APEX



**REMEDIATION SUMMARY & SOIL CLOSURE REQUEST**

Property:

**REGENCY FIELD SERVICES LLC.**
**Trunk "O" Drip Tank #107**
**Historical Release Site**
**Lea County, New Mexico**
**Unit Letter "O", Section 5, Township 21 South, Range 36 East**
**Latitude 32.50335, Longitude -103.28578**
**1RP-3581**

April 2015
Apex Project No. 7030714G042

Prepared for:

**Regency Field Services LLC**
301 Commerce Street, Suite 700
Fort Worth, TX 76109
Attn: **Ms. Crystal Callaway, BSN, RN, CHMM**

Prepared by:

Thomas Franklin
Project Manager

Liz Scaggs, P.G.
Senior Technical Review

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# REMEDIATION SUMMARY & SOIL CLOSURE REQUEST

**REGENCY FIELD SERVICES LLC.**
**Trunk "O" Drip Tank #107**
**Historical Release Site**
**Lea County, New Mexico**
**Unit Letter O, Section 5, Township 21 South, Range 36 East**
**Latitude 32.50335, Longitude -103.28578**

April 2015
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## 1.0 INTRODUCTION

### 1.1 Site Description & Background

Apex TITAN, Inc. (Apex) has prepared this Remediation Summary and Soil Closure Request for the Regency Field Services, LLC (Regency) Trunk "O" Drip Tank #107 (referred to hereinafter as the "Site" or "subject Site"). This Soil Closure Request is based upon the interpretation of the data collected by Basin Environmental (Basin) and the remedial actions conducted to date by Apex.

The Trunk "O" Drip Tank #107 is located in Unit Letter O, Section 5, Township 21 South, Range 36 East, Lea County, New Mexico (GPS 32.50335, -103.28578). Regency Field Services, LLC has acquired this pipeline and associated equipment.

Remedial actions were conducted by Apex in accordance with New Mexico Energy, Minerals, and Natural Resources Department (EMNRD), Oil Conservation Division (NMOCD) rules (*NMAC 19.15.29 Release Notification*) and the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

### 1.2 Project Objective

The objective of the Remediation Summary and Soil Closure Request is to present documentation of the activities that were performed to date and to request closure of the site.

### 1.3 Standard of Care

Apex's services are performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, express or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

### 1.4 Reliance

This report has been prepared for the exclusive use of Regency, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the express written authorization of Regency and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

## 2.0 SITE RANKING & PROPOSED REMEDIAL ACTION GOALS

The Site is subject to regulatory oversight by the NMOCD. To address activities related to releases, the NMOCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the NMOCD rules, specifically NMAC 19.15.29 *Release Notification*. These documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

In accordance with the NMOCD's *Guidelines for Remediation of Leaks, Spills and Releases*, Apex utilized the general site characteristics to determine the appropriate "ranking" for the Site. The ranking criteria and associated scoring are provided in the table below:

| **Ranking Criteria** | | | **Ranking Score** |
|---|---|---|---|
| Depth to Groundwater | <50 feet | 20 | **0** |
| | 50 to 99 feet | 10 | |
| | >100 feet | 0 | |
| Wellhead Protection Area, <1,000 feet from a water source, or; <200 feet from private domestic water source. | Yes | 20 | **0** |
| | No | 0 | |
| Distance to Surface Water Body | <200 feet | 20 | **0** |
| | 200 to 1,000 feet | 10 | |
| | >1,000 feet | 0 | |
| **Total Ranking Score** | | | **0** |

Based on Apex's evaluation of the scoring criteria, the Site would have a Total Ranking Score of 0. This ranking is based on the following:

- The depth to the initial groundwater-bearing zone is >100 feet at the Site.
- The impacted area is greater than 200 feet from a private domestic water source.
- Distance to the nearest surface water body is greater than 1,000 ft.

Based on a Total Ranking Score of 0, cleanup goals for soils remaining in place include: 10 milligrams per kilogram (mg/Kg) for benzene, 50 mg/Kg for total benzene, toluene, ethylbenzene and xylene (BTEX), 5,000 mg/Kg for total petroleum hydrocarbons (TPH) and 1,000 mg/Kg for chloride.

## 3.0 INITIAL RESPONSE & DRILLING ACTIVITIES

### 3.1 Initial Response

On April 22, 2013 Basin personnel installed one (1) trench in the area of the former above ground storage tank as shown in Figure 3, Appendix A. During installation of the trench five (5) soil samples were obtained. The soil samples were submitted for laboratory analysis which detected elevated chloride and TPH concentrations where the former above ground storage tank was located. Chloride concentrations at the surface were 10,800 mg/kg, TPH concentrations at the surface were 23,094 mg/kg. The Soil Analytical Summary Table as provided by Basin is located in Appendix B.

### 3.2 Drilling Activities

Soil boring activities were conducted in the area of the former above ground storage tank. On February 17, 2015, Ms. Adrian Jackson was present to observe on-Site activities and to collect soil samples. Four soil borings (SB-1 through SB-4) as shown on Figure 3, Appendix A were installed. Soil boring, SB-1 was installed to a depth of fifteen (15) feet bgs, Soil boring, SB-2 through SB-4 were installed to a deep of five (5) feet bgs. Samples were collected and field screened for chlorides and hydrocarbons.

### 3.3 Drilling Confirmation Soil Sampling Program

Fifteen (15) soil samples were collected from the Site by Apex personnel and analyzed for BTEX and TPH at the surface and for chlorides to the total depths. All sample results for BTEX, TPH and chlorides were below the cleanup goals, as previously discussed in Section 2.0.

## 4.0 LABORATORY ANALYTICAL METHODS

The samples were analyzed for TPH GRO/DRO utilizing EPA method SW-846 8015, BTEX using EPA method SW-846 8021B and chlorides utilizing EPA method SW-846 300.1. Copies of the laboratory analysis are provided in Appendix D.

Soil samples were collected and placed in laboratory prepared glassware, placed on ice in a cooler. The sample coolers and completed chain-of-custody forms were relinquished to Trace Analysis, Inc. in Midland, Texas for normal turn-around time.

