DP-S-7 (2-3)

| Laboratory: Analysis: QC Batch: Prep Batch: | TPH DRO 128423 | | Analytical I Date Analy Sample Pre | zed: 2 | 5 8015 D 2016-02-24 | | Prep Method: Analyzed By: Prepared By: | JĹ |
|--|-------------------|------|--|--------|------------------------|-------|--|------|
| | | | | RL | | | | |
| Parameter | | Flag | Cert | Result | | Units | Dilution | RL |
| DRO | | В | 3 | 316 | n | ng/Kg | 1 | 50.0 |

| Report Date 15-0167-01 | : February 24, 201 | 6 | | Work Order XTO Per | | | Page Nur | nber: 6 of 24 |
|--|--|------|---------|---------------------------------------|--------------------------------------|-----------------|-------------------------------------|--------------------|
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 64.3 | mg/Kg | 1 | 50.0 | 129 | 70 - 130 |
| Sample: 41 Laboratory: Analysis: QC Batch: Prep Batch: | 4630 - DP-S-7 (: Midland TPH GRO 128397 108704 | 2-3) | Date An | al Method: alyzed: Preparation: | S 8015 D 2016-02-23 2016-02-22 | | Prep Metl Analyzed Prepared 1 | By: AK |

| | | | | | RL | | | | |
|------------------------------|------|------|------|--------|--------|----------|--------|----------|----------|
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/k | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 2.04 | mg/Kg | 1 | 2.00 | 102 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.94 | mg/Kg | 1 | 2.00 | 97 | 70 - 130 |

Sample: 414631 - DP-S-7 (3-4)

| Laboratory: Midland Analysis: BTEX QC Batch: 128396 Prep Batch: 108704 | | Analytica Date Ana Sample P | | S 8021E 2016-02 2016-02 | -23 | | Prep Method Analyzed By Prepared By: | AK |
|---|------|-----------------------------------|--------|-------------------------------|----------|-----------------|--|--------------------|
| | | | | RL | | | | |
| Parameter | Flag | Cert |] | Result | Units | 1 | Dilution | RL |
| Benzene | Qr.U | 3 | < | 0.0200 | mg/Kg | , ,) | 1 | 0.0200 |
| Toluene | Qr.U | 3 | <(| 0.0200 | mg/Kg | | 1 | 0.0200 |
| Ethylbenzene | Qr,U | 3 | <1 | 0.0200 | mg/Kg | , 3 | 1 | 0.0200 |
| Xylene | Qr,U | 3 | < | 0.0200 | mg/Kg | | 1 | 0.0200 |
| Surrogate | Fla | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | 1.79 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 70 - 130 |

| Report Date 15-0167-01 | : February 24, 20 | 16 | Work Order: 16021901 XTO Perla Negra | | | | Page Nun | nber: 7 of 24 |
|---|--|-------|--|---|--------------------------------------|-------------------------|---|--------------------------------|
| Sample: 41 | 4631 - DP-S-7 | (3-4) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 128416 108739 | | Date A | tical Method Analyzed: e Preparatio | 2016-02-1 | 23 | Prep Me Analyzec Prepared | By: RL |
| | | | | | RL | | | |
| Parameter Chloride | | Flag | Cert | Re: | sult 7.7 | Units mg/Kg | Dilution 1 | RL 25.0 |
| Laboratory: Analysis: QC Batch: Prep Batch: Parameter | Midland TPH DRO 128423 108737 | Flag | Analytical Method: S 8015 D Date Analyzed: 2016-02-24 Sample Preparation: RL Cert Result Units | | | | Prep Me Analyzed Prepared Dilution | l By: JL |
| DRO | | B,Jh | Cert 3 | | 0.0 | Units mg/Kg | 1 | 50.0 |
| Surrogate n-Tricosane | Flag | Cert | Result 39.4 | Units mg/Kg | Dilution 1 | Spike Amount 50.0 | Percent Recovery 79 | Recovery Limits 70 - 130 |
| Sample: 41 | 4631 - DP-S-7 (| (3-4) | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 128397 108704 | | Date Ana | al Method: alyzed: Preparation: | S 8015 D 2016-02-23 2016-02-22 | | Prep Meth Analyzed I Prepared I | By: AK |

| Parameter | Flag | | Cert | | RL Result | Uni | ts | Dilution | RL |
|------------------------------|------|------|------|--------|--------------|----------|--------|----------|---------------------|
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | | 1.92 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.81 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |

| Report Date: February 24, 2016 15-0167-01 | Work Order: 16021901 XTO Perla Negra | Page Number: 8 of 24 |
|--|---|----------------------|
| | | |

Sample: 414632 - DP-S-7 (4-5)

| Laboratory: Midland Analysis: BTEX QC Batch: 128396 Prep Batch: 108704 | | Date Ana | d Method: dyzed: 'reparation | S 8021I 2016-02 : 2016-02 | -23 | | Prep Method Analyzed By Prepared By | : AK |
|---|------|----------|------------------------------------|---------------------------------|----------|-----------------|---|---------------------|
| | | | | \mathbf{RL} | | | | |
| Parameter | Flag | Cert | | Result | Units | 5 | Dilution | RL |
| Benzene | Qr | 3 | < | 0.0200 | mg/Kį | <u> </u> | 1 | 0.0200 |
| Toluene | Qr | 3 | (| 0.0522 | mg/Kg | 5 | 1 | 0.0200 |
| Ethylbenzene | Qr | з | (|).0330 | mg/Kg | 7 | 1 | 0.0200 |
| Xylene | Qr | 3 | | 0.100 | mg/K | | 1 | 0.0200 |
| Surrogate | Fla | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 0 | 2.00 | mg/Kg | 1 | 2.00 | 100 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.98 | mg/Kg | 1 | 2.00 | 99 | 70 - 130 |

Sample: 414632 - DP-S-7 (4-5)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 128416 108739 | | Analytical Date Anal Sample Pr | | E 300.0 2016-02-23 | | Prep Method: Analyzed By: Prepared By: | \mathbf{RL} |
|--|--|------|--------------------------------------|--------|-----------------------|-------|--|---------------|
| | | | | RL | J | | | |
| Parameter | | Flag | Cert | Result | t | Units | Dilution | RL |
| Chloride | | Qr | 1,2,4 | <25.0 |) n | ng/Kg | 1 | 25.0 |

Sample: 414632 - DP-S-7 (4-5)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 128423 108737 | | Date Ar | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-24 | 1 | Prep Me Analyzec Prepared | l By: JĹ |
|--|--|------------------|---------|---|------------------------|-----------------|---------------------------------|--------------------|
| | | | | | RL | | | |
| Parameter | | \mathbf{F} lag | Cert | Res | ult | Units | Dilution | RL |
| DRO | | B,Jb | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recoverv | Recovery Limits |
| n-Tricosane | | | 42.7 | mg/Kg | 1 | 50.0 | 85 | 70 - 130 |

| Report Date: February 24, 2016 15-0167-01 | Work Order: 16021901 XTO Perla Negra | Page Number: 9 of 24 |
|--|---|----------------------|
| | | |

Sample: 414632 - DP-S-7 (4-5)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 128397 Prep Batch: 108704 | | | Date An | al Methoc alyzed: Preparatic | 2016-0 | 2-23 | | Prep Metho Analyzed By Prepared By | y: AK |
|--|------|------|---------|------------------------------------|--------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | | 2.01 | mg/Kg | 1 | 2.00 | 100 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 2.34 | mg/Kg | 1 | 2.00 | 117 | 70 - 130 |

Sample: 414633 - DP-S-7 (5-6)

| Laboratory: Analysis: QC Batch: Prep Batch: | Chloride (IC) 128417 | | Analytical Date Anal Sample Pi | | E 300.0 2016-02-23 | | Prep Method: Analyzed By: Prepared By: | \mathbf{RL} |
|--|-------------------------|------|--------------------------------------|--------|-----------------------|-------|--|---------------|
| | | | | RL | , | | | |
| Parameter | | Flag | Cert | Result | ; 1 | Units | Dilution | RL |
| Chloride | | | 1,2,4 | 36.6 | nı | g/Kg | 1 | 25.0 |

Sample: 414633 - DP-S-7 (5-6)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO 128423 108737 | | Date Ai | cal Method: nalyzed: Preparation: | S 8015 D 2016-02-24 | 1 | Prep Me Analyzec Prepared | l By: JĹ |
|--|--|-----------------|-------------------------|---|------------------------|--------|---------------------------------|----------|
| | | | | | RL | | | |
| Parameter | | \mathbf{Flag} | Cert | Res | sult | Units | Dilution | RL |
| DRO | | B,U | 3 | <5 | 0.0 | mg/Kg | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Tricosane | | | 47.9 | mg/Kg | 1 | 50.0 | 96 | 70 - 130 |

| Report Date: February 24, 2016 15-0167-01 | Work Order: 16021901 XTO Perla Negra | Page Number: 10 of 24 |
|--|---|-----------------------|
| | | |

Sample: 414633 - DP-S-7 (5-6)

| Laboratory: Midland Analysis: TPH GRO QC Batch: 128397 Prep Batch: 108704 | Analytical Method:S 8015 DDate Analyzed:2016-02-23Sample Preparation:2016-02-22 | | | | | | | Prep Metho Analyzed B Prepared B | y: AK |
|--|---|------|------|--------|--------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert | | Result | Uni | ts | Dilution | \mathbf{RL} |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | · | ¥ | | 2.02 | mg/Kg | 1 | 2.00 | 101 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | | 1.79 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |

Sample: 414634 - DP-S-7 (6-7)

| Laboratory: Analysis: QC Batch: Prep Batch: | Lubbock Chloride (IC) 128417 108741 | | Analytical Date Anal Sample Pr | | E 300.0 2016-02-23 | | Prep Method: Analyzed By: Prepared By: | , |
|--|--|------|--------------------------------------|--------|-----------------------|------|--|------|
| | | | | RL | | | | |
| Parameter | | Flag | Cert | Result | U | nits | Dilution | RL |
| Chloride | | | 1,2,4 | 29.3 | mg, | /Kg | 1 | 25.0 |

Sample: 414634 - DP-S-7 (6-7)

| Midland TPH DRO 128423 108737 | | Date Ar | nalyzed: | | i | Prep Me Analyzec Preparec | l By: JL |
|--|-----------------------------|---|--|---|---|--|---|
| | | | | RL | | | |
| | $\mathbf{F}\mathbf{lag}$ | Cert | Res | sult | Units | Dilution | RL |
| | B,U | 3 | <5 | 50.0 | mg/Kg | 1 | 50.0 |
| | | | | | Spike | Percent | Recovery |
| Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| | | 48.2 | mg/Kg | 1 | 50.0 | 96 | 70 - 130 |
| - | TPH DRO 128423 108737 | ТРН DRO 128423 108737 Flag _{в,υ} | TPH DRO Analytic 128423 Date An 108737 Sample Flag Cert Flag Cert Result | TPH DROAnalytical Method:128423Date Analyzed:108737Sample Preparation:FlagCertResB,U3<5 | TPH DROAnalytical Method:S 8015 D128423Date Analyzed:2016-02-24108737Sample Preparation:RLFlagCertResultB,U3<50.0 | TPH DROAnalytical Method:S 8015 D128423Date Analyzed:2016-02-24108737Sample Preparation:RLFlagCertResultUnitsB,U $3 < 50.0$ Mg/KgFlagCertResultUnitsSpikeFlagCertResultUnits | TPH DROAnalytical Method:S 8015 DPrep Method:128423Date Analyzed:2016-02-24Analyzed:108737Sample Preparation:PreparedRLFlagCertResultUnitsDilutionB,U3<50.0 |

| Report Date: February 24, 2010 15-0167-01 | | | Work Or XTO I | | Page Number: 11 of 24 | | | | |
|--|------|----------|------------------|------------------------------------|-----------------------|----------|-----------------|--|---------------------|
| Sample: 414634 - DP-S-7 (6 | -7) | | | | | | | | |
| Laboratory: Midland Analysis: TPH GRO QC Batch: 128397 Prep Batch: 108704 | | | Date An | al Methoo alyzed: Preparatio | 2016-0 | 2-23 | | Prep Metho Analyzed By Prepared By | y: AK |
| | | | | | \mathbf{RL} | | | | |
| Parameter | Flag | | Cert | | Result | Unit | s | Dilution | RL |
| GRO | U | | 3 | | <4.00 | mg/K | g | 1 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Triffuorotoluene (TFT) | | <u>v</u> | | 2.01 | mg/Kg | 1 | 2.00 | 100 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 | |

.

Method Blanks

| Method Blank (1) QC Bate | ch: 128396 | | | | | | | | |
|------------------------------|------------|--------|------------|----------|-----------|--------|----------|----------|--|
| QC Batch: 128396 | | Date A | nalyzed: | 2016-02- | 23 | | Analyzed | By: AK | |
| Prep Batch: 108704 | | QC Pr | eparation: | 2016-02- | 22 | | Prepared | By: AK | |
| | | | | | MDL | | | | |
| Parameter | Flag | | Cert | | Result | | Units | RL | |
| Benzene | ····· | | 3 | | < 0.0100 |] | ng/Kg | 0.02 | |
| Toluene | | | 3 | | < 0.0156 | I | mg/Kg | | |
| Ethylbenzene | | | 3 | | < 0.0151 | I | ng/Kg | 0.02 | |
| Xylene | | | 3 | | < 0.00430 |] | mg/Kg | 0.02 | |
| | | | | | | Spike | Percent | Recovery | |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotoluene (TFT) | Ŭ | | 1.86 | mg/Kg | 1 | 2.00 | 93 | 70 - 130 | |
| 4-Bromofluorobenzene (4-BFB) | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 70 - 130 | |

Method Blank (1) QC Batch: 128397

| QC Batch: 128397 Prep Batch: 108704 | Date Analyzed: QC Preparation: | | | 2016-02-23 2016-02-23 | | | By: AK By: AK | |
|--|-----------------------------------|------|--------|--------------------------|-------------------|-----------------|---------------------|--------------------|
| Parameter | Flag | | Cert | | ${ m MDL}$ Result | | Units | RL |
| GRO | | | 3 | | <1.76 |] | mg/Kg | 4 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | <u>_</u> | | 1.93 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.71 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |

| Method Blank (1) QC Batch | : 128416 |
|---------------------------|----------|
|---------------------------|----------|

| QC Batch: | 128416 | Date Analyzed: | 2016-02-23 | Analyzed By: | RL |
|-------------|--------|-----------------|------------|--------------|----|
| Prep Batch: | 108739 | QC Preparation: | 2016-02-23 | Prepared By: | RL |

| Report Date: Februar 15-0167-01 | eport Date: February 24, 2016 0167-01 | | | | er: 16021901 erla Negra | | Page Number: | 13 of 24 |
|--|--|--------------|--------|--------------------------|----------------------------|-------------------|--------------------------|--------------------|
| Parameter | | Flag | | Cert | | MDL Result | Units | RL |
| Chloride | | | | 1,2,4 | | <8.34 | mg/Kg | 25 |
| Method Blank (1) | QC B | atch: 128417 | | | | | | |
| QC Batch: 128417 Prep Batch: 108741 | | | | analyzed: eparation: | 2016-02-23 2016-02-23 | | Analyzed B Prepared B | |
| Parameter | | Flag | | Cert | | MDL Result | Units | RL |
| Chloride | | | | 1,2,4 | | <8.34 | mg/Kg | 25 |
| Method Blank (1) | QC B | atch: 128423 | | | | | | |
| QC Batch: 128423 Prep Batch: 108737 | | | | Analyzed: reparation: | 2016-02-24 2016-02-24 | | Analyzed E Prepared B | |
| Parameter | | Flag | | Cert | | MDL Result | Units | \mathbf{RL} |
| DRO | в | В | | 3 | | 10.8 | mg/Kg | 50 |
| Surrogate | Flag | Cert | Result | Units | Dilutio | Spike n Amount | | Recovery Limits |
| n-Tricosane | | | 54.5 | mg/Kg | 1 | 50.0 | 109 | 70 - 130 |

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

| QC Batch: | 128396 | | Ι | Date Analy | Analyzed By: AK | | | | | |
|--------------|--------|--------------|---|------------|-----------------|------|--------|-------------------------|------|------------------------|
| Prep Batch: | 108704 | | (| F | Prepared By: A | | | | | |
| | | | | | | | | | | |
| | | | | LCS | | | Spike | Matrix | | Rec. |
| Param | | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Benzene | | | 3 | 2.08 | mg/Kg | 1 | 2.00 | < 0.0100 | 104 | 70 - 130 |
| Toluene | | | 3 | 2.10 | mg/Kg | 1 | 2.00 | < 0.0156 | 105 | 70 - 130 |
| Ethylbenzene | 3 | | 3 | 2.20 | mg/Kg | 1 | 2.00 | < 0.0151 | 110 | 70 - 130 |
| Xylene | | | 3 | 6.04 | mg/Kg | 1 | 6.00 | < 0.00430 | 101 | 70 - 130 |

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

| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|--------------|--------------|--------|-------|------|--------|-----------|------|----------|-----|----------------------|
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | | 3 | 1.99 | mg/Kg | 1 | 2.00 | < 0.0100 | 100 | 70 - 130 | 4 | 20 |
| Toluene | | 3 | 2.06 | mg/Kg | 1 | 2.00 | < 0.0156 | 103 | 70 - 130 | 2 | 20 |
| Ethylbenzene | | 3 | 2.09 | mg/Kg | 1 | 2.00 | < 0.0151 | 104 | 70 - 130 | 5 | 20 |
| Xylene | | 3 | 5.97 | mg/Kg | 1 | 6.00 | < 0.00430 | 100 | 70 - 130 | 1 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|-------------------------|--------|-------|------|--------|------|------|----------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 1.96 | 1.72 | mg/Kg | 1 | 2.00 | 98 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.68 | 1.68 | mg/Kg | 1 | 2.00 | 84 | 84 | 70 - 130 |

Laboratory Control Spike (LCS-1)

| QC Batch: Prep Batch: | 128397 108704 | | | ate Analyz C Prepara | Analyzed By: AK Prepared By: AK | | | | | |
|--------------------------|----------------------|------------|--------------|-------------------------|------------------------------------|----------|---------------|-------------------------|------|----------|
| D | | R | a | LCS | TT •. | T) I) | Spike | Matrix | Đ | Rec. |
| Param | | E. | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| GRO | | | 3 | 17.7 | mg/Kg | 1 | 20.0 | <1.76 | 88 | 70 - 130 |
| Percent recov | very is based on the | spike rest | ilt. RI | PD is based | on the spil | ke and s | oike duplicat | e result. | | |

continued ...

