Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM1926831738
District RP	1RP-5643
Facility ID	fRM1925936987
Application ID	pRM1925936291

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Rob Kirk Title: General Manager, HSE and Compliance

Signature: RR Kirk Date: 11/13/2020

email: rob.kirk@solarismidstream.com Telephone: O: 432-203-9020 C: 469-978-5620

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Closure of Release Investigation and Remedial Action Plan

General Site Information:
Marathon Madera Line

Site Contact:
Rob Kirk, Solaris Water Midstream
907 Tradewinds Blvd, Ste. B, Midland, Texas 79706
(432) 203-9020

Depth to Ground Water
Greater than 100 feet below grade surface

Distance to Nearest Surface Water
Red Bluff Reservoir (North-western Loving County, TX), approximately 30 miles to the Southwest

Driving Directions
From Hwy 128, and Hwy 1 go south 10.4 mi, East on unimproved road 16 mi., turn south and go 1.30 mi., then turn west and go 0.30 mi., South 0.01 mi. to Pipe location.

Legal Description
Unit L1, Section 18, T26S, R35E, Lea County, New Mexico

October 8, 2020
Terracon Project No. AR197283

Prepared for:
Solaris Water Midstream LLC
Midland, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

November 10, 2020

Solaris Water Midstream LLC
907 Tradewinds Blvd., Suite B
Midland, Texas 79706

Attn: Mr. Rob Kirk
P: 432-203-9020
E: rob.kirk@solarismidstream.com

RE: **Closure of Release Investigation and Remedial Action Plan**
Marathon Madera Line
Unit L1, Section 18, Township 26 South, Range 35 East
Lea County, New Mexico
Terracon Project No. AR197283

Dear Mr. Kirk,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure of Release Investigation and Remedial Action Plan (RAP) for the site referenced above. The Release Investigation and RAP were developed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon took the following actions to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation, RAP, and closure in general accordance with our proposal (PAR197283) dated August 22, 2019.

- Based on the magnitude of chloride and hydrocarbon concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 60 cubic yards (cy) of chloride impacted material was required to be excavated and treated with pulverized gypsum, then mixed and blended with water and returned to the excavation.
- Following treatment to depths, vertical and horizontal delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants were below the desired NMOCD remediation action level (RAL).
- Based on the anticipated depth to groundwater and confirmed vertical delineation, a remedial response at depths greater than 4 ft. bgs, was required. Terracon further delineated the vertical extent of chloride concentrations to ensure protection of groundwater.
- Terracon will backfill and reseed following submittal of the closure report in accordance with *NMOCD Re-vegetation guidlines (19.15.29.13).*

Terracon appreciates this opportunity to provide environmental services to Solaris Water Midstream LLC (Solaris). Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Joseph Guesnier	Erin Loyd, P.G. (TX)
Staff Scientist	Principal
Lubbock	Office Manager – Lubbock

Terracon

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Closure of Release Investigation and Remedial Action Plan
Marathon Madera Line
Unit L1, Section 18, T26S, R35E
Lea County, New Mexico
Terracon Project No. AR197283
October 8, 2020

1.0 SITE DESCRIPTION

The site is comprised of an approximate 1 – acre area of native pasture land impacted by a produced water release, with the majority of the release residing to the west of pipeline right of way, in the pasture land. The site is within the Unit Letter L1, Section 2, Township 26 South, Range 35 East, Lea County, New Mexico. The Marathon Madera Line consists of rights-of-way for pipelines, and an unmodified lease road, with the origin of the release being a pump check valve failure. A Topographic Map illustrating the site location is included as Figure 1 and a Site Map illustrating soil sample locations is included as Figure 2 in Appendix A. A water well record search is also included as New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) Location Map as Figure 7 in Appendix A. A map illustrating the site's location in reference to NMOCD Karst mapping database is presented as Figure 8 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services was to investigate the magnitude and extent of the documented release and develop a Remedial Action Plan (RAP) in accordance with the NMOCD requirements that detail site closure activities to be completed. This closure addresses the August 22, 2019 release of approximately 100 barrels (bbls) of produced water which contained an estimated 0.25 bbls of crude originating from a malfunctioning pump check valve on a pipeline connection of a Solaris flowback line, and the remediation activities that have taken place at the above referenced site.

3.0 INTRODUCTION AND NOTIFICATION

The following table provides detailed information regarding the August 22, 2019 produced water release at the Marathon Madera Line Site in Lea County, New Mexico:

Required Information	Site and Release information	
Responsible party Local contact	The facility is operated by Solaris Water Midstream	
	Contact: Mr. Rob Kirk	P: (469) 978-5620 E: rob.kirk@solarismidstream.com

Required Information	Site and Release information	
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Rob Kirk (Solaris) on September 9, 2019.	
Facility description	The Marathon Madera Line is in Lea County, New Mexico. It is an approximate 1-acre area located within Unit L1, Section 18, Township 26 South, Range 35 East, approximately 12 miles southwest of Bennett, New Mexico. The site was developed as a pipeline right of way.	
Time of incident	August 21, 2019, discovered at 11:00 a.m.	
Discharge event	Release of produced water containing crude oil originating from a malfunctioning pump check valve on a pipeline connection of a Solaris transfer flowback line. The release origin occurred west of the pipeline right of way. The release area, near the origin of the release, was limited to an approximately 1-acre area; however, a portion of the release meandered along the surface for approximately 200 ft. to the west at a width ranging from approximately 275 ft. at the release point extending to 1 ft bgs. The release margins are illustrated on Figure 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the pipeline and affected the surface and to depth.	
Quantity of spilled material	Total Fluids: 100 bbls	Produced Water: 100 bbls containing approximately 0.25 bbls of crude oil
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the west.	
Immediate corrective actions	Pipeline was shut in, and the pump along with the malfunctioning joint were replaced and repaired.	

4.0 INITIAL RESPONSE ACTIONS

4.1 Source Elimination

Initial source elimination was accomplished by the Solaris foreman shutting in the leaking line and replacing the malfunctioning pump and repairing the joint in the pipeline that failed. Solaris enlisted the services of Terracon to assess the impacted areas of the release and develop a remedication plan of action.

5.0 GENERAL SITE CHARACTERISTICS

5.1 Depth to Groundwater

A water well record search of the New Mexico Office of the State Engineer (NMOSE) Potable Water Well (POD) Geographic Information System (GIS) data portal identified no registered wells within 0.5 miles of the site. One registered well (CP-01305) was identified at 4.8 miles of the site with a stated depth of 230 ft. below grade surface (bgs). NMOSE registered wells within 5.25 miles of the site have a minimum depth to groundwater of 173 feet bgs, with a maximum reported depth of 300 feet bgs. Based on the review of NMOSE available documentation, the depth to groundwater at the site is anticipated to be deeper than 100 feet bgs.