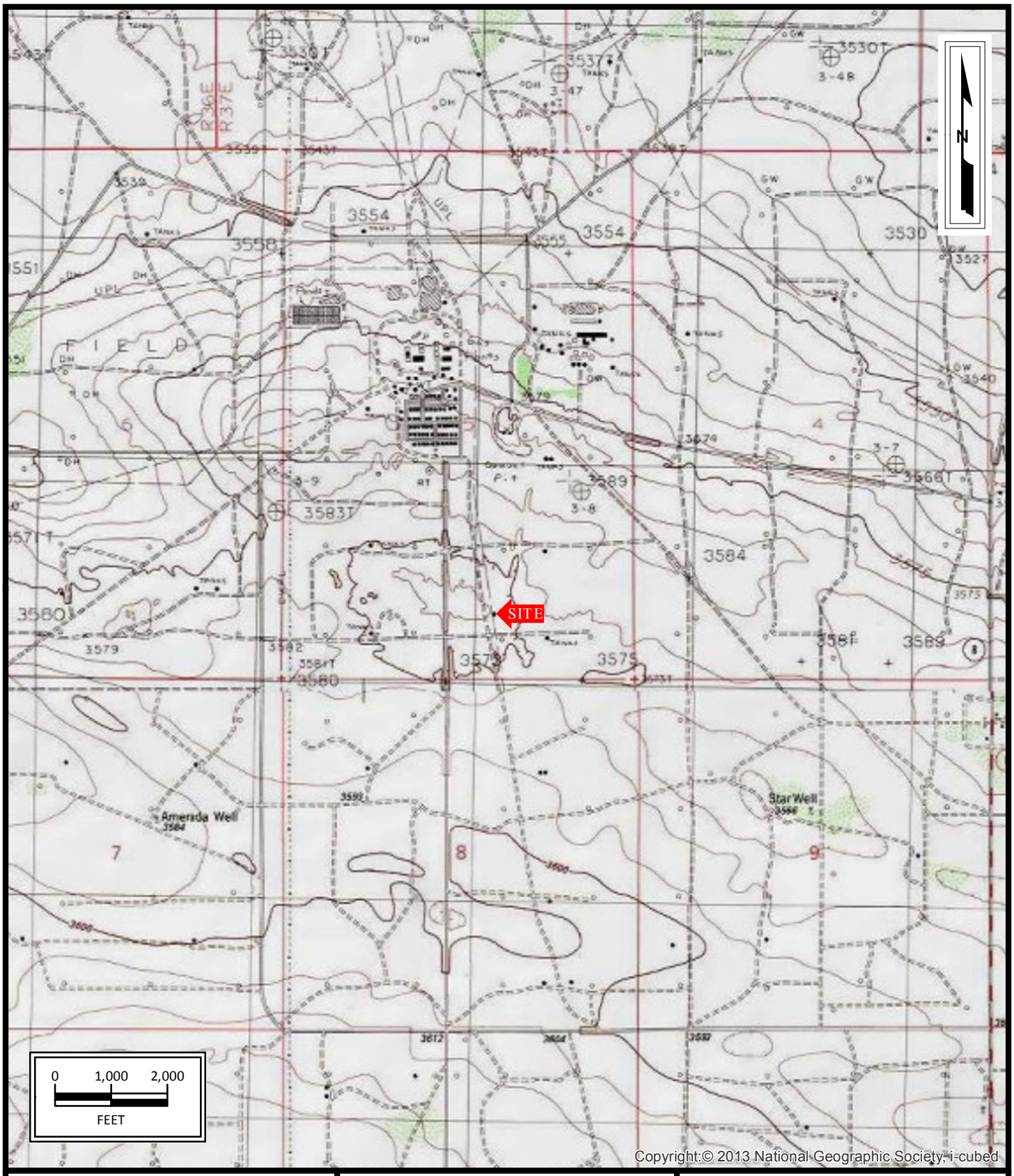
Figure 3 is a Site plan that indicates the approximate location of the confirmation soil samples and soil boring locations in relation to pertinent land features and general Site boundaries, which is included in Appendix A.

## 5.0 CLOSURE

Based upon the data provided by Basin and the work completed by Apex, the constituents of concern were horizontally and vertically delineated. Based upon the response actions and laboratory analytical results, no additional investigation and/or remediation appears warranted at this time. Regency respectfully requests closure of this site. Copies of the Initial and Final C-141 are provided in Appendix F.

# APPENDIX A

## Figures




**Regency - Trunk "O" Drip Tank #107**
Lea County, New Mexico
32.50335N, 103.28578W

Project No. 7030714G042.001

**Apex TITAN, Inc.**
505 N. Big Spring Street, Suite 301A
Midland, Texas 79701
*Phone: (432) 695-6016*
www.apexcos.com
***A Subsidiary of Apex Companies, LLC***

**FIGURE 1**
**Topographic Map**


**Regency - Trunk "O" Drip Tank #107**
Lea County, New Mexico
32.50335N, 103.28578W

Project No. 7030714G042.001

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**FIGURE 2**
**Site Vicinity Map**


**Regency - Trunk "O" Drip Tank #107**
Lea County, New Mexico
32.50335N, 103.28578W

Project No. 7030714G042.001

**Apex TITAN, Inc.**
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**FIGURE 3**
**Site Map**

# APPENDIX B

## Soil Analytical Summary Table

**TABLE 1**

**CONCENTRATIONS OF BENZENE, BTEX, TPH & CHLORIDE IN SOIL**

**SOUTHERN UNION GAS SERVICES**
**TRUNK "O" D.T. #107**
**HISTORICAL RELEASE SITE**
**LEA COUNTY, NEW MEXICO**
**NMOCD REF: # N/A**

| SAMPLE LOCATION | SAMPLE DEPTH (BGS) | SAMPLE DATE | SOIL STATUS | METHOD: EPA SW 846-8021B, 5030 | | | | | METHOD: 8015M | | | TOTAL TPH $C_6$-$C_{28}$ (mg/Kg) | EPA: 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | BENZENE (mg/Kg) | TOLUENE (mg/Kg) | ETHYL-BENZENE (mg/Kg) | TOTAL XYLENES (mg/Kg) | TOTAL BTEX (mg/Kg) | GRO $C_6$-$C_{12}$ (mg/Kg) | DRO $C_{12}$-$C_{28}$ (mg/Kg) | ORO $C_{28}$-$C_{35}$ (mg/Kg) | | CHLORIDE (mg/Kg) |
| SP#1 @ Surface | Surface | 4/22/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | 64.5 | 19,200 | 3,830 | **23,094** | **10,800** |
| TT-1 @ 2' | 2' | 4/22/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | 20.4 | 52.5 | 72.9 | 80.0 |
| TT-1 @ 4' | 4' | 4/22/2013 | In-Situ | <0.050 | 0.071 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | 15.4 | 15.4 | 848 |
| TT-1 @ 8' | 8' | 4/22/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | **1,570** |
| TT-1 @ 14' | 14' | 4/22/2013 | In-Situ | <0.050 | <0.050 | <0.050 | <0.150 | <0.300 | <10.0 | <10.0 | <10.0 | <10.0 | **1,180** |
| | | | | | | | | | | | | | |
| **NMOCD Standard** | | | | **10** | | | | **50** | | | | **5,000** | **1,000** |

- = Not analyzed.

**TABLE 2**
**REGENCY - Trunk "O" Drip Tank #107**
**ANALYTICAL RESULTS**

| Sample ID | Date | Sample Depth (feet) | Benzene (mg/Kg) | Toluene (mg/Kg) | Ethylbenzene (mg/Kg) | Xylene (mg/Kg) | Total BTEX (mg/Kg) | TPH (DRO) (mg/Kg) | TPH (GRO) (mg/Kg) | Total TPH (mg/Kg) | Chloride (mg/Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **NMOCD - *Guidelines for Remediation of Leaks, Spills and Releases*** | | | ***10*** | **NE** | **NE** | **NE** | ***50*** | **NE** | | ***5,000*** | ***1000*** |
| **SOIL BORING CONFIRMATION SAMPLES** | | | | | | | | | | | |
| Soil Bore-1 | 02/17/2015 | 0-1' | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 | <4.00 | <50.0 | 110 |
| Soil Bore-1 | 02/17/2015 | 2-3' | - | - | - | - | - | - | - | - | <25.0 |
| Soil Bore-1 | 02/17/2015 | 4-5' | - | - | - | - | - | - | - | - | <25.0 |
| Soil Bore-1 | 02/17/2015 | 6-7' | - | - | - | - | - | - | - | - | 57.4 |
| Soil Bore-1 | 02/17/2015 | 9-10' | - | - | - | - | - | - | - | - | 81.5 |
| Soil Bore-1 | 02/17/2015 | 14-15' | - | - | - | - | - | - | - | - | 29.4 |
| Soil Bore-2 | 02/17/2015 | 0-1' | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 | <4.00 | <50.0 | 26.4 |
| Soil Bore-2 | 02/17/2015 | 2-3' | - | - | - | - | - | - | - | - | 27.3 |
| Soil Bore-2 | 02/17/2015 | 4-5' | - | - | - | - | - | - | - | - | 27.1 |
| Soil Bore-3 | 02/17/2015 | 0-1' | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 | <4.00 | <50.0 | <25.0 |
| Soil Bore-3 | 02/17/2015 | 2-3' | - | - | - | - | - | - | - | - | <25.0 |
| Soil Bore-3 | 02/17/2015 | 4-5' | - | - | - | - | - | - | - | - | <25.0 |
| Soil Bore-4 | 02/17/2015 | 0-1' | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 | <4.00 | <50.0 | <25.0 |
| Soil Bore-4 | 02/17/2015 | 2-3' | - | - | - | - | - | - | - | - | 25.9 |
| Soil Bore-4 | 02/17/2015 | 4-5' | - | - | - | - | - | - | - | - | 34.6 |

mg/Kg- milligrams per Kilograms

NE - Not Established

**Concentrations in Bold and Highlighted exceed the NMOCD Guidelines**

# APPENDIX C

## Photos

View East – Picture taken 9/3/2014

View North – Picture taken 9/3/2014

APEX

View West – Picture taken 2/17/2015 during Soil Boring Activities

# APPENDIX D

## Laboratory Analysis and Chain-of-Custody

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 30, 2013

JOEL LOWRY

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: TRUNK "O" D.T. #107

Enclosed are the results of analyses for samples received by the laboratory on 04/23/13 11:03.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