| Report Date: February 24, 2016 15-0167-01 | | Work Order: 16021901 XTO Perla Negra | | | | | | | Page Number: 15 of 24 | | | | |
|--|------------|---|--|--|---|--|------------------------|---|-----------------------------|---|--|-------------------|--|
| control spikes continued | | | TOCD | | | 0 - 11 | | £ | | Da | <i>.</i> | | RPD |
| Param | F | С | LCSD Result | Units | Dil. | Spike Amoun | | fatrix lesult | Rec. | Re Lin | | RPD | Limit |
| | | · | LCSD | | | Spike | Ν | latrix | | Re | c. | | RPD |
| Param | F | С | Result | Units | Dil. | Amoun | | lesult | Rec. | Lin | nit | RPD | Limit |
| GRO | | 3 | 20.4 | mg/Kg | 1 | 20.0 | < | <1.76 | 102 | 70 - | 130 | 14 | 20 |
| Percent recovery is based on the | spike | resu | lt. RPD | is based or | n the sp | oike and | spike | duplica | te res | ult. | | | |
| | | | LC | S LCS | SD | | | Spil | œ | LCS | LCS | SD | Rec. |
| Surrogate | | | Resu | ult Resu | ilt I | Units | Dil. | Amo | mt | Rec. | Ree | | Limit |
| Trifluorotoluene (TFT) | | | 1.9 | | | ıg/Kg | 1 | 2.0 | | 98 | 10- | | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.7 | 4 1.9 | 3 n | ıg/Kg | 1 | 2.0 | 0 | 87 | 96 | ; í | 70 - 130 |
| QC Batch: 128416 Prep Batch: 108739 | | | | Analyzed Preparatio | | 16-02-23 16-02-23 | | | | | Analy Prepa | zed By red By | |
| Prep Batch: 108739 | | 12 | QC 1 | Preparatio LCS | on: 201 | 16-02-23 | | Spike | | latrix | Prepa | red By | 7: RL Rec. |
| Prep Batch: 108739 Param | | F | QC I | Preparatio LCS Result | on: 201 Units | 16-02-23 Dil | | Amount | F | 1atrix tesult | Prepa Re | red By c. | r: RL Rec. Limit |
| Prep Batch: 108739 Param Chloride | eniko | | QC 1 <u>C</u> 1,2,4 | Preparatio LCS Result 252 | m: 201 Units mg/Ka | 16-02-23 Dil g 1 | | Amount 250 | | 1atrix lesult <8.34 | Prepa | red By c. | r: RL Rec. Limit |
| Prep Batch: 108739 Param Chloride | spike | | QC I $\frac{C}{1,2,4}$ It. RPD | Preparatio LCS Result 252 is based of | m: 201 Units mg/Ka | 16-02-23 Dil g 1 pike and | spike | Amount 250 e duplica | | 1atrix tesult <8.34 sult. | Prepa Re 10 | red By c. | 7: RL Rec. Limit 90 - 110 |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the | Ŷ | resu | QC I C 1.2.4 It. RPD LCSD | Preparatio LCS Result 252 is based of | n: 201 Units mg/K_1 n the sp | 16-02-23 Dil g 1 pike and Spike | l <i></i> spike | Amount 250 e duplica Matrix | F < te res | latrix lesult <8.34 sult. Re | Prepa Re 10 ec. | red By | 7: RL Rec. Limit 90 - 110 RPD |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the Param | spike F | resu | QC I C 1.2.4 lt. RPD LCSD Result | Preparatio LCS Result 252 is based or Units | n: 201 Units mg/K n the sj Dil. | Dil <u>g 1</u> pike and Spike Amou | . spike e l nt l | Amount 250 e duplica Matrix Result | F te res Rec. | latrix lesult <8.34 sult. Ra Lin | Prepa Re 10 ec. mit | red By c. 1 | 7: RL Rec. Limit 90 - 110 RPD Limit |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the Param Chloride | F | resu C 1,2,4 | QC 1 <u>C</u> 1.2.4 lt. RPD LCSD Result 255 | Preparatio LCS Result 252 is based of Units mg/Kg | m: 20 Units mg/Ki n the sp Dil. | Dil Dil g 1 pike and Spike Amou 250 | spike nt | Amount 250 e duplica Matrix Result <8.34 | F ute res Rec. 102 | latrix lesult <8.34 sult. Ra Lin 90 - | Prepa Re 10 ec. | red By | 7: RL Rec. Limit 90 - 110 RPD |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the | F | C 1,2,4 resu | QC 1 <u>C</u> 1.2.4 lt. RPD LCSD Result 255 | Preparatio LCS Result 252 is based of Units mg/Kg | m: 20 Units mg/Ki n the sp Dil. | Dil Dil g 1 pike and Spike Amou 250 | spike nt | Amount 250 e duplica Matrix Result <8.34 | F ute res Rec. 102 | latrix lesult <8.34 sult. Ra Lin 90 - | Prepa Re 10 ec. mit | red By c. 1 | 7: RL Rec. Limit 90 - 110 RPD Limit |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (L | F | C 1,2,4 resu | QC I <u>C</u> 1.2.4 It. RPD LCSD Result 255 It. RPD | Preparatio LCS Result 252 is based of Units mg/Kg is based of | m: 201 <u>Units</u> mg/K ₁ n the sp <u>Dil.</u> 1 n the sp | Dil Dil g 1 pike and Spike Amou 250 | spike | Amount 250 e duplica Matrix Result <8.34 | F ute res Rec. 102 | latrix lesult <8.34 sult. Ra Lin 90 - | Re 10 ec. 110 | red By c. 1 | r: RL Rec. Limit 90 - 110 RPD Limit 20 |
| Prep Batch: 108739 Param Chloride Percent recovery is based on the Param Chloride Percent recovery is based on the Laboratory Control Spike (L | F | C 1,2,4 resu | QC I <u>C</u> 1.2.4 It. RPD LCSD Result 255 It. RPD Date | Preparatio LCS Result 252 is based of Units mg/Kg | m: 201 | Dil g 1 pike and Spike Amou 250 pike and | spike e 1 nt 1 | Amount 250 e duplica Matrix Result <8.34 | F ute res Rec. 102 | latrix lesult <8.34 sult. Ra Lin 90 - | Prepa Re 10 ec. 110 Analy | red By | r: RL Rec. Limit 90 - 110 RPD Limit 20 |

| | | | | LCS | | | Spike | Matrix | | Rec. |
|----------|--|--------------|-------|--------|-------|------|--------|--------|------|----------|
| Param | | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Chloride | | | 1,2,4 | 257 | mg/Kg | 1 | 250 | <8.34 | 103 | 90 - 110 |
| ~ | | - 1 | | | | | | | | |

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

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|--|---|-------|--------|---------------|------------------|--------|--------|------|----------|----------------------|----------|
| control spikes continued | | | | | | N 1 | | | | | |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F | C | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | | 1,2.4 | 257 | mg/Kg | 1 | 250 | <8.34 | 103 | 90 - 110 | 0 | 20 |

Laboratory Control Spike (LCS-1)

.

| QC Batch: 128423 Prep Batch: 108737 | | | | e Analyze Preparati | | 16-02-24 16-02-24 | | | | e | ed By red By | |
|---|------------------|----------------|----------------------------------|-----------------------------------|---------|------------------------|--|------------------------|----------------------------------|-----------|-------------------------|--------------------|
| Param | | F | С | LCS Result | Units | Dil. | Spike Amount | | trix sult | Rec. | | Rec. Limit |
| DRO | | | 3 | 235 | mg/Kg | 1 | 250 | 1(| 0.8 | 90 | 7 | 70 - 130 |
| | n the onle | noon | 1+ DDD | in bonne (| <u></u> | | | ງ10 ກວຍນ | | | | |
| Percent recovery is based o Param | n the spike F | С | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | t I | $\frac{\text{RPD}}{13}$ | RPD Limit 20 |
| Percent recovery is based o | F | C3 | LCSD Result 206 | Units mg/Kg | Dil. | Spike Amount 250 | Matrix Result 10.8 | Rec. 78 | Rec. Limit 70 - 13 | t I | | |
| Percent recovery is based o Param DRO | F | C 3 resu | LCSD Result 206 | Units mg/Kg is based o | Dil. | Spike Amount 250 | Matrix Result 10.8 | Rec. 78 | Rec. Limit 70 - 13 | t I | | Limit |
| Percent recovery is based o Param DRO | F n the spike | C 3 resu | LCSD Result 206 lt. RPD | Units mg/Kg is based o D | Dil. | Spike Amount 250 | Matrix Result 10.8 pike duplica | Rec. 78 ate resu | Rec. Limit 70 - 13 Ilt. | t I 30 | | Limit 20 |

Matrix Spikes

| Matrix Spike | (MS-1) | Spiked Sample: 414630 |
|--------------|--------|-----------------------|
|--------------|--------|-----------------------|

| QC Batch: | 128396 | Date Analyzed: | 2016-02-23 | Analyzed By: | AK |
|-------------|--------|-----------------|------------|--------------|----|
| Prep Batch: | 108704 | QC Preparation: | 2016-02-22 | Prepared By: | AK |

| | | | | MS | | | Spike | Matrix | | Rec. |
|--------------|-----|----|---|--------|-------|------|--------|-------------------------|------|----------|
| Param | | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Benzene | Qti | Qs | 3 | 0.698 | mg/Kg | 1 | 2.00 | < 0.0100 | 35 | 70 - 130 |
| Toluene | Qs | Qs | 3 | 0.819 | mg/Kg | 1 | 2.00 | < 0.0156 | 41 | 70 - 130 |
| Ethylbenzene | Qs | Qs | 3 | 0.864 | mg/Kg | 1 | 2.00 | < 0.0151 | 43 | 70 - 130 |
| Xylene | Qs | Qs | 3 | 2.40 | mg/Kg | 1 | 6.00 | < 0.00430 | 40 | 70 - 130 |