5.2 Distance to Nearest Potable Water Well

Based on review of the NMOSE database, registered potable water wells were not present within 0.5 miles of the site.

5.3 Distance to Nearest Surface Water

The Red Bluff Reservoir is located approximately 30 miles southwest of the site.

5.4 Soil / Waste Characteristics

Soils at the site are mapped as Upton-Simona complex, 1 to 5 percent slopes, eroded, 0 to 13 inches gravelly loam, 13 to 21 inches cemented, 21 to 60 inches very gravelly loam. This soil has a surface layer of gravelly sand. Restrictive features, are present at 7 to 20 inches bgs resulting in the formation being categorized with a high runoff classification.

5.5 Karst Characteristics

Terracon evaluated data from the NMOCD Public FTP Site, Karst map designations in reference to the site location. The site appears to be within a high level Karst risk area. Based on site observations within the extent of the release margins, the potential for Karst formations in this specific area are of low potential. A layer of solid competent rock was encountered from 30 to 60 inches bgs within the release margins. The full extent of release quantities and excavation activities did not extend greater than 48 inches bgs.

5.6 Groundwater Quality

Groundwater quality at the site is predominately used for commercial oil and gas production and the nearest well (CP-01305) is being utilized for Industrial operations.

6.0 REGULATORY FRAMEWORK AND RESPONSE ACTION LEVELS

Oil and gas exploration and production facilities in New Mexico are generally regulated by the New Mexico Oil Conservation Division (NMOCD). The NMOCD has issued the *Closure Criteria for Soils Impacted by a Release, June 21, 2018* and *Restoration, Reclamation, and Re-vegetation (19.15.29.13) NMAC – D (Reclamation of areas no longer in use)* as guidance documents for the remediation and reclamation of sites impacted by releases from oil and gas exploration and production activities. Sections 6.1 and 6.2 below detail applicability of these guidance documents to the site-specific characteristics associated with the Marathon Madera Line.

6.1 Reclamation Levels (Surface to 4 ft. bgs)

The below Reclamation Limits for chlorides, TPH (GRO+DRO+MRO), Total BTEX (includes benzene, toluene, ethylbenzene and xylenes), and benzene are defined within New Mexico Administration Code (NMAC) *Restoration, Reclamation, and Re-vegetation* (19.15.29.13) *New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use)* for soils extending to 4 ft. bgs.:

Constituent	Remediation Limits
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
Total BTEX	50 mg/kg
Benzene	10 mg/kg

6.2 Remediation Levels (> 4 ft. bgs)

The *Closure Criteria for Soils Impacted by a Release* guidance document provides direction for initial response actions, site assessment, sampling procedures and provides closure criteria based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

Table 1
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/L TDS	Constituent	Method*	Limit**
≤50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	100 mg/kg
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet – 100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015 M	1,000 mg/kg
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015 M	2,500 mg/kg
	TPH (GRO+DRO)	EPA SW-846 Method 8015 M	1,000 mg/kg
	Total BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

**Or other methods approved by the division*
***Numerical limits or natural background level, whichever is greater*
****This applies to releases of produced water or other fluids, which may contain chloride*

Based on the site-specific characteristics, the applicable NMOCD remediation levels for Total BTEX, chloride, and TPH within soils, exclusive of the Reclamation Zone (surface to 4 ft. bgs), are as follows:

Constituent	Remediation Limit
Chloride	20,000 mg/kg
TPH (GRO+DRO+MRO)	2,500 mg/kg
TPH (GRO+DRO)	1,000 mg/kg
Total BTEX	50 mg/kg
Benzene	10 mg/kg

7.0 SOIL SAMPLING PROCEDURES

Soil sampling procedures are detailed as follows:

7.1 Soil Sampling Procedures for Laboratory Analysis

Soil Sampling Procedures

Soil sampling for laboratory analysis was conducted according to NMOCD-approved industry standards or other NMOCD-approved procedures. Accepted NMOCD soil sampling procedures and laboratory analytical methods are as follows:

- Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier.
- Label the samples with a unique code for each sample.
- Cool and store samples with cold packs or on ice.
- Promptly ship samples to the lab for analysis following chain of custody procedures.
- All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

Analytical Methods

All soil samples must be analyzed using EPA methods, or by other NMOCD-approved methods and must be analyzed within the holding time specified by the method. Below are laboratory analytical methods the selected laboratory will use for analysis of soil samples analyzed for petroleum related constituents.

- Chloride – EPA Method 300.0

- Total Petroleum Hydrocarbons – TPH (GRO+DRO+MRO) – EPA Method 8015M
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) – EPA Method 8021B
- Benzene – EPA Method 8021B

8.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's September 04, 2019 release investigation activities, a total of 29 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. Of the 29 soils samples collected, 23 soil samples were collected from within the release margins.

8.1 Release Margins Data Evaluation

8.1.1 Reclamation Assessment Data Evaluation

A total of 23 discrete soil samples were collected within the top 4 ft. of soil from six sample locations (HA-1 through HA-6). The data evaluation in Section 8.1.1 pertains to these samples.

Benzene was not detected above applicable laboratory SDLs in the soil samples analyzed within the release margins. Therefore, the benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in one of the 23 soil sample analyzed within the release margins. The Total BTEX concentration was 0.0107 mg/kg in soil sample HA-1 (Surface to 0.5 ft bgs.). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 23 soil samples analyzed within the release margins. The chloride concentrations ranged from 297 mg/kg in soil sample HA-2 (3.5 to 4.0 ft bgs) to 7,240 mg/kg in soil sample HA-4 (3.5 to 4.0 ft bgs). The soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

TPH was detected above applicable laboratory SDLs in six of the 23 soil samples analyzed within the release margins. The TPH concentrations ranged from 0.357 mg/kg in soil sample HA-1 (Surface to 0.5 ft bgs) to 51.2 mg/kg in soil sample HA-5 (Surface to 0.5 ft bgs). The soil samples collected within the release margins did not exhibit TPH concentrations above the NMOCD RAL of 100 mg/kg for TPH, as summarized in Table 2.

At each of the soil boring locations, soil samples greater than depths of 4 ft bgs were not obtained due to encountering a restrictive formation at depth.

8.2 Background Data Evaluation

A total of six discrete soil samples were collected within the top 2 ft. of soil from six sample locations (HA-7 and HA-8). The data evaluation in Section 8.2 pertains to these samples.

Benzene, Total BTEX, and TPH were not detected above applicable laboratory SDLs in the soil samples analyzed within the background samples. Therefore, concentrations did not exceed the applicable NMOCD RAL's for benzene, Total BTEX, and TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the six soil samples analyzed within the background samples. The chloride concentrations ranged from 7.4 mg/kg in soil sample HA-7 (Surface to 0.5 ft bgs) to 13.4 mg/kg in soil sample HA-8 (surface to 0.5 ft bgs). The soil samples analyzed within the background samples did not exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

8.2.1 Background Data Summary

At each of the soil boring locations, a soil samples greater than depths of 2 ft bgs were not obtained due to encountering a restrictive formation at depth. All analyzed constituents were below the target NMOCD RAL's, with only Chloride measuring above the laboratory SDLs.