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

| | | | |
|---|---|---|---|
| Received: | 04/23/2013 | Sampling Date: | 04/22/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | TRUNK "O" D.T. #107 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: SP #1 @ SURFACE (H300948-01)

**BTEX 8021B** mg/kg Analyzed By: AP

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/24/2013 | ND | 1.75 | 87.5 | 2.00 | 0.211 | |
| Toluene* | <0.050 | 0.050 | 04/24/2013 | ND | 1.61 | 80.6 | 2.00 | 0.0547 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/24/2013 | ND | 1.73 | 86.3 | 2.00 | 1.63 | |
| Total Xylenes* | <0.150 | 0.150 | 04/24/2013 | ND | 5.06 | 84.4 | 6.00 | 1.34 | |
| Total BTEX | <0.300 | 0.300 | 04/24/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *114 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg Analyzed By: DW

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **10800** | 16.0 | 04/24/2013 | ND | 448 | 112 | 400 | 3.64 | |

**TPH 8015M** mg/kg Analyzed By: MS **S-06**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **GRO C6-C10** | **64.5** | 50.0 | 04/23/2013 | ND | 205 | 103 | 200 | 4.08 | |
| **DRO >C10-C28** | **19200** | 50.0 | 04/23/2013 | ND | 190 | 94.9 | 200 | 8.60 | |
| **EXT DRO >C28-C35** | **3830** | 50.0 | 04/23/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *96.9 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *727 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte



Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

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

| | | | |
|---|---|---|---|
| Received: | 04/23/2013 | Sampling Date: | 04/22/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | TRUNK "O" D.T. #107 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ 2' (H300948-02)

**BTEX 8021B** mg/kg **Analyzed By: AP**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *96.9 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg **Analyzed By: DW**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **80.0** | 16.0 | 04/24/2013 | ND | 448 | 112 | 400 | 3.64 | |

**TPH 8015M** mg/kg **Analyzed By: MS**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2013 | ND | 205 | 103 | 200 | 4.08 | |
| **DRO >C10-C28** | **20.4** | 10.0 | 04/23/2013 | ND | 190 | 94.9 | 200 | 8.60 | |
| **EXT DRO >C28-C35** | **52.5** | 10.0 | 04/23/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *89.0 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *117 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte



Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

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

| | | | |
|---|---|---|---|
| Received: | 04/23/2013 | Sampling Date: | 04/22/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | TRUNK "O" D.T. #107 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ 4' (H300948-03)

**BTEX 8021B** mg/kg **Analyzed By: AP**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| **Toluene*** | **0.071** | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *100 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg **Analyzed By: DW**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **848** | 16.0 | 04/24/2013 | ND | 448 | 112 | 400 | 3.64 | |

**TPH 8015M** mg/kg **Analyzed By: MS**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2013 | ND | 205 | 103 | 200 | 4.08 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2013 | ND | 190 | 94.9 | 200 | 8.60 | |
| **EXT DRO >C28-C35** | **15.4** | 10.0 | 04/23/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *87.0 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *117 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte



Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

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

| | | | |
|---|---|---|---|
| Received: | 04/23/2013 | Sampling Date: | 04/22/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | TRUNK "O" D.T. #107 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ 8' (H300948-04)

**BTEX 8021B** mg/kg Analyzed By: AP

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *100 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg Analyzed By: DW

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1570** | 16.0 | 04/24/2013 | ND | 448 | 112 | 400 | 3.64 | |

**TPH 8015M** mg/kg Analyzed By: MS

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2013 | ND | 205 | 103 | 200 | 4.08 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2013 | ND | 190 | 94.9 | 200 | 8.60 | |
| EXT DRO >C28-C35 | <10.0 | 10.0 | 04/23/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *88.5 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *119 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte



Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## *Analytical Results For:*

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

| | | | |
|---|---|---|---|
| Received: | 04/23/2013 | Sampling Date: | 04/22/2013 |
| Reported: | 04/30/2013 | Sampling Type: | Soil |
| Project Name: | TRUNK "O" D.T. #107 | Sampling Condition: | Cool & Intact |
| Project Number: | NONE GIVEN | Sample Received By: | Jodi Henson |
| Project Location: | LEA COUNTY, NM | | |

### Sample ID: TT - 1 @ 14' (H300948-05)

**BTEX 8021B** mg/kg **Analyzed By: AP**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| Benzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.18 | 109 | 2.00 | 0.709 | |
| Toluene* | <0.050 | 0.050 | 04/29/2013 | ND | 1.96 | 98.2 | 2.00 | 0.399 | |
| Ethylbenzene* | <0.050 | 0.050 | 04/29/2013 | ND | 2.14 | 107 | 2.00 | 0.0330 | |
| Total Xylenes* | <0.150 | 0.150 | 04/29/2013 | ND | 6.18 | 103 | 6.00 | 1.28 | |
| Total BTEX | <0.300 | 0.300 | 04/29/2013 | ND | | | | | |

*Surrogate: 4-Bromofluorobenzene (PID* *102 %* *89.4-126*

**Chloride, SM4500Cl-B** mg/kg **Analyzed By: DW**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **1180** | 16.0 | 04/24/2013 | ND | 448 | 112 | 400 | 3.64 | |

**TPH 8015M** mg/kg **Analyzed By: MS**

| Analyte | Result | Reporting Limit | Analyzed | Method Blank | BS | % Recovery | True Value QC | RPD | Qualifier |
|---|---|---|---|---|---|---|---|---|---|
| GRO C6-C10 | <10.0 | 10.0 | 04/23/2013 | ND | 205 | 103 | 200 | 4.08 | |
| DRO >C10-C28 | <10.0 | 10.0 | 04/23/2013 | ND | 190 | 94.9 | 200 | 8.60 | |
| EXT DRO >C28-C35 | <10.0 | 10.0 | 04/23/2013 | ND | | | | | |

*Surrogate: 1-Chlorooctane* *87.0 %* *65.2-140*

*Surrogate: 1-Chlorooctadecane* *112 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte



Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

## Notes and Definitions

| | |
|---|---|
| S-06 | The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's. |
| ND | Analyte NOT DETECTED at or above the reporting limit |
| RPD | Relative Percent Difference |
| ** | Samples not received at proper temperature of 6°C or below. |
| *** | Insufficient time to reach temperature. |
| - | Chloride by SM4500Cl-B does not require samples be received at or below 6°C |
| | Samples reported on an as received basis (wet) unless otherwise noted on report |





Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

# Cardinal Laboratories

101 East Marland
Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476



| | | | |
|---|---|---|---|
| **Company Name:** | Basin Environmental Service Technologies, LLC | **Phone #:** | (575)396-2378 |
| **Address:** | P.O. Box 301<br>Lovington, NM 88260 | **Fax #:** | (575)396-1429 |
| **Contact Person:** | | **E-mail:** | pm@basinenv.com,<br>rose.slade@sug.com,cyndi.inskeep@sug.com |
| **Invoice to:** | Southern Union Gas | | |
| **Project #:** | | **Project Name:** | Trunk "O" D.T. #107 |
| **Project Location:**<br>**(include state)** | Lea Co., NM | **Sampler Signature:** | Joel Lowery |