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

| | | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|-------|--------------|---|--------|-------|------|--------|-------------------------|------|------------------------|-----|----------------------|
| Param | | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | Qr,Qs | Qr,Qs | 3 | 1.29 | mg/Kg | 1 | 2.00 | < 0.0100 | 64 | 70 - 130 | 60 | 20 |
| Toluene | Qr | Qr | 3 | 1.40 | mg/Kg | 1 | 2.00 | < 0.0156 | 70 | 70 - 130 | 52 | 20 |
| Ethylbenzene | Qr | Qr | 3 | 1.61 | mg/Kg | 1 | 2.00 | < 0.0151 | 80 | 70 - 130 | 60 | 20 |
| Xylene | Qr | Qr | 3 | 4.58 | mg/Kg | 1 | 6.00 | < 0.00430 | 76 | 70 - 130 | 63 | 20 |

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

| | MS | MSD | | | Spike | MS | MSD | Rec. |
|------------------------------|-------------------------|--------|-------|------|--------|------|------|----------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 1.92 | 1.82 | mg/Kg | 1 | 2 | 96 | 91 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.97 | 1.86 | mg/Kg | 1 | 2 | 98 | 93 | 70 - 130 |

Matrix Spike (MS-1) Spiked Sample: 414630

| QC Batch: Prep Batch: | 128397 108704 | | |)ate Analyz)C Prepara | ed: 2016 tion: 2016 | -02-23 -02-22 | | | | By: AK By: AK |
|--------------------------|------------------|----|---|---------------------------|------------------------|------------------|-----------------|------------------|------|------------------|
| Param | | F | С | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
| GRO | | ×. | 3 | 19.3 | mg/Kg | 1 | 20.0 | <1.76 | 96 | 70 - 130 |

continued ...

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|--|---------------------------|------------------------------------|--|---|--|--|---|---|--|--|---|
| matrix spikes continued | | | MSD | | | Spike | Matriz | - | Rec | 、 | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | | Lim | | Limit |
| | | | | | | | | | n | | |
| Param | F | С | MSD Result | Units | Dil. | Spike Amount | Matri: Result | | Rec Lim | | RPD Limit |
| GRO | - | 3 | 15.8 | mg/Kg | 1 | 20.0 | <1.76 | | 70 - 1 | | 20 |
| Percent recovery is based on the s | spike | | | | n the s | | | | | | |
| v | 1 | | | | | 1 | | | | MOD | Dee |
| Surrogate | | | M Res | | | Units | | Spike .mount | MS Rec. | MSD Rec. | Rec. Limit |
| Trifluorotoluene (TFT) | | | 1.9 | | | mg/Kg | 1 | 2 | $\frac{100}{100}$ | 98 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.9 | | | mg/Kg | 1 | 2 | 98 | 84 | 70 - 130 |
| | | | | | | | | | fa tuis | | |
| Param | | F | C | MS Result | Unit | e Dil | Spi Amo | | latrix esult | Rec | Rec. Limit |
| ר ו 1 ^{יי} | | F | C | Result | Unit mg/I | | Spi Amo 25 | unt R | tesult 64.1 | Rec. | Limit |
| Chloride c | ₂₅ spike | Qs | 1,2,4 | Result 485 | mg/I | ۲g 1 | Amo 25 | unt R D | tesult 64.1 | | Limit |
| Chloride c | | Qs | 1,2,4 t. RPD | Result 485 is based or | mg/I | \sqrt{g} 1 spike and s | Amo 25 spike dup | unt R D licate res | tesult 64.1 ult. | 168 | Limit 80 - 120 |
| Chloride c Percent recovery is based on the s | spike | _{Qs} resul | 1,2,4 t. RPD MSD | Result 485 is based of | mg/H n the s | Kg 1 spike and s Spike | Amo 25 spike dup Matr | unt R D licate res ix | tesult 64.1 ult. Re | 168 c. | Limit 80 - 120 RPD |
| Chloride c Percent recovery is based on the s Param | | Qs | 1,2,4 t. RPD MSD Resul | Result 485 is based of | mg/ł n the s Dil | Kg 1 spike and s Spike | Amo 25 spike dup Matr | unt R D licate res ix lt Rec. | tesult 64.1 ult. | 168 c. nit RPE | Limit 80 - 120 RPD |
| Chloride c Percent recovery is based on the s Param Chloride Qr Percent recovery is based on the s | spike F Qr spike | Qs resul C 1,2.4 resul | 1,2,4 t. RPD MSD Resul 301 t. RPD | Result 485 is based or t Units mg/Kg | mg/H n the s Dil g 1 | <u>لاح 1</u> Spike and s Spike Amoun 250 | Amo 25 spike dup Matr at Resu 64.1 | unt R D licate res ix lt Rec. 95 | tesult 64.1 ult. Re Lin 80 - | 168 c. nit RPE | Limit 80 - 120 RPD Limit |
| Chloride c Percent recovery is based on the s Param Chloride Qr Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 128417 | spike F Qr spike | Qs resul C 1,2.4 resul | 1,2,4 t. RPD MSD Resul 301 t. RPD 414767 Date | Result 485 is based or t Units mg/Kg | $\frac{mg/H}{Dil}$ n the s g 1 n the s | <u>لاح 1</u> Spike and s Spike Amoun 250 | Amo 25 spike dup Matr at Resu 64.1 | unt R D licate res ix lt Rec. 95 | esult 64.1 ult. Re Lim 80 - ult. | 168 c. nit RPE | Limit 80 - 120 RPD Limit 20 |
| Percent recovery is based on the s Param Chloride Qr Percent recovery is based on the s Matrix Spike (MS-1) Spiked QC Batch: 128417 | spike F Qr spike | Qs resul C 1,2.4 resul | 1,2,4 t. RPD MSD Resul 301 t. RPD 414767 Date | Result 485 is based or t Units mg/Kg is based or Analyzed | $\frac{mg/H}{Dil}$ n the s g 1 n the s | Xg 1 spike and s Spike . Amoun 250 spike and s Spike and s . 16-02-23 16-02-23 | Amo 25 spike dup Matr at Resu 64.1 | unt R D licate res ix lt Rec. 95 licate res | esult 64.1 ult. Re Lim 80 - ult. | 168 c. nit RPE 120 47 Analyzed I | Limit 80 - 120 RPD Limit 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 | | | | | | | | | _ | | |
| Denom | 12 | a | MSD | ΥΥ | ۲ <u>٦</u> ٠1 | Spike | Matrix | D | Rec. | מממ | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Chloride | Qs Qs | 1,2,4 | 8670 | mg/Kg | 50 | 250 | 7510 | 464 | 80 - 120 | 6 | 20 |
| Percent recovery is based on Matrix Spike (xMS-1) | the spike Spiked Sa | | | based on | the sp | ike and spi | ke duplica | ate resu | iit. | | |
| QC Batch: 128423 Prep Batch: 108737 | | | | Analyzed: reparation | - | 6-02-24 6-02-24 | | | | lyzed B bared B | |

| | | | ${ m MS}$ | | | Spike | Matrix | | Rec . |
|-------|--------------|---|-----------|-------|------|--------|--------|------|------------------------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| DRO | | 3 | 212 | mg/Kg | 1 | 250 | 8.56 | 81 | 70 - 130 |

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

| Param | F | С | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---------------------------------------|-------------------------------|---|--------------------------|-------|-----------------|---------------------|--------------------------------|--------------------|---------------|-----|---------------|
| DRO | | 3 | 200 | mg/Kg | 1 | 250 | 8.56 | 76 | 70 - 130 | 6 | 20 |
| | | | | | | | | | | | |
| Percent recovery is base | - | | | | n the s | pike and sp | - | | | D | Rec |
| Percent recovery is base Surrogate | ed on the spike m M Res | S | lt. RPD i MSI Resu |) | n the s nits | pike and sp Dil. | oike duplic Spike Amount | ate res M Re | IS MS | | Rec. Limit |

Calibration Standards

Standard (CCV-1)

| QC Batch: 128396 | | | Analy | zed By: AK | | | | |
|------------------|------|------|-------|------------|--------|----------|----------|------------|
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 3 | mg/kg | 0.100 | 0.0984 | 98 | 80 - 120 | 2016-02-23 |
| Toluene | | 3 | mg/kg | 0.100 | 0.101 | 101 | 80 - 120 | 2016-02-23 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.104 | 104 | 80 - 120 | 2016-02-23 |
| Xylene | | 3 | mg/kg | 0.300 | 0.288 | 96 | 80 - 120 | 2016-02-23 |

Standard (CCV-2)

| QC Batch: 128396 | | | Date An | alyzed: 20 | Analyzed By: AK | | | |
|------------------|------|-----------------------|---------|------------|-----------------|----------|----------|------------|
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 3 | mg/kg | 0.100 | 0.100 | 100 | 80 - 120 | 2016-02-23 |
| Toluene | | 3 | mg/kg | 0.100 | 0.0999 | 100 | 80 - 120 | 2016-02-23 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.100 | 100 | 80 - 120 | 2016-02-23 |
| Xylene | | 3 | mg/kg | 0.300 | 0.284 | 95 | 80 - 120 | 2016-02-23 |

Standard (CCV-1)

| QC Batch: | 128397 | | Date | Analyzed: | 2016-02-23 | | Analy | zed By: AK |
|-----------|--------|------|-------|-----------------------|------------|----------|----------|------------|
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | 3 | mg/Kg | 1.00 | 1.03 | 103 | 80 - 120 | 2016-02-23 |

Standard (CCV-2)