8.3 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibit concentrations of chloride in multiple locations. Based on these exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the site.

It is anticipated that released produced water associated chlorides consolidated upon the cemented layer of the Petrocalcic features within the release margins. Based on the presence of the competent rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

8.4 Grid Sample Data Evaluation

During Terracon's grid sampling event on January 29, 2020, 52 discrete soil samples were collected from the sectioned off inferred release area, to better delineate the impacted areas. The data evaluation in Section 8.4 pertains to these samples

Considering the only constituent of concern from the initial release investigation data was chloride. Only chloride was analyzed during the grid sampling.

Chloride was detected above applicable laboratory SDLs in all soil samples analyzed within the sectioned off areas. The chloride concentrations ranged from 6.21 mg/kg in soil sample C1 (Surface to 0.5 ft bgs) to 1,470 mg/kg in soil sample E3 (1.5 to 2.0 ft bgs). One of the 52 soil samples analyzed exhibited chloride concentrations above the applicable NMOCD Reclamation Assessment Limit of 600 mg/kg, as summarized in Table 2.

8.4.1 Grid Sample Data Summary

Based on the review of the above grid sampling investigation analytical results, the areas within the release margins exhibit concentrations of chloride above RALs in one location. Based on this exceedance above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the site.

It is anticipated that released produced water associated chlorides consolidated upon the cemented layer of the Petrocalcic features within the release margins and disapated through favorable soil conditions. Based on the presence of the competent rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

8.5 Confirmation Margins Data Evaluation

During Terracon's confirmation sampling events on February 25, 2020, April 9, 2020 and July 14, 2020, 18 confirmation soil sample were collected from both the open excavation and a location that had previously displayed elevated chloride levels, in conjunction with reclamation activities and analyzed for BTEX, chloride and/or TPH.

8.5.1 Confirmation Assessment Data Evaluation

Benzene was not detected above the applicable laboratory SDL in any of the seven confirmation soil samples. The Benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in three of the seven confirmation soil samples.Total BTEX concentrations ranged from 0.00546 mg/kg in soil sample CS-2 (4.5 to 5.0 ft bgs.) to 0.058 mg/kg in soil sample HA-1 (3.5 to 4.0 ft bgs). The Total BTEX concentrations did not exceed the applicable NMOCD RAL for BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in the seven analyzed confirmation soil samples. The Chloride concentrations ranged from 1.58 mg/kg in soil sample HA-4 (4.5 to 5.0 ft bgs) to 1,750 mg/kg in soil sample HA-5 (4.5 to 5.0 ft bgs). Three chloride concentrations did

exceed the applicable NMOCD RAL for Chloride of 600 mg/kg. The areas of HA-5 and CS-2 was resampled after additional remedial efforts resulting in a reduced concentration during the April 09, 2020 and July 14, 2020 sampling events, as summarized in Table 2.

Total TPH was detected above applicable laboratory SDLs in two of the seven analyzed confirmation soil samples. Total TPH concentrations ranged from 2.57 mg/kg in soil sample HA-1 (3.5 to 4.0 ft bgs) to 18.95 mg/kg in soil sample CS-2 (1.5 to 2.0 ft bgs). The detected Total TPH concentrations did not exceed the applicable NMOCD RAL for Total TPH of 100 mg/kg,as summarized in Table 2.

8.5.2 Confirmation Data Summary

Based on the review of the above confirmation analytical results, the areas surrounding the remediation margins do not exhibit concentrations above NMOCD RAL for benzene, Total BTEX, chloride and Total TPH. Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail recommended closure of response actions to be implemented at the site. Terracon recommend the restoration of the above mentioned site on August 15, 2020.

9.0 SOIL RECLAMATION AND REMEDIATION

Soil exhibiting concentrations above applicable NMOCD regulations was remediated, reclamated and managed according to the criteria described below which is intended to protect fresh waters, public health and the environment from exposure to the above constituents of concern.

9.1 Reclamation Response Objectives

Based on the magnitude of chloride concentrations detected within the release margins to depths subject to NMOCD Reclamation requirements, approximately 60 cy of chloride impacted material were excavated and disposed of at a permitted disposal facility under manifest.

9.2 Remediation Response Objectives

Following excavation to recommended Reclamation depths, horizontal delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD RALs. Based on the proximity of the analyzed samples to this restrictive layer and the magnitude of the concentrations being elevated above 600 mg/kg but below 20,000 mg/kg, Terracon previously recommended hydro-vacing the restrictive feature to wash out the residual presence of chlorides at this restrictive zone to ensure that concentrations are not elevated further at this restrictive interphase. However, Terracon did not encounter significant restrictive features during the remediation activities on site, and Hydro excavation was not warranted to complete the remediation.

Based on the anticipated depth to groundwater, and considering the possibility of Karst formations it is anticipated that no additonal remedial response will be warranted within the soils at depths not effected by the release.

9.3 Soil Management

The selected method of soil management is removal and disposal at a NMOCD-approved facility. Excavated soils was transported by truck (20 cubic yard capacity) and disposed at R360 Disposal Facility located in Halfway, New Mexico.

10.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

10.1 Termination of Reclamation and Remedial Actions

Reclamation and remedial actions at the site were terminated when the confirmation samples indicated that the above objectives have been completed within the reclamation and remedial depth designations. The intent of the reclamation and remedial approaches were to achieve compliance with NMOCD regulatory objectives in ensuring that any remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, the public health and the environment.