**ANALYSIS REQUEST**
**(Circle or Specify Method No.)**

| LAB ID (LAB USE) | SAMPLE ID | (G)RAB or (C)OMP | # CONTAINERS | MATRIX: WATER | SOIL | AIR | SLUDGE | PRESERVATIVE METHOD: HCL | $HNO_3$ | $H_2SO_4$ | NaOH | ICE | NONE | SAMPLING: DATE | TIME | Chloride | TPH 8015M | BTEX 8021B | Turn Around Time if different from standard | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SP#1 @ Surface | G | 1 | | X | | | | | | | X | | 4/22/13 | 830 | X | X | X | | |
| 2 | TT-1 @ 2' | G | 1 | | X | | | | | | | X | | 4/22/13 | 910 | X | X | X | | |
| 3 | TT-1 @ 4' | G | 1 | | X | | | | | | | X | | 4/22/13 | 920 | X | X | X | | |
| 4 | TT-1 @ 8' | G | 1 | | X | | | | | | | X | | 4/22/13 | 930 | X | X | X | | |
| 5 | TT-1 @ 14' | G | 1 | | X | | | | | | | X | | 4/22/13 | 940 | X | X | X | | |

| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | |
|---|---|---|---|---|---|---|---|---|
| Joel Lowery | | 4/23/13 | 11:07 | Jodi Henson | | 4/23/13 | 11:07 | INST 54 °C<br>OBS ___ °C<br>COR -6 °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST ___ °C<br>OBS ___ °C<br>COR ___ °C |
| Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: | INST ___ °C<br>OBS ___ °C<br>COR ___ °C |

**LAB USE ONLY**

Intact Y / N

Headspace Y / N /NA

Log-in Review

**REMARKS:**

☐ Dry Weight Basis Required

☐ TRRP Report Required

☐ Check If Special Reporting Limits Are Needed

Carrier # _____

Submittal of samples constitutes agreement to Terms and Conditions

ORIGINAL COPY

# Summary Report

Thomas Franklin
APEX/Titan
2351 W. Northwest Hwy.
Suite 3321
Dallas, Tx 75220

Report Date: March 6, 2015

Work Order: 15021812

Project Location: Lea Co, NM
Project Name: Regency-Trunk "0" Drip Tank #107
Project Number: 7030714G042

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|---|---|---|---|---|---|
| 387205 | Soil Bore-1 (0-1) | soil | 2015-02-17 | 12:52 | 2015-02-18 |
| 387206 | Soil Bore-1 (2-3) | soil | 2015-02-17 | 12:54 | 2015-02-18 |
| 387207 | Soil Bore-1 (4-5) | soil | 2015-02-17 | 12:56 | 2015-02-18 |
| 387208 | Soil Bore-1 (6-7) | soil | 2015-02-17 | 13:00 | 2015-02-18 |
| 387209 | Soil Bore-1 (9-10) | soil | 2015-02-17 | 13:01 | 2015-02-18 |
| 387210 | Soil Bore-1 (14-15) | soil | 2015-02-17 | 13:02 | 2015-02-18 |
| 387211 | Soil Bore-2 (0-1) | soil | 2015-02-17 | 13:19 | 2015-02-18 |
| 387212 | Soil Bore-2 (2-3) | soil | 2015-02-17 | 13:21 | 2015-02-18 |
| 387213 | Soil Bore-2 (4-5) | soil | 2015-02-17 | 13:24 | 2015-02-18 |
| 387214 | Soil Bore-3 (0-1) | soil | 2015-02-17 | 13:38 | 2015-02-18 |
| 387215 | Soil Bore-3 (2-3) | soil | 2015-02-17 | 13:40 | 2015-02-18 |
| 387216 | Soil Bore-3 (4-5) | soil | 2015-02-17 | 13:42 | 2015-02-18 |
| 387217 | Soil Bore-4 (0-1) | soil | 2015-02-17 | 14:00 | 2015-02-18 |
| 387218 | Soil Bore-4 (2-3) | soil | 2015-02-17 | 14:01 | 2015-02-18 |
| 387219 | Soil Bore-4 (4-5) | soil | 2015-02-17 | 14:02 | 2015-02-18 |

| | BTEX | | | | TPH DRO - NEW | TPH GRO |
|---|---|---|---|---|---|---|
| | Benzene | Toluene | Ethylbenzene | Xylene | DRO | GRO |
| Sample - Field Code | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) |
| **387205 - Soil Bore-1 (0-1)** | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 Qr | <4.00 |
| **387211 - Soil Bore-2 (0-1)** | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 Qr | <4.00 |
| **387214 - Soil Bore-3 (0-1)** | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 Qr | <4.00 |
| **387217 - Soil Bore-4 (0-1)** | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <50.0 Qr | <4.00 |

**Sample: 387205 - Soil Bore-1 (0-1)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **110** | mg/Kg | 25 |

**Sample: 387206 - Soil Bore-1 (2-3)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387207 - Soil Bore-1 (4-5)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387208 - Soil Bore-1 (6-7)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **57.4** | mg/Kg | 25 |

**Sample: 387209 - Soil Bore-1 (9-10)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **81.5** | mg/Kg | 25 |

**Sample: 387210 - Soil Bore-1 (14-15)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **29.4** | mg/Kg | 25 |

**Sample: 387211 - Soil Bore-2 (0-1)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **26.4** | mg/Kg | 25 |

**Sample: 387212 - Soil Bore-2 (2-3)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **27.3** | mg/Kg | 25 |

**Sample: 387213 - Soil Bore-2 (4-5)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **27.1** | mg/Kg | 25 |

**Sample: 387214 - Soil Bore-3 (0-1)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387215 - Soil Bore-3 (2-3)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387216 - Soil Bore-3 (4-5)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387217 - Soil Bore-4 (0-1)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | <25.0 | mg/Kg | 25 |

**Sample: 387218 - Soil Bore-4 (2-3)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **25.9** | mg/Kg | 25 |

**Sample: 387219 - Soil Bore-4 (4-5)**

| Param | Flag | Result | Units | RL |
|---|---|---|---|---|
| Chloride | | **34.6** | mg/Kg | 25 |

TRACEANALYSIS, INC.

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

## Certifications

**WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025**

# Analytical and Quality Control Report

Thomas Franklin
APEX/Titan
2351 W. Northwest Hwy.
Suite 3321
Dallas, Tx, 75220

Report Date: March 6, 2015

Work Order: 15021812

Project Location: Lea Co, NM
Project Name: Regency-Trunk "0" Drip Tank #107
Project Number: 7030714G042

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

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|---|---|---|---|---|---|
| 387205 | Soil Bore-1 (0-1) | soil | 2015-02-17 | 12:52 | 2015-02-18 |
| 387206 | Soil Bore-1 (2-3) | soil | 2015-02-17 | 12:54 | 2015-02-18 |
| 387207 | Soil Bore-1 (4-5) | soil | 2015-02-17 | 12:56 | 2015-02-18 |
| 387208 | Soil Bore-1 (6-7) | soil | 2015-02-17 | 13:00 | 2015-02-18 |
| 387209 | Soil Bore-1 (9-10) | soil | 2015-02-17 | 13:01 | 2015-02-18 |
| 387210 | Soil Bore-1 (14-15) | soil | 2015-02-17 | 13:02 | 2015-02-18 |
| 387211 | Soil Bore-2 (0-1) | soil | 2015-02-17 | 13:19 | 2015-02-18 |
| 387212 | Soil Bore-2 (2-3) | soil | 2015-02-17 | 13:21 | 2015-02-18 |
| 387213 | Soil Bore-2 (4-5) | soil | 2015-02-17 | 13:24 | 2015-02-18 |
| 387214 | Soil Bore-3 (0-1) | soil | 2015-02-17 | 13:38 | 2015-02-18 |
| 387215 | Soil Bore-3 (2-3) | soil | 2015-02-17 | 13:40 | 2015-02-18 |
| 387216 | Soil Bore-3 (4-5) | soil | 2015-02-17 | 13:42 | 2015-02-18 |
| 387217 | Soil Bore-4 (0-1) | soil | 2015-02-17 | 14:00 | 2015-02-18 |
| 387218 | Soil Bore-4 (2-3) | soil | 2015-02-17 | 14:01 | 2015-02-18 |
| 387219 | Soil Bore-4 (4-5) | soil | 2015-02-17 | 14:02 | 2015-02-18 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch

basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 29 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

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

# Report Contents

# Case Narrative

Samples for project Regency-Trunk "0" Drip Tank #107 were received by TraceAnalysis, Inc. on 2015-02-18 and assigned to work order 15021812. Samples for work order 15021812 were received intact at a temperature of 4.7 C.