QC Batch: 128397

Date Analyzed: 2016-02-23

Analyzed By: AK

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|---|---|------------------------|---|---|---|--|--|--|--|--|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed | | |
| GRO | | 3 | mg/Kg | 1.00 | 0.803 | 80 | 80 - 120 | 2016-02-23 | | |
| Standard (C | CV-1) | | | | | | | | | |
| QC Batch: 12 | 28416 | | Date | Analyzed: | 2016-02-23 | | Analy | rzed By: RL | | |
| Param | 171 | | ۲ ۲ ۱ | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed | | |
| | | 1 2321 | | | COIRC. | TUCCOVELY | LAIIIIUS | Mhaiyzeu | | |
| Chloride | Flag | Cert 1,2.4 | Units mg/Kg | 25.0 | 25.5 | 102 | 90 - 110 | 2016-02-23 | | |
| | CV-2) | | mg/Kg | | | | 90 - 110 | 2016-02-23 vzed By: RL | | |
| Chloride Standard (CC | CV-2) | | mg/Kg | 25.0 | 25.5 | | 90 - 110 | | | |
| Chloride Standard (CC QC Batch: 12 Param | CV-2) | | mg/Kg Date Units | 25.0 Analyzed: CCVs True Conc. | 25.5 2016-02-23 CCVs Found Conc. | 102 CCVs Percent Recovery | 90 - 110 Analy Percent Recovery Limits | zed By: RL Date Analyzed | | |
| Chloride Standard (CC QC Batch: 12 | C V-2) 28416 | 1,2.4 | mg/Kg Date | 25.0 Analyzed: CCVs True | 25.5 2016-02-23 CCVs Found | 102 CCVs Percent | 90 - 110 Analy Percent Recovery | vzed By: RL Date | | |
| Chloride Standard (CC QC Batch: 12 Param | C V-2) 28416 Flag | 1,2.4 Cert | mg/Kg Date Units | 25.0 Analyzed: CCVs True Conc. | 25.5 2016-02-23 CCVs Found Conc. | 102 CCVs Percent Recovery | 90 - 110 Analy Percent Recovery Limits | zed By: RL Date Analyzed | | |
| Chloride Standard (CC QC Batch: 12 Param Chloride | CV-2) 28416 Flag CV-1) | 1,2.4 Cert | mg/Kg Date Units mg/Kg | 25.0 Analyzed: CCVs True Conc. | 25.5 2016-02-23 CCVs Found Conc. | 102 CCVs Percent Recovery | 90 - 110 Analy Percent Recovery Limits 90 - 110 | zed By: RL Date Analyzed | | |
| Chloride Standard (CC QC Batch: 12 Param Chloride Standard (CC QC Batch: 12 | CV-2) 28416 Flag CV-1) 8417 |),2.4 Cert),2.4 | mg/Kg Date Units mg/Kg Date | 25.0 Analyzed: CCVs True Conc. 25.0 Analyzed: CCVs True | 25.5 2016-02-23 CCVs Found Cone. 25.4 2016-02-23 CCVs Found | 102 CCVs Percent Recovery 102 CCVs Percent | 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy Percent Recovery | vzed By: RL Date Analyzed 2016-02-23 vzed By: RL Date | | |
| Chloride Standard (CC QC Batch: 12 Param Chloride Standard (CC | CV-2) 28416 Flag CV-1) | 1,2.4 Cert | mg/Kg Date Units mg/Kg | 25.0 Analyzed: CCVs True Conc. 25.0 Analyzed: CCVs | 25.5 2016-02-23 CCVs Found Conc. 25.4 2016-02-23 CCVs | 102 CCVs Percent Recovery 102 CCVs | 90 - 110 Analy Percent Recovery Limits 90 - 110 Analy Percent | vzed By: RL Date Analyzed 2016-02-23 | | |

Standard (CCV-2)

QC Batch: 128417

Date Analyzed: 2016-02-23

Analyzed By: RL

| Report Date: February 24, 2016 15-0167-01 | | | | Work Or XTO I | Page Number: 22 of 24 | | | |
|--|---------|-------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Chloride | | 1,2,4 | mg/Kg | 25.0 | 25.7 | 103 | 90 - 110 | 2016-02-23 |
| Standard | | | | 4 1 Y | | | | |
| QC Batch: | 128423 | | Date | Analyzed: CCVs | 2016-02-24 CCVs | CCVs | Anal Percent | yzed By: JL |
| Param | Flag | Cert | Units | True Conc. | Found Conc. | Percent Recovery | Recovery Limits | Date Analyzed |
| DRO | | 3 | mg/Kg | 250 | 224 | 90 | 80 - 120 | 2016-02-24 |
| Standard (| (CCV-2) | | | | | | | |
| QC Batch: | 128423 | | Date | Analyzed: | 2016-02-24 | | Anal | yzed By: JL |
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |

250

208

83

80 - 120

2016-02-24

Units mg/Kg

Param DRO

3

Appendix

Report Definitions

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

Laboratory Certifications

| | Certifying | Certification | Laboratory |
|---|------------|---------------------|---------------|
| С | Authority | Number | Location |
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| - | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | LELAP | LELAP-02003 | Lubbock |
| 2 | NELAP | T104704219-15-11 | Lubbock |
| 3 | NELAP | T104704392-14-8 | Midland |
| 4 | | 2015-066 | 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

Work Order: 16021901 XTO Perla Negra

Attachments

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

| CHAIN-OF-CUSTODY | AB WC Per | | 11000000000000000000000000000000000000 | 50 15 15 15 15 15 15 15 15 15 15 15 15 15 | | | 633 | 633 | 634 | 4 635 | | | | | LABORATORY USE ONLY: RECEIVING TEMP: U-7 THERM #: T-12 | | C CARRIER BILL # | of manufactory and the second of the second |
|------------------|---|--------------|---|--|-----------------|---------------------|----------|----------|-------------|-----------------------|--|------|--|-------|---|---------------------------------|------------------------------|---|
| | DATE: 2/18/20 PO #: PROJECT LOCATION O LAI PROJECT #: 15-0 | | 101 C 0100 11 410 C 0100 11 401 C 0100 11 401 C 0100 100 | | | | | | | | | | | | | | Ź | I OF |
| | 507 N. Marienfeld, Ste. 200 Midland, TX 79701 432-687-0901 | PRESERVATION | K∧ED ∕I®OH □ | ♦ A A H ⁵ 20 ⁴ ☐ 1 HCI HCI # of Contai | | | | | | | | | | | REGENER BY (Signature) | | RECEIVED BY: (Signature) | on 414630-34 as |
| 04°1100190 | | ĒR | R OT=OTHER | # Date Time Matrix | 2-18-16 10:25 S | | 10:30 | | | \uparrow \uparrow | | | | | 2/19/16 | 0/19/16 8:36 | ure) DATE/TIME | 414620,31,32 AWN 744 C |
| Ĵ.Μ | A drson & hc. Environmental Consultants Data Reported to: | | | Field Sample I.D. | OP-S-7 (Z-3) | ¹¹ (3-4) | ۳ "(۲+5) | " "(S-6) | (L-9)), , , | (S~L), ,, | | | | TOTAL | REL/NOU/SHED SY: (Signature) | North Contraction of the second | RELINQUISHED BY: (Signature) | VIIN RTEX ON 4141 |

| CHAIN-OF-CLISTODY | ABWO | 10000000000000000000000000000000000000 | LABORATORY USE ONLY: RECEIVING TEMP: 4 THERM #: 4 CUSTODY SEALS - BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CUSTODY SEALS - D BROKEN D INTACT D NOT USED CORRIER BILL # ZT 453083 4 CIVILIA |
|-------------------|---|--|---|
| | DATE: 2/18/2016 PO #: PROJECT LOCATION OR NAM LAI PROJECT #: 15-016 7- | | TURN AROUND TIME NORMAL & 1 DAY] 2 DAY] 0THER] 0THER] |
| | 507 N. Marienfeld, Ste. 200 Midland, TX 79701 432-687-0901 | | ELVED BY: (Signature) EIVED BY: (Signature) SEIVED BY: (Signature) Acord A Uoud 4/14/630-34 05) |
| 071:1003190 | S, Inc. | THER TIME | Z/19116 BATE/TIME 2/19116 8:26 2/19116 8:36 DATE/TIME DATE/TIME 2/23/14 9 |
| M | A drson & Ssociates, Inc. Environmental Consultants Data Reported to: | TRRP report? | OUNSHED BY |



6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite At (BioAquatic) 2501 Mayes Rd., Suite 100

Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 Carrolaon, Texas 75006

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800-378-1296 806-794-1296 915-585-3443 432+689+6301 972-242-7750

FAX 806+794+1298 FAX 915+585+4944 FAX 432+689+6313

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Travis Williams Larson and Associates, Inc.

Report Date: April 29, 2016

P. O. Box 50685 Midland, TX, 79710 Work Order: 16042626

Project Name: XTO Perla Negra Project Number: 15-0167-01

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

| | | | Date | Time | Date |
|--------|-------------|-------------------------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 418124 | S-7 (0-1) | soil | 2016-04-26 | 00:00 | 2016-04-26 |
| 418125 | S-7 (1-2) | soil | 2016-04-26 | 00:00 | 2016-04-26 |

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

Blain Leptinich F

Dr. Blair Leftwich, Director James Taylor, Assistant Director Johnny Grindstaff, Operations Manager

Report Contents

| Case Narrative | 4 |
|---|--------------------|
| Analytical Report Sample 418124 (S-7 (0-1)) Sample 418125 (S-7 (1-2)) | |
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| Laboratory Control Spikes QC Batch 129780 - LCS (1) QC Batch 129787 - LCS (1) | 8 8 8 |
| Matrix Spikes QC Batch 129780 - xMS (1) QC Batch 129787 - MS (1) | 9 9 9 |
| Calibration Standards 1 QC Batch 129780 - CCV (1) | 10 10 |
| Appendix | $\frac{11}{11}$ |

Case Narrative

Samples for project XTO Perla Negra were received by TraceAnalysis, Inc. on 2016-04-26 and assigned to work order 16042626. Samples for work order 16042626 were received intact at a temperature of 6.0 C.