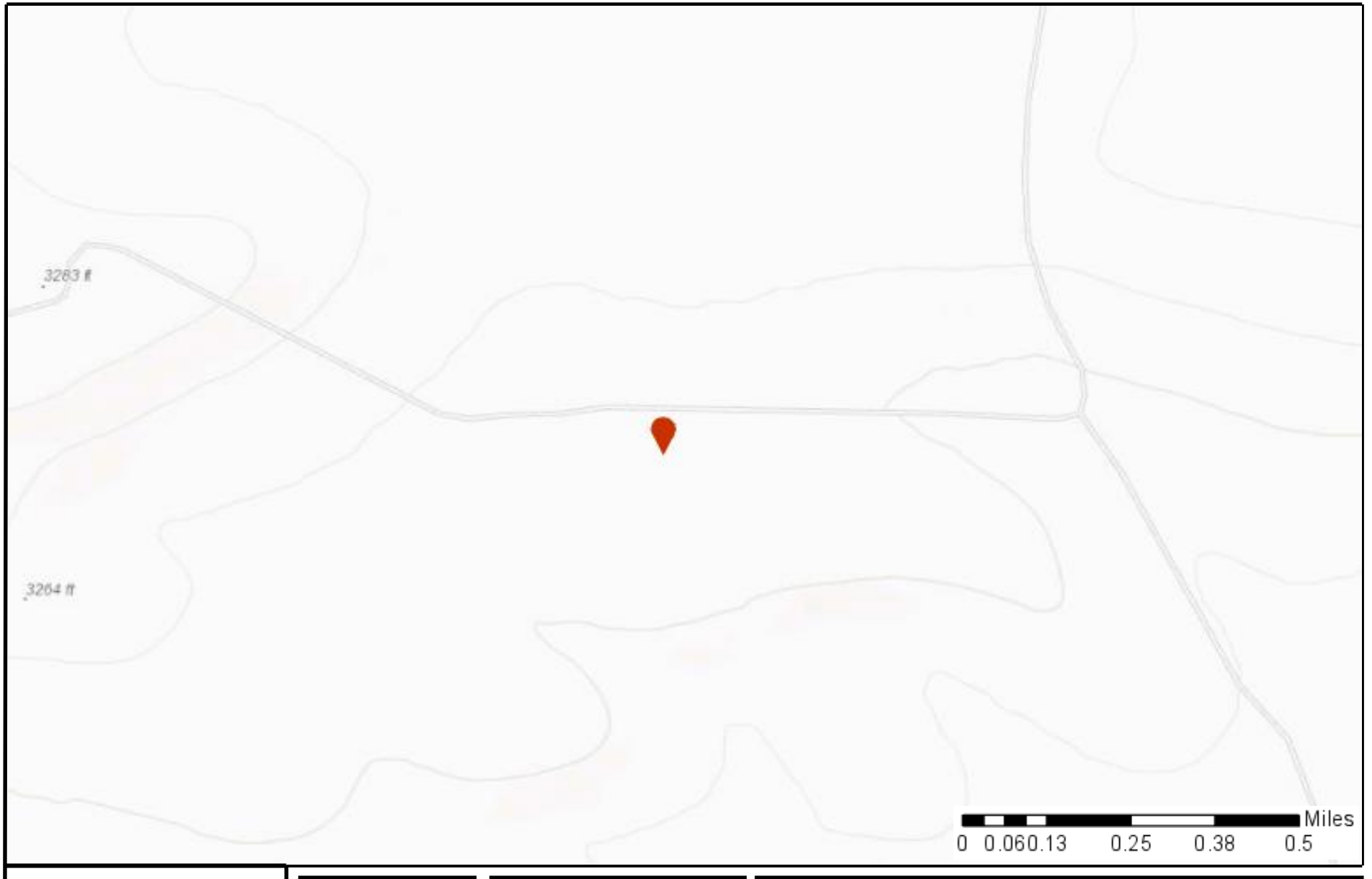
10.2 Final Closure

Upon termination of remedial actions (Sections 6 and 9), the area of the release will be closed by backfilling the excavated area, contouring to surrounding area topography and reseeding the area with approved-native vegetative seed.

10.3 Final Report

Do to the completion of remedial activities, a final report summarizing actions taken to mitigate environmental damage related to the release has been provided to NMOCD for approval.

APPENDIX A – FIGURES AND TABLES



Site Location

N

Project No.	AR107283
Scale:	As Shown
Source:	Google Earth
Date:	2019

Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 1 - Topographic Map

Marathon Madera
32.04783408, -103.41205065
Lea County, New Mexico

Contamination area

Pipe Transfer

Sample Location

N

Project No.	AR197283
Scale:	1:8,200
Source:	Google Earth
Date:	09/13/2019

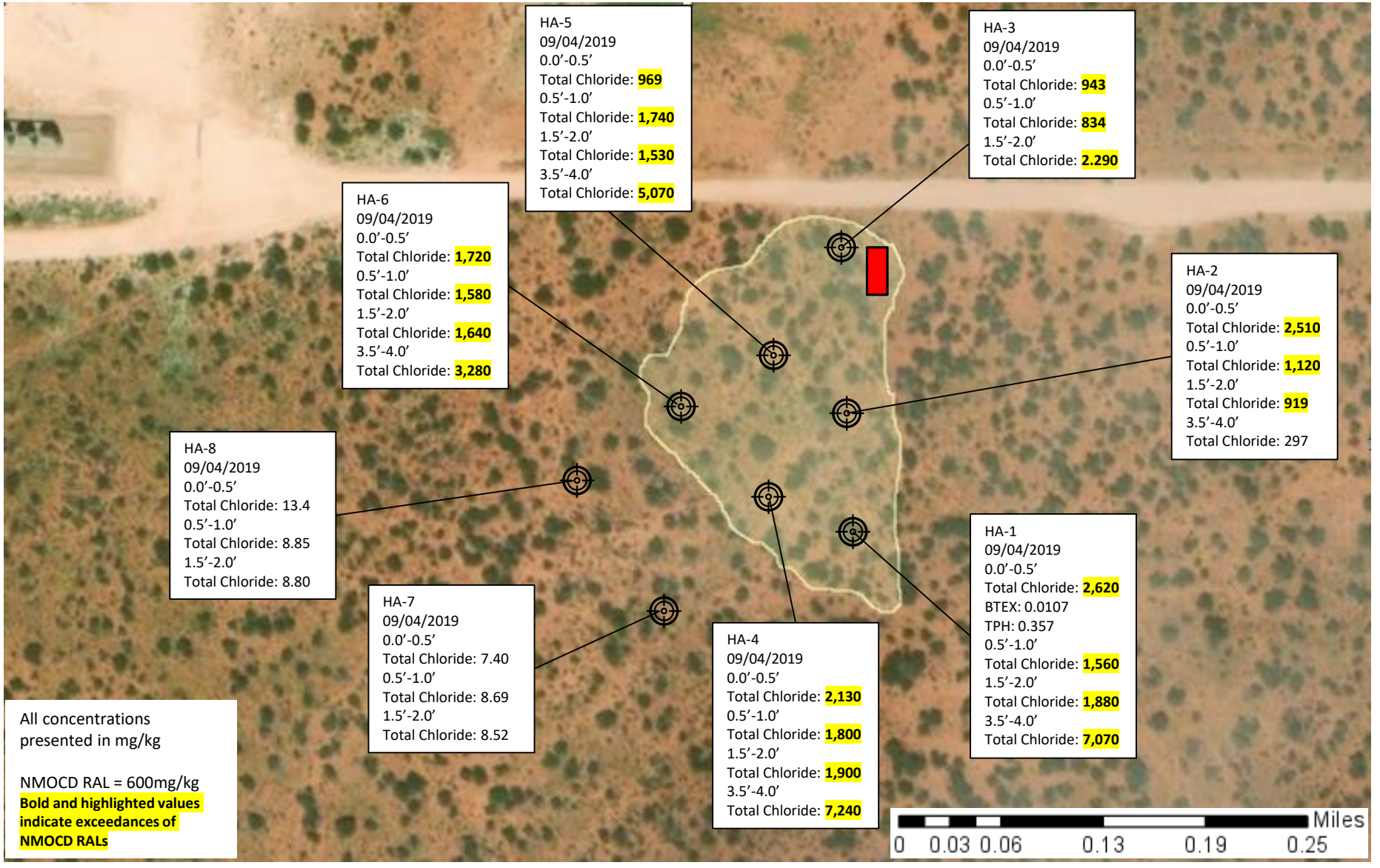
Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 2 – Site Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico



Contamination area

Pipe Transfer

Sample Location

N

Project No.	AR197283
Scale:	1:8,200
Source:	Google Earth
Date:	09/13/2019

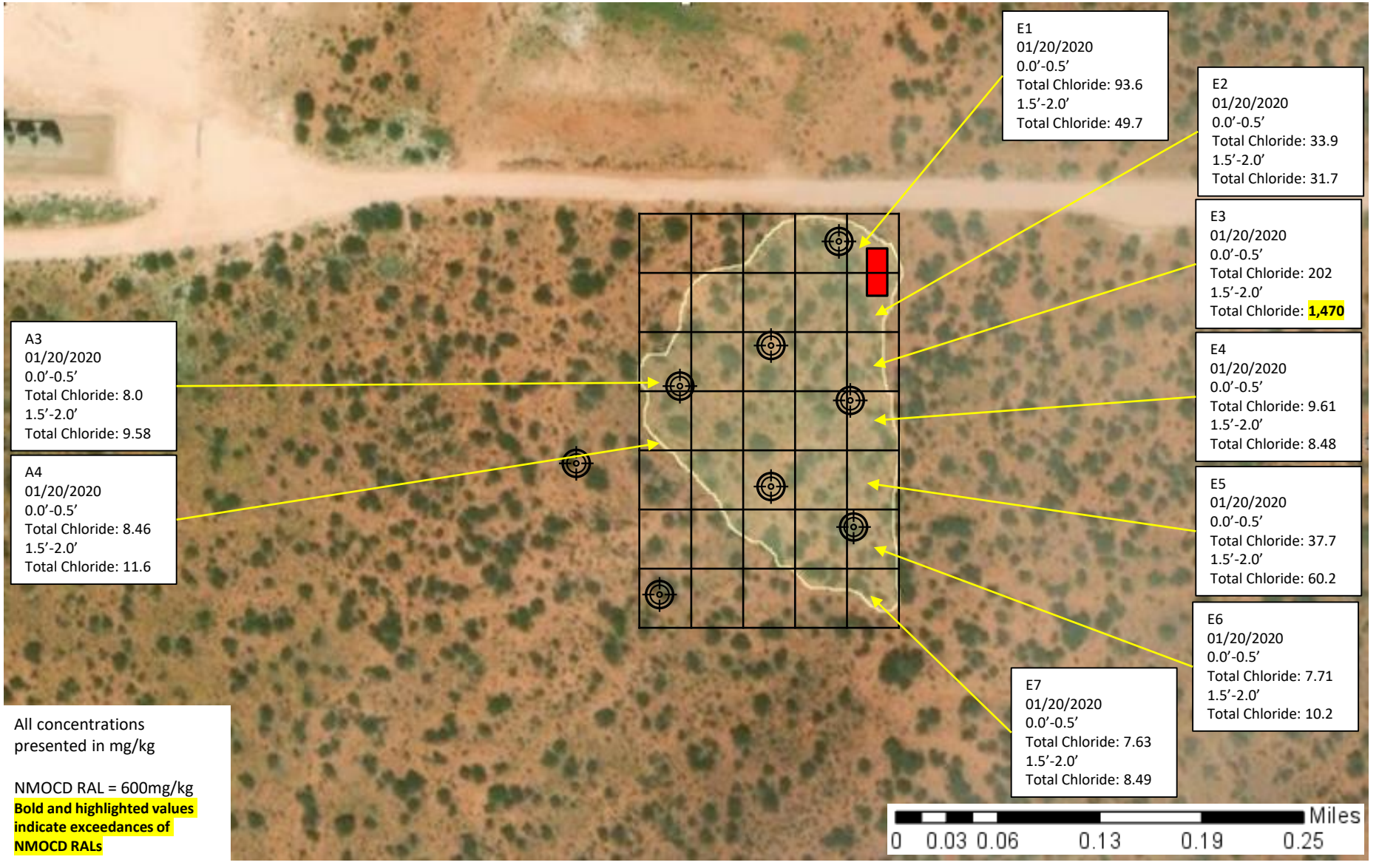
Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 3 – Contamination Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico



Contamination area

Pipe Transfer

Sample Location

N

Project No.	AR197283
Scale:	1:8,200
Source:	Google Earth
Date:	09/13/2019

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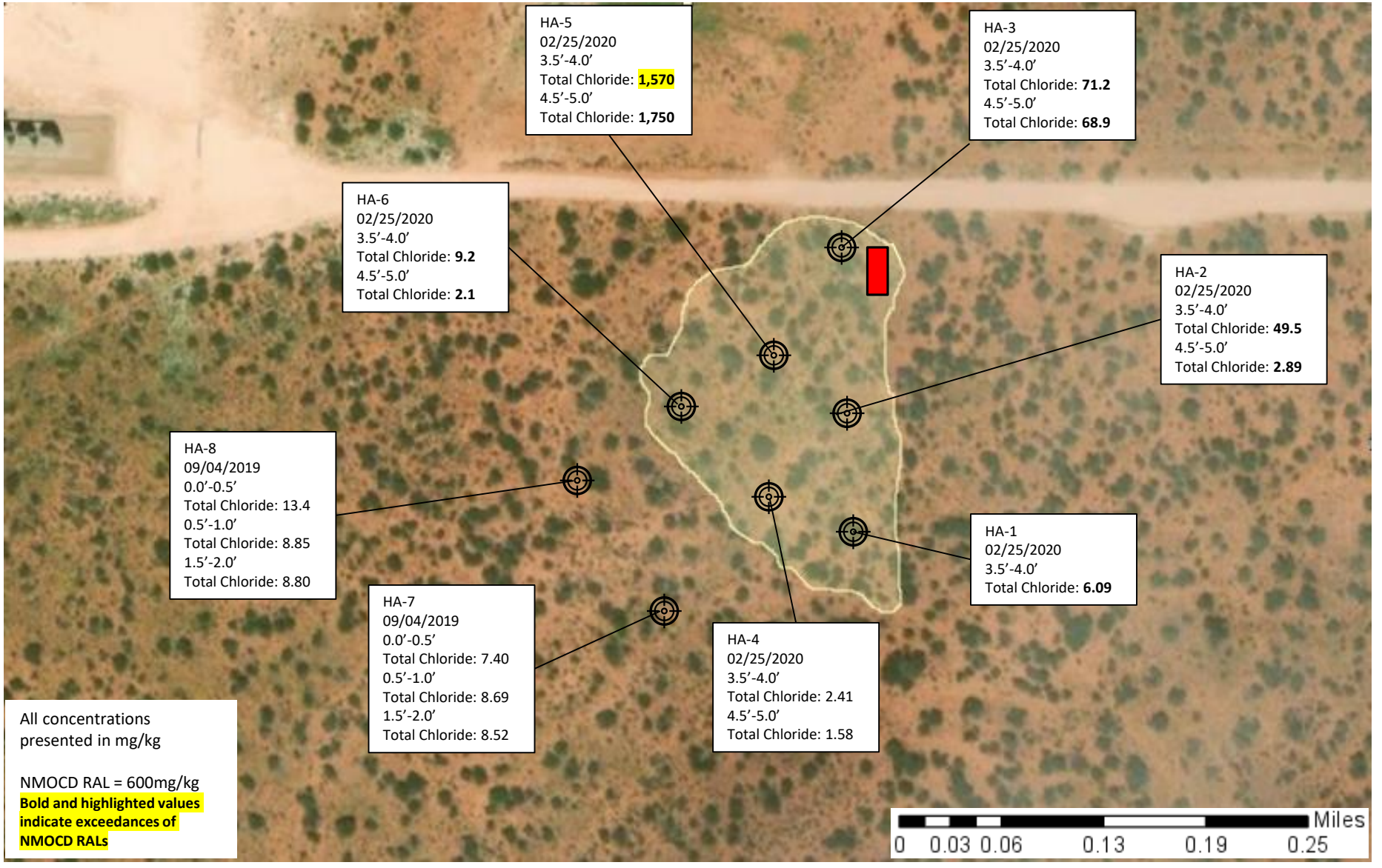
Figure 4 – Grid Sampling Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico



Contamination area

Pipe Transfer

Sample Location

N

Project No.	AR197283
Scale:	1:8,200
Source:	Google Earth
Date:	09/13/2019

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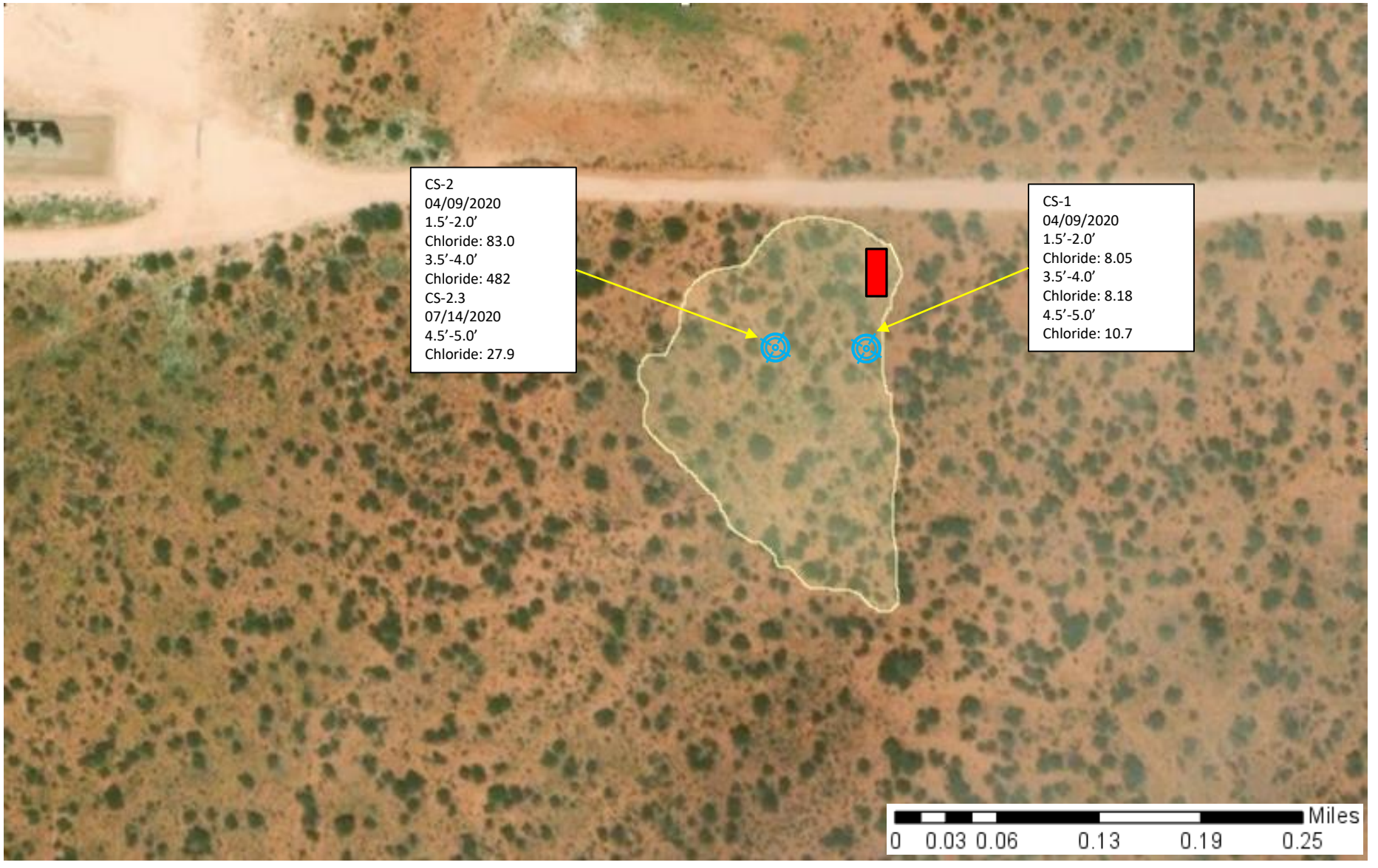
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 5 – Secondary Contamination Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico



Contamination area

Pipe Transfer

Confirmation Sample Location

N

Project No.	AR197283
Scale:	1:8,200
Source:	Google Earth
Date:	09/13/2019

Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

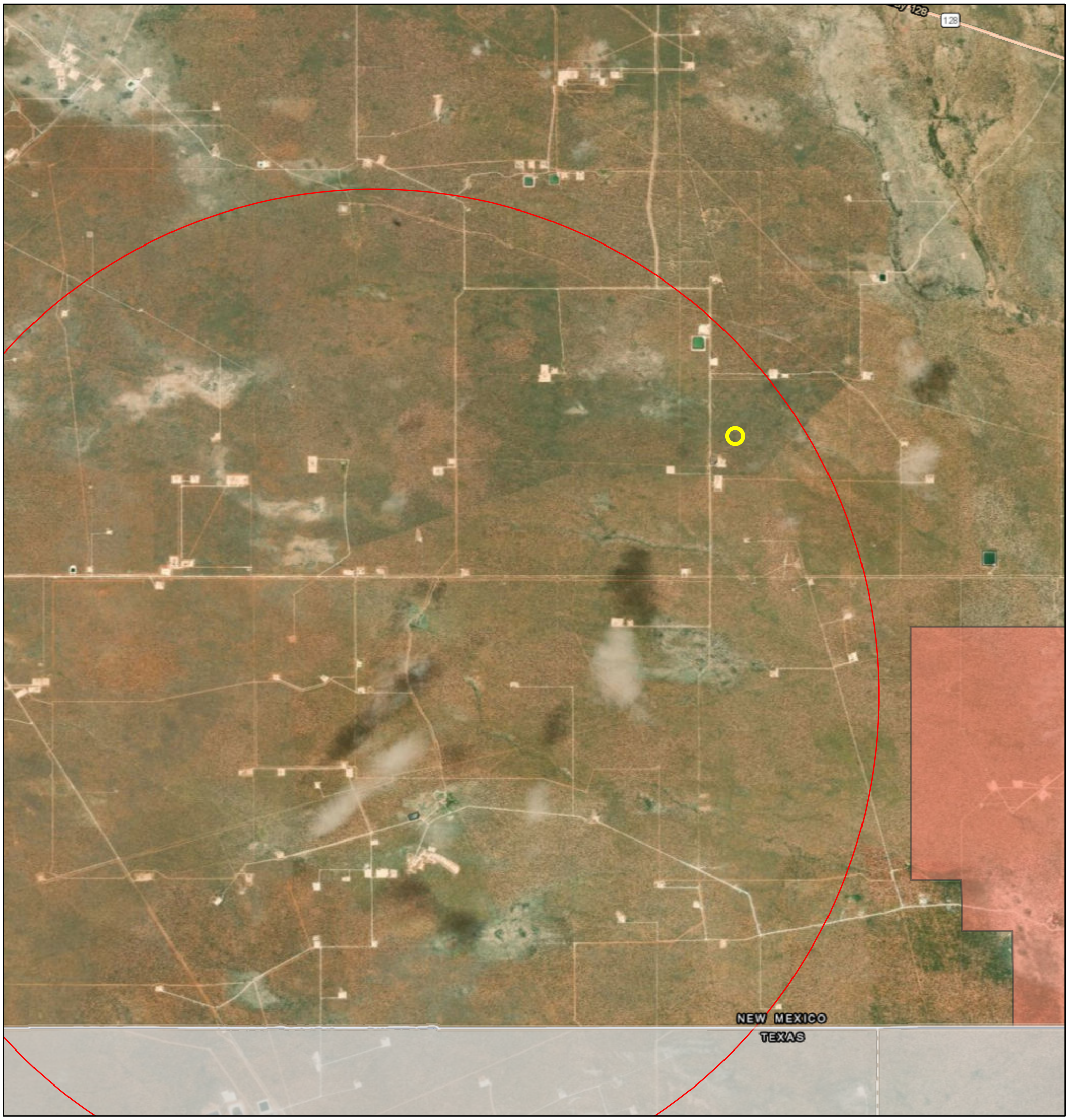
Figure 6 – Confirmation Contamination Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico

Figure 7 - NMOSE POD Location Map



11/18/2019 11:39:03 AM

Water Right Regulations

Critical Management Area - Guidelines

OSE District Boundary

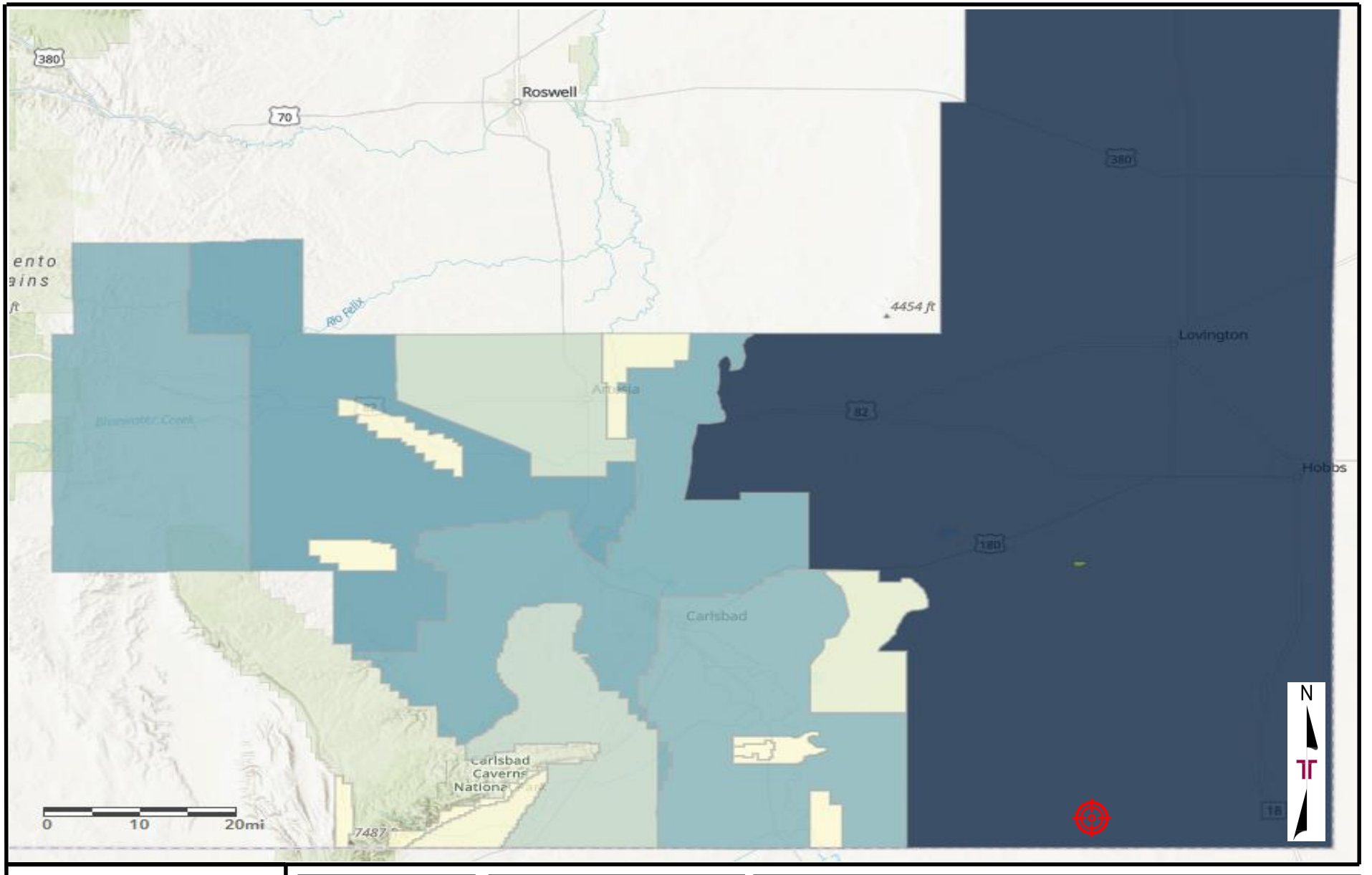
1:72,224

0 0.5 1 2 mi

0 1 2 4 km

Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and

Printed from Public Web Map
Unofficial Map from OSE POD Locations Web Application