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

| Test | Method | Prep Batch | Prep Date | QC Batch | Analysis Date |
|---|---|---|---|---|---|
| BTEX | S 8021B | 101075 | 2015-02-20 at 10:19 | 119535 | 2015-02-21 at 19:55 |
| Chloride (IC) | E 300.0 | 101217 | 2015-02-25 at 15:00 | 119676 | 2015-02-26 at 13:12 |
| Chloride (IC) | E 300.0 | 101262 | 2015-03-02 at 13:00 | 119716 | 2015-03-02 at 13:56 |
| Chloride (IC) | E 300.0 | 101363 | 2015-03-04 at 16:00 | 119824 | 2015-03-05 at 12:57 |
| TPH DRO - NEW | S 8015 D | 101143 | 2015-02-24 at 17:00 | 119593 | 2015-02-25 at 08:30 |
| TPH GRO | S 8015 D | 101075 | 2015-02-20 at 10:19 | 119536 | 2015-02-21 at 20:01 |

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 15021812 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: 387205 - Soil Bore-1 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 119535 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | Result | RL Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Benzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.69 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.87 | mg/Kg | 1 | 2.00 | 94 | 70 - 130 |

**Sample: 387205 - Soil Bore-1 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119676 | Date Analyzed: | 2015-02-26 | Analyzed By: | RL |
| Prep Batch: | 101217 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | Result | RL Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **110** | mg/Kg | 1 | 25.0 |

**Sample: 387205 - Soil Bore-1 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 119593 | Date Analyzed: | 2015-02-25 | Analyzed By: | SC |
| Prep Batch: | 101143 | Sample Preparation: | 2015-02-24 | Prepared By: | SC |

| Parameter | Flag | Cert | Result | RL Units | Dilution | RL |
|---|---|---|---|---|---|---|
| DRO | Qr | 3 | <50.0 | mg/Kg | 1 | 50.0 |

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

**Sample: 387205 - Soil Bore-1 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 119536 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| GRO | U | 3 | <4.00 | mg/Kg | 1 | 4.00 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.71 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.67 | mg/Kg | 1 | 2.00 | 84 | 70 - 130 |

**Sample: 387206 - Soil Bore-1 (2-3)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387207 - Soil Bore-1 (4-5)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119676 | Date Analyzed: | 2015-02-26 | Analyzed By: | RL |
| Prep Batch: | 101217 | Sample Preparation: | | Prepared By: | RL |

*continued . . .*

*sample 387207 continued . . .*

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387208 - Soil Bore-1 (6-7)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **57.4** | mg/Kg | 1 | 25.0 |

**Sample: 387209 - Soil Bore-1 (9-10)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **81.5** | mg/Kg | 1 | 25.0 |

**Sample: 387210 - Soil Bore-1 (14-15)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **29.4** | mg/Kg | 1 | 25.0 |

**Sample: 387211 - Soil Bore-2 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 119535 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Benzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |

| 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) | | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 70 - 130 |

**Sample: 387211 - Soil Bore-2 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **26.4** | mg/Kg | 1 | 25.0 |

**Sample: 387211 - Soil Bore-2 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 119593 | Date Analyzed: | 2015-02-25 | Analyzed By: | SC |
| Prep Batch: | 101143 | Sample Preparation: | 2015-02-24 | Prepared By: | SC |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| DRO | Qr,U | 3 | <50.0 | mg/Kg | 1 | 50.0 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | | | 96.3 | mg/Kg | 1 | 100 | 96 | 70 - 130 |

**Sample: 387211 - Soil Bore-2 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 119536 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| GRO | U | 3 | <4.00 | mg/Kg | 1 | 4.00 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.78 | mg/Kg | 1 | 2.00 | 89 | 70 - 130 |

**Sample: 387212 - Soil Bore-2 (2-3)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **27.3** | mg/Kg | 1 | 25.0 |

**Sample: 387213 - Soil Bore-2 (4-5)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **27.1** | mg/Kg | 1 | 25.0 |

**Sample: 387214 - Soil Bore-3 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 119535 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Benzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |

| 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) | | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 70 - 130 |

**Sample: 387214 - Soil Bore-3 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387214 - Soil Bore-3 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 119593 | Date Analyzed: | 2015-02-25 | Analyzed By: | SC |
| Prep Batch: | 101143 | Sample Preparation: | 2015-02-24 | Prepared By: | SC |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| DRO | Qr,U | 3 | <50.0 | mg/Kg | 1 | 50.0 |

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

**Sample: 387214 - Soil Bore-3 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 119536 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| GRO | U | 3 | <4.00 | mg/Kg | 1 | 4.00 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.81 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.74 | mg/Kg | 1 | 2.00 | 87 | 70 - 130 |

**Sample: 387215 - Soil Bore-3 (2-3)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387216 - Soil Bore-3 (4-5)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119824 | Date Analyzed: | 2015-03-05 | Analyzed By: | RL |
| Prep Batch: | 101363 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387217 - Soil Bore-4 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | BTEX | Analytical Method: | S 8021B | Prep Method: | S 5035 |
| QC Batch: | 119535 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Benzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Toluene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Ethylbenzene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |
| Xylene | U | 3 | <0.0200 | mg/Kg | 1 | 0.0200 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.80 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.99 | mg/Kg | 1 | 2.00 | 100 | 70 - 130 |

**Sample: 387217 - Soil Bore-4 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119824 | Date Analyzed: | 2015-03-05 | Analyzed By: | RL |
| Prep Batch: | 101363 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <25.0 | mg/Kg | 1 | 25.0 |

**Sample: 387217 - Soil Bore-4 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 119593 | Date Analyzed: | 2015-02-25 | Analyzed By: | SC |
| Prep Batch: | 101143 | Sample Preparation: | 2015-02-24 | Prepared By: | SC |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| DRO | Qr,U | 3 | <50.0 | mg/Kg | 1 | 50.0 |

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

**Sample: 387217 - Soil Bore-4 (0-1)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Midland | | | | |
| Analysis: | TPH GRO | Analytical Method: | S 8015 D | Prep Method: | S 5035 |
| QC Batch: | 119536 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | Sample Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| GRO | U | 3 | <4.00 | mg/Kg | 1 | 4.00 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.81 | mg/Kg | 1 | 2.00 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.78 | mg/Kg | 1 | 2.00 | 89 | 70 - 130 |

**Sample: 387218 - Soil Bore-4 (2-3)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119824 | Date Analyzed: | 2015-03-05 | Analyzed By: | RL |
| Prep Batch: | 101363 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **25.9** | mg/Kg | 1 | 25.0 |

**Sample: 387219 - Soil Bore-4 (4-5)**

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Lubbock | | | | |
| Analysis: | Chloride (IC) | Analytical Method: | E 300.0 | Prep Method: | N/A |
| QC Batch: | 119824 | Date Analyzed: | 2015-03-05 | Analyzed By: | RL |
| Prep Batch: | 101363 | Sample Preparation: | | Prepared By: | RL |

| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | **34.6** | mg/Kg | 1 | 25.0 |

# Method Blanks

**Method Blank (1)** QC Batch: 119535

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119535 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | QC Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| Benzene | | 3 | <0.00533 | mg/Kg | 0.02 |
| Toluene | | 3 | <0.00645 | mg/Kg | 0.02 |
| Ethylbenzene | | 3 | <0.0116 | mg/Kg | 0.02 |
| Xylene | | 3 | <0.00874 | mg/Kg | 0.02 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | | | 1.65 | mg/Kg | 1 | 2.00 | 82 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.93 | mg/Kg | 1 | 2.00 | 96 | 70 - 130 |