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

| | | Prep | Prep | $\rm QC$ | Analysis |
|---------|----------|-----------------------|-----------------------|----------|---------------------|
| Test | Method | Batch | Date | Batch | Date |
| TPH DRO | S 8015 D | 109942 | 2016-04-27 at 14:00 | 129780 | 2016-04-28 at 15:18 |
| TPH GRO | S 8015 D | 109951 | 2016-04-28 at $15:02$ | 129787 | 2016-04-28 at 15:02 |

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 16042626 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: 418124 - S-7 (0-1)

| Laboratory: Analysis: QC Batch: Prep Batch: | sis: TPH DRO atch: 129780 | | Date An | al Method: alyzed: Preparation: | S 8015 D 2016-04-28 2016-04-23 | - | Prep Me Analyze Prepare | d By: HJ | |
|--|------------------------------|------|---------|---------------------------------------|--------------------------------------|------------|-------------------------------|---------------------|--------------------|
| Parameter | | | Flag | Cert | Res | RL sult | Units | Dilution | RL |
| DRO | | | | 1, 2.3, 4 | 81 | .40 | mg/Kg | 5 | 50.0 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qsr | Qsr | 3 | 325 | mg/Kg | 5 | 25.0 | 1300 | 58.2 - 150 |

Sample: 418124 - S-7 (0-1)

| Laboratory: Lubbock Analysis: TPH GRO QC Batch: 129787 Prep Batch: 109951 | | Ι | Date Ana | al Method alyzed: Preparatio | 2016-0 | 4-28 | | Prep Metho Analyzed E Prepared B | By: ST |
|--|------|------|----------|------------------------------------|---------------------|----------|-----------------|--|--------------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | | | 1,2,3,4 | | 878 | mg/K | g | 10 | 4.00 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | Qsr | Qsr | 3 | 1.28 | mg/Kg | 10 | 2.00 | 64 | 76.4 - 123 |
| 4-Bromofluorobenzene (4-BFB) | Qsr | Qsr | 3 | 35.7 | mg/Kg | 10 | 2.00 | 1785 | 69.4 - 120 |

Sample: 418125 - S-7 (1-2)

| Laboratory: | Lubbock | | | | |
|-------------|---------|---------------------|------------|--------------|------------|
| Analysis: | TPH DRO | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 129780 | Date Analyzed: | 2016-04-28 | Analyzed By: | HJ |
| Prep Batch: | 109942 | Sample Preparation: | 2016-04-27 | Prepared By: | $_{ m HJ}$ |

| Report Date: April 29, 2016 15-0167-01 | | | | Ŵ | Page Number: 6 of 12 | | | | |
|---|-----|------|------|---------|----------------------|----------|-----------------|---------------------|--------------------|
| Parameter | | | Flag | Cert | Res | RL | Units | Dilution | RL |
| DRO | | | | 1,2,3,4 | 40 | 90 | mg/Kg | 1 | 50.0 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qsr | Qsr | 3 | 173 | mg/Kg | 1 | 25.0 | 692 | 58.2 - 150 |

Sample: 418125 - S-7 (1-2)

| Laboratory: Lubbock Analysis: TPH GRO QC Batch: 129787 Prep Batch: 109951 | | Analytical Method:S 8015 DDate Analyzed:2016-04-28Sample Preparation:2016-04-28 | | | | | | Prep Methe Analyzed I Prepared B | By: ST |
|--|------------------|---|---------|--------|--------|----------|--------|--|------------|
| | | | | | RL | | | | |
| Parameter | Flag | | Cert |] | Result | Uni | ts | Dilution | RL |
| GRO | Qs | | 1,2,3,4 | | 1030 | mg/K | g | 10 | 4.00 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | Qsr | Qsr | 3 | 1.42 | mg/Kg | 10 | 2.00 | 71 | 76.4 - 123 |
| 4-Bromofluorobenzene (4-BFB |) _{Qsr} | Qsr | 3 | 38.3 | mg/Kg | 10 | 2.00 | 1915 | 69.4 - 120 |

Method Blanks

| n-Tricosane | | | 3 | 21.5 | mg/Kg | 1 | 25.0 | 86 | 58.2 - 150 |
|--|---------|------|------------|--------|--------------------------|--------------------------|-----------------|---------------------|--------------------------|
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| DRO | | | | | 1,2,3,4 | < | 8.47 | mg/Kg | 50 |
| Parameter | | | Fla | ng | Cert | | MDL esult | Units | RL |
| QC Batch: 129780 Prep Batch: 109942 | | | | | Analyzed: reparation: | 2016-04-28 2016-04-27 | | • | zed By: HJ red By: HJ |
| Method Bl | ank (1) | QC I | 3atch: 129 | 780 . | | | | | |

| Method Blank | (1) | QC Batch: 129787 |
|--------------|-----|------------------|
|--------------|-----|------------------|

| QC Batch: 129787 Prep Batch: 109951 | | | Analyzed: reparation: | 2016-04- 2016-04- | - | | ed By: ST d By: ST | |
|--|------|--------|--------------------------|----------------------|---------------|-----------------|-----------------------|--------------------------|
| Parameter | Flag | | Cert | | MDL Result | | Units | RL |
| GRO | | | 1,2,3,4 | | < 0.271 | | mg/Kg | 4 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | | 3 3 | $2.11 \\ 2.15$ | mg/Kg mg/Kg | 1 1 | 2.00 2.00 | 106 108 | 76.4 - 123 69.4 - 120 |

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

| QC Batch: 129780 Prep Batch: 109942 | | | Analyzed: reparation | | 6-04-28 6-04-27 | | | | yzed By ared By | |
|--|--------------|------------|-------------------------|---------------|--------------------|-------------|---------|------------------------|--------------------|------------------------|
| | |] | LCS | | | Spike | Ma | atrix | | Rec. |
| Param | F | C R | esult | Units | Dil. | Amount | Re | esult Rec | . 1 | Limit |
| DRO | | 1,2.3.4 | 494 r | ng/Kg | 1 | 500 | < | 8.47 99 | 68 | .5 - 136 |
| Percent recovery is based on the | spike resu | lt. RPD is | based on | the sp | ike and s | pike duplic | ate res | sult. | | |
| | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F C | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | 1,2,3,4 | 500 | mg/Kg | 1 | 500 | <8.47 | 100 | 68.5 - 136 | 1 | 20 |
| Percent recovery is based on the | spike resu | t. RPD is | based on | the sp | ike and s | pike duplic | ate res | ult. | | |
| | LCS | LCSD | | | | Spike | LCS | LCSD | | Rec. |
| Surrogate | Result | Result | Units | S | Dil. | Amount | Rec | | | Limit |
| n-Tricosane 3 | 25.8 | 25.9 | mg/K | | 1 | 25.0 | 103 | | | .2 - 150 |
| QC Batch: 129787 Prep Batch: 109951 | | QC Pi | Analyzed: reparation | | 6-04-28 6-04-28 | 6 H | | Prep | yzed Bj ared By | 7: ST |
| Davam | \mathbf{F} | | LCS | 17 • 4 | 12.1 | Spike | | atrix De | | Rec. |
| Param GRO | | | | Units | Dil. | Amount | | esult Rea | | Limit |
| | | | | ng/Kg | | 20.0 | |).271 94 | 04 | .2 - 120 |
| Percent recovery is based on the | spike resul | it. RPD is | based on | the sp | ike and s | pike duplic | ate res | sult. | | |
| | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | F C | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| GRO | 1,2,3,4 | 19.3 | mg/Kg | 1 | 20.0 | < 0.271 | 96 | 64.2 - 120 | 2 | 20 |
| Percent recovery is based on the | spike resul | t. RPD is | based on | the sp | ike and s | pike duplic | ate res | sult. | | |
| | | LCS | LCSD | | | Spik | e | LCS LCS | D | Rec. |
| Surrogate | | Result | | U | nits D | il. Amou | | Rec. Rec | | Limit |
| Trifluorotoluene (TFT) | | 1.96 | 1.96 | | | 1 2.00 | | 98 98 | | .4 - 123 |
| 4-Bromofluorobenzene (4-BFB) | | 3 2.22 | 2.22 | | | 1 2.00 | | 111 111 | | .4 - 120 |
| · ···· · · · · · · · · · · · · · · · · | | | | | | | | | | |

Matrix Spikes

4-Bromofluorobenzene (4-BFB)

| Matrix Spike (xMS-1) |) Spil | ked Sa | ample | : 418218 | | | | | | | | |
|--|----------|--------|--------------|----------|------------------------|----------|----------------------|-----------------|------------------|------------|---------------------|----------------------------|
| QC Batch: 129780 Prep Batch: 109942 | | | | | Analyzed 'reparatio | | 16-04-28 16-04-27 | | | | alyzed I pared I | |
| | | | | _ | MS | | | Spike | | trix | | Rec. |
| Param DRO | | | 2 | | Result | Units | Dil. | Amount | | | ec. | Limit |
| | | | | ,2,3,4 | | mg/Kg | - | 500 | | | 02 4 | 9.3 - 138 |
| Percent recovery is based | l on the | spike | result | . RPD i | s based or | ı the sj | oike and s | pike duplic | eate res | ult. | | |
| | | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | | F | \mathbf{C} | Result | Units | Dil. | Amount | | Rec. | Limit | RPI | |
| DRO | | | 1,2,3,4 | 560 | mg/Kg | 1 | 500 | 47.6 | 102 | 49.3 - 138 | 3 0 | 20 |
| Percent recovery is based | on the | spike | result | . RPD i | s based or | 1 the s | oike and s | pike duplic | cate res | ult. | | |
| | | Μ | | MSD | | | | | | | ~ | Dee |
| Surrogate | | Res | | Result | : Un | *** | Dil. | Spike Amount | MS Rec | | | Rec. Limit |
| n-Tricosane | 3 | 28 | | 28.3 | mg/ | | 1 | 25 | 112 | | | $\frac{1.1111}{8.2 - 150}$ |
| QC Batch: 129787 Prep Batch: 109951 | - | | - | | Analyzed reparatio | | 16-04-28 16-04-28 | | | | alyzed I pared I | v |
| | | | | | | | | | | | | |
| ** | | | | | MS | | | Spike | | atrix | | Rec. |
| Param | | | F | | Result | Units | | Amoun | | | ec. | Limit |
| GRO | | | •••• | 1,2.3,4 | 1120 | mg/K | | 20.0 | | | 50 3 | 5.3 - 129 |
| Percent recovery is based | on the | spike | result | . RPD is | s based or | n the sj | oike and s | pike duplic | cate res | ult. | | |
| | | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | | F | С | Result | Units | Dil. | Amount | | Rec. | Limit | RPI | |
| GRO | Qs | Qs | 1,2,3,4 | 976 | mg/Kg | | 20.0 | 1030 | -270 | 35.3 - 12 | | 20 |
| Percent recovery is based | on the | spike | result | . RPD is | | | oike and s | pike duplic | cate res | ult. | | |
| | | | | | | | | | | | (CT) | D. |
| Surrogate | | | | M Res | | | Thite | | oike ount | | ISD lec. | Rec. Limit |
| Trifluorotoluene (TFT) | | | | 3 1.0 | | | Units ng/Kg | | $\frac{0000}{2}$ | | | $\frac{1}{6.4 - 12}$ |
| imagious (ii i) | 107701 | | | 3 1.0 | | | 116/ 1 1 8 | | 4 | | 02 (| 0.9 - 12 |

 $\mathbf{2}$

1960

1700

69.4 - 120

mg/Kg

10

3

 $\mathbf{Q}\mathbf{sr}$

Qsr

39.2

34.0

Calibration Standards

Standard (CCV-1)

| QC Batch: | 129780 | | Date | Analyzed: | 2016-04-28 | | Analyzed By: HJ | | |
|-------------------------|--------------------------|---------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|--|
| 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 | 500 | 501 | 100 | 80 - 120 | 2016-04-28 | |
| Standard (QC Batch: | C CV-2) 129780 | | Date | Analyzed: | 2016-04-28 | | Analy | yzed By: HJ | |
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | |
| DRO | | 1,2,3,4 | mg/Kg | 500 | 524 | 105 | 80 - 120 | 2016-04-28 | |

Standard (CCV-1)

| QC Batch: | 129787 | | Date | Analyzed: | 2016-04-28 | | Analyzed By: ST | | | |
|-----------|--------|---------|-------|-----------|------------|----------|-----------------|------------|--|--|
| | | | | CCVs | CCVs | CCVs | Percent | | | |
| | | | | True | Found | Percent | Recovery | Date | | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | | |
| GRO | | 1,2,3,4 | mg/Kg | 1.00 | 1.14 | 114 | 80 - 120 | 2016-04-28 | | |

Standard (CCV-2)

| QC Batch: 129787 | | | Date | Analyzed: | 2016-04-28 | | Analyzed By: ST | | |
|------------------|------|---------|-------|--------------|---------------|-----------------|---------------------|------------|--|
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | |
| GRO | | 1.2,3,4 | mg/Kg | 1.00 | 1.00 | 100 | 80 - 120 | 2016-04-28 | |

Appendix

Report Definitions

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

Laboratory Certifications

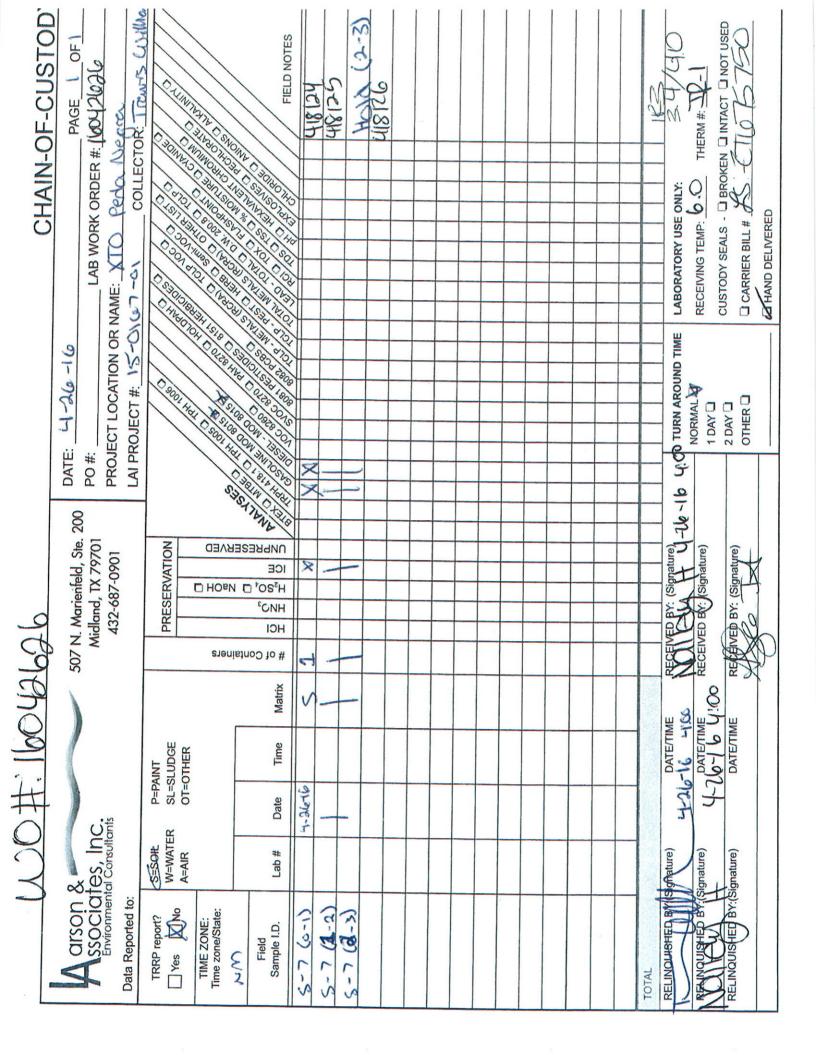
| | Certifying | Certification | Laboratory |
|----------|------------|---------------------|---------------|
| С | Authority | Number | Location |
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| - | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | L-A-B | L2418 | Lubbock |
| 2 | Kansas | Kansas E-10317 | Lubbock |
| 3 | LELAP | LELAP-02003 | Lubbock |
| 4 | NELAP | T104704219-16-12 | 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

Attachments

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



Appendix C

Photographs



Well Sign



Viewing Northeast from Southwest Corner of Location December 5, 2015



Viewing East from Southwest Corner of Location December 5, 2015



Viewing West from Southeast Corner of Location December 5, 2015



Viewing North from Southeast Corner of Location December 5, 2015



Viewing Northeast from Southeast Corner of Location December 5, 2015



Viewing Southeast from South Center of Location December 5, 2015



Viewing Southwest from South Center of Location December 5, 2015



Viewing Northwest from Southeast of Location December 5, 2015



Viewing Northeast near Southeast Corner of Location January 29, 2016



Viewing East along ROW near Southeast Corner of Location January 29, 2016



Viewing West along ROW near Southeast Corner of Location January 29, 2016



Viewing Southeast near Southwest Corner of Location January 29, 2016



Viewing Northeast near Southeast Corner of Location June 2, 2016



Viewing Southeast near Southeast Corner of Location June 2, 2016



Viewing East on ROW near Southeast Corner of Location June 2, 2016



Viewing Southeast near Southeast Corner of Location June 2, 2016



Viewing South near Southeast Corner of Location June 2, 2016



Viewing West on ROW near Southeast Corner of Location June 2, 2016



Viewing East on ROW near Sample Location S-7 June 2, 2016

Appendix D

Initial and Final C-141

RECEIVED

By JKeyes at 12:45 pm, Dec 21, 2015

District 1 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

Form C-141 Revised August 8, 2011

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

1220 South St. Francis Dr. Santa Fe, NM 87505

Release Notification and Corrective Action

| | OPERATOR | \boxtimes | Initial Report | Final Report |
|--|-----------------------------|-------------|----------------|---------------------|
| Name of Company: XTO Energy, Inc | Contact: Stephanie Rabadue | | | |
| Address: 500 W. Illinois St Ste 100 Midland, Texas 79701 | Telephone No.: 432-620-6714 | | | |
| Facility Name: Perla Negra Federal Com #4H | Facility Type: Well Site | | | |
| | | | | |

Surface Owner: Bureau of Land Management | Mineral Owner: Bureau of Land Management | API No.: 30-025-42577

LOCATION OF RELEASE

| Unit Letter A | Section 25 | Township 19S | Range 34E | Feet from the 298 | North/South Line North | Feet from the 485 | East/West Line East | County Lea |
|------------------|---------------|-----------------|--------------|-------------------|---------------------------|-------------------|------------------------|---------------|
| | | | | | | | | |