**Method Blank (1)** QC Batch: 119536

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119536 | Date Analyzed: | 2015-02-21 | Analyzed By: | AK |
| Prep Batch: | 101075 | QC Preparation: | 2015-02-20 | Prepared By: | AK |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| GRO | | 3 | <2.32 | mg/Kg | 4 |

| 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) | | | 1.72 | mg/Kg | 1 | 2.00 | 86 | 70 - 130 |

**Method Blank (1)** QC Batch: 119593

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119593 | Date Analyzed: | 2015-02-25 | Analyzed By: | SC |
| Prep Batch: | 101143 | QC Preparation: | 2015-02-24 | Prepared By: | SC |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| DRO | | 3 | <7.41 | mg/Kg | 50 |

| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | | | 98.4 | mg/Kg | 1 | 100 | 98 | 70 - 130 |

**Method Blank (1)** QC Batch: 119676

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119676 | Date Analyzed: | 2015-02-26 | Analyzed By: | RL |
| Prep Batch: | 101217 | QC Preparation: | 2015-02-25 | Prepared By: | RL |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <3.97 | mg/Kg | 25 |

**Method Blank (1)** QC Batch: 119716

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119716 | Date Analyzed: | 2015-03-02 | Analyzed By: | RL |
| Prep Batch: | 101262 | QC Preparation: | 2015-03-02 | Prepared By: | RL |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| Chloride | | 1,2,4 | <3.97 | mg/Kg | 25 |

**Method Blank (1)** QC Batch: 119824

| | | | | | |
|---|---|---|---|---|---|
| QC Batch: | 119824 | Date Analyzed: | 2015-03-05 | Analyzed By: | RL |
| Prep Batch: | 101363 | QC Preparation: | 2015-03-04 | Prepared By: | RL |

| Parameter | Flag | Cert | MDL Result | Units | RL |
|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 6.99 | mg/Kg | 25 |

# Laboratory Control Spikes

**Laboratory Control Spike (LCS-1)**

QC Batch: 119535 | Date Analyzed: 2015-02-21 | Analyzed By: AK
Prep Batch: 101075 | QC Preparation: 2015-02-20 | Prepared By: AK

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | | 3 | 1.87 | mg/Kg | 1 | 2.00 | <0.00533 | 94 | 70 - 130 |
| Toluene | | 3 | 1.87 | mg/Kg | 1 | 2.00 | <0.00645 | 94 | 70 - 130 |
| Ethylbenzene | | 3 | 1.92 | mg/Kg | 1 | 2.00 | <0.0116 | 96 | 70 - 130 |
| Xylene | | 3 | 5.79 | mg/Kg | 1 | 6.00 | <0.00874 | 96 | 70 - 130 |

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

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | 3 | 1.84 | mg/Kg | 1 | 2.00 | <0.00533 | 92 | 70 - 130 | 2 | 20 |
| Toluene | | 3 | 1.81 | mg/Kg | 1 | 2.00 | <0.00645 | 90 | 70 - 130 | 3 | 20 |
| Ethylbenzene | | 3 | 1.84 | mg/Kg | 1 | 2.00 | <0.0116 | 92 | 70 - 130 | 4 | 20 |
| Xylene | | 3 | 5.55 | mg/Kg | 1 | 6.00 | <0.00874 | 92 | 70 - 130 | 4 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.73 | 1.63 | mg/Kg | 1 | 2.00 | 86 | 82 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 2.01 | 1.97 | mg/Kg | 1 | 2.00 | 100 | 98 | 70 - 130 |

**Laboratory Control Spike (LCS-1)**

QC Batch: 119536 | Date Analyzed: 2015-02-21 | Analyzed By: AK
Prep Batch: 101075 | QC Preparation: 2015-02-20 | Prepared By: AK

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| GRO | | 3 | 19.3 | mg/Kg | 1 | 20.0 | <2.32 | 96 | 70 - 130 |

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

*continued ...*

*control spikes continued ...*

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| GRO | | [3] | 20.8 | mg/Kg | 1 | 20.0 | <2.32 | 104 | 70 - 130 | 8 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.77 | 1.82 | mg/Kg | 1 | 2.00 | 88 | 91 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.85 | 1.84 | mg/Kg | 1 | 2.00 | 92 | 92 | 70 - 130 |

**Laboratory Control Spike (LCS-1)**

QC Batch: 119593 | Date Analyzed: 2015-02-25 | Analyzed By: SC
Prep Batch: 101143 | QC Preparation: 2015-02-24 | Prepared By: SC

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| DRO | | [3] | 243 | mg/Kg | 1 | 250 | <7.41 | 97 | 70 - 130 |

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

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRO | | [3] | 240 | mg/Kg | 1 | 250 | <7.41 | 96 | 70 - 130 | 1 | 20 |

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

| Surrogate | LCS Result | LCSD Result | Units | Dil. | Spike Amount | LCS Rec. | LCSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 106 | 105 | mg/Kg | 1 | 100 | 106 | 105 | 70 - 130 |

**Laboratory Control Spike (LCS-1)**

QC Batch: 119676 | Date Analyzed: 2015-02-26 | Analyzed By: RL
Prep Batch: 101217 | QC Preparation: 2015-02-25 | Prepared By: RL

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | [1,2,4] | 234 | mg/Kg | 1 | 250 | <3.97 | 94 | 90 - 110 |

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

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 231 | mg/Kg | 1 | 250 | <3.97 | 92 | 90 - 110 | 1 | 20 |

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 119716 | Date Analyzed: 2015-03-02 | Analyzed By: RL
Prep Batch: 101262 | QC Preparation: 2015-03-02 | Prepared By: RL

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 231 | mg/Kg | 1 | 250 | <3.97 | 92 | 90 - 110 |

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

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 233 | mg/Kg | 1 | 250 | <3.97 | 93 | 90 - 110 | 1 | 20 |

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

**Laboratory Control Spike (LCS-1)**

QC Batch: 119824 | Date Analyzed: 2015-03-05 | Analyzed By: RL
Prep Batch: 101363 | QC Preparation: 2015-03-04 | Prepared By: RL

| Param | F | C | LCS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 235 | mg/Kg | 1 | 250 | <3.97 | 94 | 90 - 110 |

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

| Param | F | C | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 233 | mg/Kg | 1 | 250 | <3.97 | 93 | 90 - 110 | 1 | 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: 387120

QC Batch: 119535 | Date Analyzed: 2015-02-21 | Analyzed By: AK
Prep Batch: 101075 | QC Preparation: 2015-02-20 | Prepared By: AK

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | | [3] | 1.58 | mg/Kg | 1 | 2.00 | <0.00533 | 79 | 70 - 130 |
| Toluene | | [3] | 1.60 | mg/Kg | 1 | 2.00 | <0.00645 | 80 | 70 - 130 |
| Ethylbenzene | | [3] | 1.75 | mg/Kg | 1 | 2.00 | <0.0116 | 88 | 70 - 130 |
| Xylene | | [3] | 5.26 | mg/Kg | 1 | 6.00 | <0.00874 | 88 | 70 - 130 |

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

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | | [3] | 1.54 | mg/Kg | 1 | 2.00 | <0.00533 | 77 | 70 - 130 | 3 | 20 |
| Toluene | | [3] | 1.60 | mg/Kg | 1 | 2.00 | <0.00645 | 80 | 70 - 130 | 0 | 20 |
| Ethylbenzene | | [3] | 1.75 | mg/Kg | 1 | 2.00 | <0.0116 | 88 | 70 - 130 | 0 | 20 |
| Xylene | | [3] | 5.25 | mg/Kg | 1 | 6.00 | <0.00874 | 88 | 70 - 130 | 0 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.79 | 1.71 | mg/Kg | 1 | 2 | 90 | 86 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 2.00 | 1.89 | mg/Kg | 1 | 2 | 100 | 94 | 70 - 130 |

**Matrix Spike (MS-1)** Spiked Sample: 387120

QC Batch: 119536 | Date Analyzed: 2015-02-21 | Analyzed By: AK
Prep Batch: 101075 | QC Preparation: 2015-02-20 | Prepared By: AK

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| GRO | | [3] | 18.7 | mg/Kg | 1 | 20.0 | <2.32 | 94 | 70 - 130 |

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

*continued ...*

*matrix spikes continued ...*

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
| GRO | | [3] | 15.7 | mg/Kg | 1 | 20.0 | <2.32 | 78 | 70 - 130 | 17 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| Trifluorotoluene (TFT) | 1.71 | 1.79 | mg/Kg | 1 | 2 | 86 | 90 | 70 - 130 |
| 4-Bromofluorobenzene (4-BFB) | 1.83 | 1.86 | mg/Kg | 1 | 2 | 92 | 93 | 70 - 130 |

**Matrix Spike (MS-1)** Spiked Sample: 387138

QC Batch: 119593 | Date Analyzed: 2015-02-25 | Analyzed By: SC
Prep Batch: 101143 | QC Preparation: 2015-02-24 | Prepared By: SC

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| DRO | | [3] | 192 | mg/Kg | 1 | 250 | <7.41 | 77 | 70 - 130 |

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

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DRO | [Qr] | [Qr] [3] | 237 | mg/Kg | 1 | 250 | <7.41 | 95 | 70 - 130 | 21 | 20 |

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

| Surrogate | MS Result | MSD Result | Units | Dil. | Spike Amount | MS Rec. | MSD Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|
| n-Tricosane | 90.1 | 102 | mg/Kg | 1 | 100 | 90 | 102 | 70 - 130 |

**Matrix Spike (MS-1)** Spiked Sample: 387207

QC Batch: 119676 | Date Analyzed: 2015-02-26 | Analyzed By: RL
Prep Batch: 101217 | QC Preparation: 2015-02-25 | Prepared By: RL

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | [1,2,4] | 246 | mg/Kg | 1 | 250 | 23 | 89 | 80 - 120 |

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

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 238 | mg/Kg | 1 | 250 | 23 | 86 | 80 - 120 | 3 | 20 |

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

**Matrix Spike (MS-1)** Spiked Sample: 387215

QC Batch: 119716 | Date Analyzed: 2015-03-02 | Analyzed By: RL
Prep Batch: 101262 | QC Preparation: 2015-03-02 | Prepared By: RL

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 228 | mg/Kg | 1 | 250 | 19.1 | 84 | 80 - 120 |

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

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 229 | mg/Kg | 1 | 250 | 19.1 | 84 | 80 - 120 | 0 | 20 |

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

**Matrix Spike (MS-1)** Spiked Sample: 387436

QC Batch: 119824 | Date Analyzed: 2015-03-05 | Analyzed By: RL
Prep Batch: 101363 | QC Preparation: 2015-03-04 | Prepared By: RL

| Param | F | C | MS Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 2530 | mg/Kg | 5 | 1250 | 1100 | 114 | 80 - 120 |

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

| Param | F | C | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | Rec. Limit | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | 1,2,4 | 2510 | mg/Kg | 5 | 1250 | 1100 | 113 | 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-1)**

QC Batch: 119535 | Date Analyzed: 2015-02-21 | Analyzed By: AK

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | | 3 | mg/kg | 0.100 | 0.0970 | 97 | 80 - 120 | 2015-02-21 |
| Toluene | | 3 | mg/kg | 0.100 | 0.0971 | 97 | 80 - 120 | 2015-02-21 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.0981 | 98 | 80 - 120 | 2015-02-21 |
| Xylene | | 3 | mg/kg | 0.300 | 0.295 | 98 | 80 - 120 | 2015-02-21 |

**Standard (CCV-2)**

QC Batch: 119535 | Date Analyzed: 2015-02-21 | Analyzed By: AK

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| Benzene | | 3 | mg/kg | 0.100 | 0.0945 | 94 | 80 - 120 | 2015-02-21 |
| Toluene | | 3 | mg/kg | 0.100 | 0.0953 | 95 | 80 - 120 | 2015-02-21 |
| Ethylbenzene | | 3 | mg/kg | 0.100 | 0.0968 | 97 | 80 - 120 | 2015-02-21 |
| Xylene | | 3 | mg/kg | 0.300 | 0.290 | 97 | 80 - 120 | 2015-02-21 |

**Standard (CCV-1)**

QC Batch: 119536 | Date Analyzed: 2015-02-21 | Analyzed By: AK

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| GRO | | 3 | mg/Kg | 1.00 | 1.03 | 103 | 80 - 120 | 2015-02-21 |

**Standard (CCV-2)**

QC Batch: 119536 | Date Analyzed: 2015-02-21 | Analyzed By: AK

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| GRO | | 3 | mg/Kg | 1.00 | 1.03 | 103 | 80 - 120 | 2015-02-21 |

**Standard (CCV-2)**

QC Batch: 119593 Date Analyzed: 2015-02-25 Analyzed By: SC

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| DRO | | 3 | mg/Kg | 250 | 232 | 93 | 80 - 120 | 2015-02-25 |

**Standard (CCV-3)**

QC Batch: 119593 Date Analyzed: 2015-02-25 Analyzed By: SC

| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|
| DRO | | 3 | mg/Kg | 250 | 227 | 91 | 80 - 120 | 2015-02-25 |

**Standard (CCV-1)**

QC Batch: 119676 Date Analyzed: 2015-02-26 Analyzed 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 | 23.2 | 93 | 90 - 110 | 2015-02-26 |

**Standard (CCV-2)**

QC Batch: 119676 Date Analyzed: 2015-02-26 Analyzed 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 | 23.3 | 93 | 90 - 110 | 2015-02-26 |

**Standard (CCV-1)**

QC Batch: 119716 Date Analyzed: 2015-03-02 Analyzed 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 | 23.1 | 92 | 90 - 110 | 2015-03-02 |

**Standard (CCV-2)**

QC Batch: 119716 Date Analyzed: 2015-03-02 Analyzed 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 | 23.2 | 93 | 90 - 110 | 2015-03-02 |

**Standard (CCV-1)**

QC Batch: 119824 Date Analyzed: 2015-03-05 Analyzed 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 | 23.4 | 94 | 90 - 110 | 2015-03-05 |

**Standard (CCV-2)**

QC Batch: 119824 Date Analyzed: 2015-03-05 Analyzed 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 | 23.1 | 92 | 90 - 110 | 2015-03-05 |

# Appendix

## Report Definitions

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

## Laboratory Certifications

| C | Certifying Authority | Certification Number | Laboratory Location |
|---|---|---|---|
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| - | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | LELAP | LELAP-02003 | Lubbock |
| 2 | NELAP | T104704219-14-10 | Lubbock |
| 3 | NELAP | T104704392-14-8 | Midland |
| 4 | | 2014-018 | Lubbock |

## Standard Flags

| F | Description |
|---|---|
| B | Analyte detected in the corresponding method blank above the method detection limit |
| H | Analyzed out of hold time |
| J | Estimated concentration |
| Jb | The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less 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.