Latitude: 32.637653 N Longitude: 103.506267 W

NATURE OF RELEASE

| Type of Release: Blow Out | Volume of Release: | Volume Recovered: | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| | 301.3bbls oil | 158.63bbls (to date) | | | | | | | |
| | 192.8mcf gas | Clean-Up in Progress | | | | | | | |
| Source of Release: Well | Date and Hour of Occurrence | Date and Hour of Discovery | | | | | | | |
| Was Immediate Notice Given? | 12/1/2015, 11AM CST | 12/1/2015, 11AM CST | | | | | | | |
| Yes No Not Required | If YES, To Whom? | | | | | | | | |
| - | | | | | | | | | |
| By Whom? Bo Jackson, XTO Energy | Date and Hour: 12/1/2015 2:30pm | | | | | | | | |
| Was a Watercourse Reached? | If YES, Volume Impacting the Wat | ercourse. | | | | | | | |
| 🗌 Yes 🖾 No | Not Applicable | | | | | | | | |
| If a Watercourse was Impacted, Describe Fully.* | | | | | | | | | |
| Not Applicable. No watercourse in vicinity. | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Describe Cause of Problem and Remedial Action Taken.* | | | | | | | | | |
| Pulling unit was fishing parted swab line and cups, they pulled out tubing | g until got to the tail of the swab line. I | nstalled a TIW valve and latched on with | | | | | | | |
| rod elevator and pulled out hole. Tied onto the tubing to pump down and Wild well control came to location and well was secured by placing TIW | it was plugged. Took off the TIW and | started out of the hole when well kicked. | | | | | | | |
| what were control came to location and were was secured by placing 11 w | valve on the well head. | | | | | | | | |
| Describe Area Affected and Cleanup Action Taken.* | | | | | | | | | |
| Estimated area affected to be 500'x500'. | | | | | | | | | |
| XTO Energy, Inc has hired a third-party environmental company to evalu | uate and perform clean-up. Clean-up is | in progress. | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| I hardly partify that the information since show is the state of the | | | | | | | | | |
| I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release | the best of my knowledge and understa | and that pursuant to NMOCD rules and | | | | | | | |
| public health or the environment. The acceptance of a C-141 report by the | hourications and perform corrective ac | does not relieve the operator of lightlity | | | | | | | |
| should their operations have failed to adequately investigate and remedia | te contamination that pose a threat to c | round water surface water, human health | | | | | | | |
| or the environment. In addition, NMOCD acceptance of a C-141 report of | does not relieve the operator of response | sibility for compliance with any other | | | | | | | |
| federal, state, or local laws and/or regulations. | <i>-,</i> | | | | | | | | |
| | OIL CONSERV | VATION DIVISION | | | | | | | |
| a Alabasi De La | | | | | | | | | |
| Signature: Styphine Rabadue | | Jam Klyer | | | | | | | |
| Printed Name: Stephanie Rabadue | Approved by Environmental Specialist: | | | | | | | | |
| Printed Name: Stephanie Rabadue | ſ | | | | | | | | |
| Title: Regulatory Analyst | Approval Date: 12/21/2015 | Expiration Date: 02/21/2016 | | | | | | | |
| the trebulary thingst | Applotal Date: | Expiration Date. | | | | | | | |
| E-mail Address: stephanie_rabadue@xtoenergy.com | Conditions of Approval: | | | | | | | | |
| | Discrete site samples required. Delineate and Attached | | | | | | | | |
| Date: 12/21/2015 Phone: 432-620-6714 | remediate per NMOCD guidelines. 1RP 4049 | | | | | | | | |
| | Geotagged photos recommended. Er | | | | | | | | |
| | BLM concurrence/approval. pJXK1535545828 | | | | | | | | |

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

| | Salita 1°C, 19191 07303 | | | | | | | | | | | | |
|--|--|-------------------------------|---------------|--|--|---|---------------------------------------|-----------|---------------------------------------|---------------------------|--------------|------------------------|--|
| Release Notification and Corrective Action | | | | | | | | | | | | | |
| | | | | | OPERATOR 🗌 | | | 🗌 Initia | l Report | Final Report | | | |
| Name of Company: XTO Energy, Inc. Address: 500 W. Illinois St Ste 100, Midland, Texas 79701 | | | | | | Contact: Dudley McMinn | | | | | | | |
| Address: 5 | 00 W. Illino | <u>bis St Ste 100,</u> | Midland, | Texas 79701 | | Telephone No.: (432) 682-8873 | | | | | | | |
| Facility Na | me: Peria | Negra Feder | al Com # | 4H | | Facility Type: Well Site | | | | | | | |
| Surface Owner: Bureau of Land Management Mineral Owner I | | | | | | Bureau of Lan | d Management | | Lease N | lo.30-025-4 | 2577 | | |
| | | | ON OF RELEASE | | | | | | | | | | |
| | | | | | | | | | County | County | | | |
| А | 25 | 195 | 34Ē | 298 | | North 485 | | | East Lea | | | L | |
| | <u> </u> | l | I | | I | | | [| | | | | |
| | | | L | atitude: 32.637 | 653N | Longituc | le: -103.50626 | 7W | | | | | |
| | | | | NAT | URE | E OF REL | EASE | | | | | | |
| Type of Rele | ase: Blow | Out | | - 10 | | | Release: 301.3 b | bl oil | Volume F | lecovered: | 158.63 | bbl oil | |
| Source of Re | longot Wall | <u> </u> | | | | | 192.8 m | | | | | | |
| Source of Re | icase: wen | | | | | | lour of Occurrenc 5, 11AM CST | ce: | | Hour of Dis 5, 11 AM (| | | |
| Was Immedi | ate Notice C | | | | | If YES, To | Whom? | | ****** | | | | |
| | | | | No 🗌 Not Re | equirec | | Bureau of Land | ~ | | | | | |
| By Whom? I Was a Water | | XTO Energy | , Inc. | | ······································ | Date and Hour 12/01/2015, 2:30 pm | | | | | | | |
| was a water | sourse Read | | Yes 🛛 | No | | If YES, Volume Impacting the Watercourse. Not applicable | | | | | | | |
| If a Watercor | urse was Im | | | | | | | | | | | | |
| | If a Watercourse was Impacted, Describe Fully.* Not applicable – no watercourse in vicinity | | | | | | | | | | | | |
| | | 1.5 | - | | | | | | | · · · · · · | | | |
| | | em and Reme parted swab li | | | art tubi | na until ont to | tail of the swab li | ina Inci | alled a TIV | l volue and | Inteher | l on with rod | |
| elevator and j | pulled out o | f hole. Tied c | onto the tu | bing to pump dov | vn and | it was plugged | . Took off the Ti | IW and : | started out | of the hole v | when th | ie well | |
| kicked. Wild | Well Cont | rol came to lo | cation and | well was secured | l by pla | ucing TIW valv | e on well head. | | | | | | |
| Describe Are | a Affected a | and Cleanup A | Action Tak | en.* Liquid picl | ced up | with vacuum t | ruck. Soil to abo | ut 8 incl | depth scra | ped from a | fected | area on | |
| location. Aff | ected area o | off location tre | eated with | 6% solution of m | icrobia | al product and i | ested for BTEX, | TPH an | d chloride. | All sample | s excer | ot S-7 below | |
| RRAL for be | fiber ontic i | X and TPH. | Sample S- | 7 was collected in and application of | 1 AT& | T right of way | and owner not co it to area around | omfortab | the with me 5.7 and real | chanical rer | nediatio | on due to | |
| residual TPH | . Chloride | delineated bel | ow 250 m | g/Kg at all sample | ed loca | tions. | | | | | | | |
| I hereby certi | fy that the i | nformation gi | ven above | is true and comp | lete to | the best of my | knowledge and u | inderstat | id that purs | uant to NM | OCD r | ules and | |
| public health | or the envir | onment. The | o report ar | d/or file certain p | elease art hy fl | e notifications and perform corrective actions for releases which may endanger the NMOCD marked as "Final Report" does not relieve the operator of liability | | | | | | ndanger filiability | |
| should their o | perations h | ave failed to a | idequately | investigate and r | emedia | liate contamination that pose a threat to ground water, surface water, human health | | | | | | | |
| or the enviror federal, state, | ment. In a | ddition, NMO | CD accep | tance of a C-141 | report | does not reliev | e the operator of | responsi | bility for c | ompliance v | vith any | y other | |
| Teuerai, state, | of local lav | vs and/or regu | iations. | | | | OIL CON | CEDV | ATION | DIVISIO | الالا | | |
| | 1.1 | 1 14 | | | | OIL CONSERVATION DIVISION | | | | | | | |
| Signature: | Nad | ley-Mg | Alm | <u></u> | | | | | | | | | |
| Printed Name: Dudley McMinn | | | | | | | Approved by District Supervisor: | | | | | | |
| | | | | | | | | | · · · · · · · · · · · · · · · · · · · | | | | |
| Title: Environ | mental Ma | nager – Permi | an Divisio | n | | Approval Date: | | { | Expiration Date: | | | | |
| E-mail Addre | ss: Dudley_ | McMinn@xt | oenergy.c | om | | Conditions of | Approval: | | | Attaches | , 1 1 | | |
| Date: 060 | 02/2016 | | Nhan | (433) 603 0033 | | | | | | Auacheo | Attached | | |
| | Date: 06/02/2016 Phone: (432) 682-8873 | | | | | | | | | | | | |

Attach Additional Sheets If Necessary