15021812

# CHAIN OF CUSTODY RECORD

APEX

Office Location 505 N Big Spring Midland TX

Project Manager Thomas Franklin

Laboratory: Trace

Address: Midland TX

Contact:

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 4.7

1 | 2 | 3 | 4 | 5

Page 1 of 2

Sampler's Name: Adrian Jackson

Sampler's Signature:

Proj. No.: 703071HG042

Project Name: Lea Co NM Regency-Trunk "O" Drip Tank #107

No/Type of Containers

ANALYSIS REQUESTED: TPH GRO/DRO 8015 | BTEX 8021B | Chloride 300.1

| Matrix | Date 2015 | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt. | 250 ml | Glass Jar | P/O Lab | TPH | BTEX | Chloride | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 2/17 | 12:52 | | X | Soil Bore - 1 | 0 | 1 | | | | X | X | X | X | X | 387205 |
| | | 12:57 | | | | 2 | 3 | | | | | | | | | 206 |
| | | 12:56 | | | | 4 | 5 | | | | | | | | | 207 |
| | | 13:00 | | | | 6 | 7 | | | | | | | | | 208 |
| | | 13:01 | | | | 9 | 10 | | | | | | | | | 209 |
| | | 13:02 | | | | 14 | 15 | | | | | | | | | 210 |
| | | 13:19 | | | Soil Bore - 2 | 0 | 1 | | | | | | X | X | | 211 |
| | | 13:21 | | | | 2 | 3 | | | | | | | | | 212 |
| | | 13:24 | | | | 4 | 5 | | | | | | | | | 213 |
| | | 13:38 | | | Soil Bore - 3 | 0 | 1 | | | | | | X | X | | 214 |

Turn around time ❑ Normal ❑ 25% Rush ❑ 50% Rush ❑ 100% Rush

| Relinquished by (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| | 2/18/15 | 8:48 | | 2/18/15 | 8:48 |
| | 2/18/15 | 9:13 | | 2/18/15 | 9:13 |
| | 2/18/15 | 15:30 | | 2-19-15 | 8:30 |
| | | | 25190300 | IR3 | 5:8 |

NOTES:
Direct bill to Regency
Hold deeper samples

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

AJ

1502812

# CHAIN OF CUSTODY RECORD

APEX

Office Location 505 N Big Spring Midland TX

Project Manager Thomas Franklin

Laboratory: Trace

Address: Midland TX

Contact:

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 2 of 2

Sampler's Name: Adrian Jackson

Sampler's Signature:

Proj. No.: 703071460042

Project Name: Lea Co NM Regency - Trunk "O" Drip Tank #107

ANALYSIS REQUESTED: TPH DRO/GRO 8015 | BTEX 8021 B | Chloride 300.1

| Matrix | Date 2015 | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt. | 250 ml | Glass Jar | P/O Lit. | TPH DRO/GRO 8015 | BTEX 8021 B | Chloride 300.1 | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 2/17 | 13:40 | | X | Soil Bore - 3 | 2 | 3 | | | | X | X | | | X | 387 |
| ↓ | ↓ | 13:42 | | ↓ | ↓ | 4 | 5 | | | | ↓ | ↓ | | | X | 215 |
| | | 14:00 | | | Soil Bore - 4 | 0 | 1 | | | | | | X | X | X | 216 |
| | | 14:01 | | | ↓ | 2 | 3 | | | | | | | | X | 217 |
| ↓ | ↓ | 14:02 | | ↓ | ↓ | 4 | 5 | | | | ↓ | ↓ | | | X | 218 |
| | | | | | | | | | | | | | | | | 219 |

Turn around time ❑ Normal ❑ 25% Rush ❑ 50% Rush ❑ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| | 2/18/15 | 8:40 | | 2/18/15 | 8:48 |
| | 2/18/15 | 9:13 | | 2/18/15 | 9:13 |
| | 2/18/15 | 15:30 | | 2-19-15 | 8:30 |
| | | | 25190300 | | 5.8 |

NOTES:
Direct bill to Regency
Hold deeper samples.

Matrix: Container — WW - Wastewater; VOA - 40 ml vial; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; C - Charcoal tube; P/O - Plastic or other; SL - sludge; O - Oil

AJ

# APPENDIX E

## Initial and Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

# Release Notification and Corrective Action

## OPERATOR

☒ Initial Report ☐ Final Report

| | |
|---|---|
| Name of Company: Regency Field Services LLC. (Formerly-Southern Union Gas Services, Ltd.) | Contact: Crystal Callaway |
| Address: 421 W. 3rd Street, Suite 250, Ft Worth, TX 76102 | Telephone No.: (817) 302-9407 |
| Facility Name: Trunk "O" Drip Tank #107 | Facility Type: Natural Gas Gathering |

| | | |
|---|---|---|
| Surface Owner: State | Mineral Owner | API No. |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| O | 5 | 21S | 36E | | | | | Lea |

**Latitude** 32.50335 **Longitude** -103.28578

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Oil and Produced Water | Volume of Release: Unknown | Volume Recovered: Unknown |
| Source of Release: Drip Tank | Date and Hour of Occurrence: Unknown | Date and Hour of Discovery: Unknown |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The drip tank facility was removed from its current location. There was some evidence of oil stained soil beneath the tank when it was removed.

Describe Area Affected and Cleanup Action Taken.*

The area measured approximately forty (40) feet in length and thirty (30) feet in width. The impacted area is located inside the earthen tank containment and will be remediated in accordance to the NMOCD guidelines for leaks and spills. On April 22, 2013 Basin Environmental personnel installed one trench in the area of the drip tank. The soil samples were submitted for laboratory analysis which detected elevated chloride and TPH concentrations at the surface. The site will be delineated and a work plan to remediate the impact will be submitted for NMOCD approval.

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

| | |
|---|---|
| Signature: Crystal Callaway | OIL CONSERVATION DIVISION |
| Printed Name: Crystal Callaway | Approved by Environmental Specialist: |
| Title: Sr Env Remediation Specialist | Approval Date: / Expiration Date: |
| E-mail Address: Crystal-Callaway@regencygas.com | Conditions of Approval: / Attached ☐ |
| Date: 3/12/15 Phone: 817-302-6514 | |

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Regency Field Services LLC. (Formerly-Southern Union Gas Services, Ltd.) | Contact: Crystal Callaway |
| Address: 421 W. 3rd Street, Suite 250, Ft. Worth, TX 76102 | Telephone No.: 817-302-9407 |
| Facility Name: Trunk "O" Drip Tank #107 | Facility Type: Natural Gas Gathering |

| | | |
|---|---|---|
| Surface Owner: State | Mineral Owner: | API No. |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| O | 5 | 21S | 36E | | | | | Lea |

**Latitude** 32.50335 **Longitude** -103.28578

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Oil and Produced Water | Volume of Release: Unknown | Volume Recovered: Unknown |
| Source of Release: Drip Tank | Date and Hour of Occurrence: Unknown | Date and Hour of Discovery: Unknown |
| Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required | If YES, To Whom? | |
| By Whom? | Date and Hour: | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The drip tank facility was removed from its current location. There was some evidence of oil stained soil beneath the tank when they were removed.

Describe Area Affected and Cleanup Action Taken.*

The drip tank facility has been removed from the current location. The site was delineated by Apex Titan in 2015. Confirmation samples were collected and sent to an NMOCD approved laboratory, which determined concentrations of BTEX, TPH and chloride were less than the NMOCD regulatory standards. Subsequently, no further investigation or remediation is warranted at this time.

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

| | | |
|---|---|---|
| Signature: | OIL CONSERVATION DIVISION | |
| Printed Name: CRYSTAL B. CALLAWAY | Approved by Environmental Specialist: | |
| Title: SENIOR REMEDIATION SPECIALIST | Approval Date: | Expiration Date: |
| E-mail Address: crystal.callaway@regencygas.com | Conditions of Approval: | Attached ☐ |
| Date: 4/1/15 Phone: (817) 302-9407 | | |

* Attach Additional Sheets If Necessary

# APPENDIX F

## Site History

# REMEDIATION SUMMARY & SOIL CLOSURE REQUEST

**REGENCY FIELD SERVICES LLC.**
**Trunk "O" Drip Tank #107**
**Historical Release Site**
**Lea County, New Mexico**
**Unit Letter O, Section 5, Township 21 South, Range 36 East**
**Latitude 32.50335, Longitude -103.28578**

April 2015
Apex Project No. 7030714G042

## SITE HISTORY

The previous remedial activities were reportedly conducted by Basin. This Closure Request is solely based upon the interpretation of the data provided by Basin and the work performed to date by Apex.

In reference to Table 1 as supplied by Basin, there is a chloride impact at the surface, eight (8) foot and fourteen (14) foot bgs. The two (2) foot sample and the four (4) foot sample do not show a significant impact which could possibly indicate a cross contamination during their sampling event.

During the sampling event as conducted by Apex, elevated chloride concentrations were not observed in the suspected soils. It is possible that the contamination was removed and not documented by Basin which would let the site appear to be clean. However, this is all speculation and cannot be proven, the only facts are the lab analytical that Apex collected showing the site as being below the Regulatory Standards.