Project No.	AR197283
Scale:	As Shown
Source:	ESRI
Date:	09/26/2019

Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

Figure 8 - Cave Karst Public UCP

Marathon Madera Line

32.0478340°, -103.4120526°

Lea County, New Mexico

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-1	0 - 0.5	Grab	09/04/19	Benzene - <0.00806 Toluene - <0.00417 Ethylbenzene - <0.00549 Total Xylenes - 0.0107 Total BTEX - 0.0107	**2,620**	0.357	<7.41	N/A	0.357
	0.5 - 1	Grab	09/04/19	Benzene - <0.00828 Toluene - <0.00429 Ethylbenzene - <0.00564 Total Xylenes - <0.00625 Total BTEX - <0.00429	**1,560**	<0.248	<7.46	N/A	<0.248
	1.5 - 2	Grab	09/04/19	BTEX - NA	**1,880**	NA			
	3.5 - 4	Grab	09/04/19	BTEX - NA	**7,070**	NA			
HA-2	0 - 0.5	Grab	09/04/19	Benzene - <0.00765 Toluene - <0.00396 Ethylbenzene - <0.00521 Total Xylenes - <0.00577 Total BTEX - <0.00396	**2,510**	<0.229	21.4	N/A	21.4
	0.5 - 1	Grab	09/04/19	Benzene - <0.00817 Toluene - <0.00423 Ethylbenzene - <0.00557 Total Xylenes - <0.00617 Total BTEX - <0.00423	**1,120**	<0.245	<7.53	N/A	<0.245
	1.5 - 2	Grab	09/04/19	BTEX - NA	**919**	NA			
	3.5 - 4	Grab	09/04/19	BTEX - NA	297	NA			
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-3	0 - 0.5	Grab	09/04/19	Benzene - <0.00822 Toluene - <0.00425 Ethylbenzene - <0.00560 Total Xylenes - <0.00620 Total BTEX - <0.00425	**943**	<0.246	<7.46	N/A	<0.246
	0.5 - 1	Grab	09/04/19	Benzene - <0.00843 Toluene - <0.00437 Ethylbenzene - <0.00575 Total Xylenes - <0.00636 Total BTEX - <0.00437	**834**	<0.253	13.5	N/A	13.5
	1.5 - 2	Grab	09/04/19	BTEX - NA	**2,290**	N/A			
HA-4	0 - 0.5	Grab	09/04/19	Benzene - <0.00845 Toluene - <0.00437 Ethylbenzene - <0.00576 Total Xylenes - <0.00637 Total BTEX - <0.00437	**2,130**	<0.253	<7.52	N/A	<0.253
	0.5 - 1	Grab	09/04/19	Benzene - <0.00859 Toluene - <0.00445 Ethylbenzene - <0.00586 Total Xylenes - <0.00648 Total BTEX - <0.00445	**1,800**	<0.258	12.5	N/A	12.5
	1.5 - 2	Grab	09/04/19	BTEX - NA	**1,900**	N/A			
	3.5 - 4	Grab	09/04/19	BTEX - NA	**7,240**	NA			
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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NA = Not Analyzed

N/A = Not Applicable

Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margin Samples (Off Pad)									
HA-5	0 - 0.5	Grab	09/04/19	Benzene - <0.00885 Toluene - <0.00458 Ethylbenzene - <0.00603 Total Xylenes - <0.00667 Total BTEX - <0.00458	**969**	<0.265	51.2	NA	51.2
	0.5 - 1	Grab	09/04/19	Benzene - <0.00871 Toluene - <0.00451 Ethylbenzene - <0.00593 Total Xylenes - <0.00657 Total BTEX - <0.00451	**1,740**	<0.261	11	NA	11
	1.5 - 2	Grab	09/04/19	BTEX - NA	**1,530**	NA			
	3.5 - 4	Grab	NA	BTEX - NA	**5,070**	NA			
HA-6	0 - 0.5	Grab	09/04/19	Benzene - <0.00856 Toluene - <0.00443 Ethylbenzene - <0.00583 Total Xylenes - <0.00646 Total BTEX - <0.00443	**1,720**	<0.257	<7.55	NA	<0.257
	0.5 - 1	Grab	09/04/19	Benzene - <0.00804 Toluene - <0.00416 Ethylbenzene - <0.00548 Total Xylenes - <0.00607 Total BTEX - <0.00416	**1,580**	<0.241	<7.55	NA	<0.241
	1.5 - 2	Grab	09/04/19	BTEX - NA	**1,640**	NA			
	3.5 - 4	Grab	09/04/19	BTEX - NA	**3,280**	NA			
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10** **Toluene - N/A** **Ethylbenzene - N/A** **Total Xylenes - N/A** **Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
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5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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N/A = Not Applicable

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TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Background Samples									
HA-7	0 - 0.5	Grab	09/04/19	Benzene - <0.00789 Toluene - <0.00408 Ethylbenzene - <0.00538 Total Xylenes - <0.00595 Total BTEX - <0.00408	7.40	<0.236	<7.51	N/A	<0.236
	0.5 - 1	Grab	09/04/19	Benzene - <0.00886 Toluene - <0.00459 Ethylbenzene - <0.00604 Total Xylenes - <0.00669 Total BTEX - <0.00459	8.69	<0.266	<7.53	N/A	<0.266
	1.5 - 2	Grab	09/04/19	BTEX - NA	8.52				
HA-8	0 - 0.5	Grab	09/04/19	Benzene - <0.00839 Toluene - <0.00434 Ethylbenzene - <0.00571 Total Xylenes - <0.00633 Total BTEX - <0.00434	13.4	<0.251	<7.53	N/A	<0.251
	0.5 - 1	Grab	09/04/19	Benzene - <0.00858 Toluene - <0.00444 Ethylbenzene - <0.00584 Total Xylenes - <0.00647 Total BTEX - <0.00444	8.85	<0.257	<7.55	N/A	<0.257
	1.5 - 2	Grab	09/04/19	BTEX - NA	8.80	NA			
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
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TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Grid & Confirmation Samples									
E1	0 - 0.5	Grab	01/29/20	BTEX - NA	93.6	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	49.7	NA	NA	NA	NA
E2	0-0.5	Grab	01/29/20	BTEX - NA	33.9	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	31.7	NA	NA	NA	NA
E3	0-0.5	Grab	01/29/20	BTEX - NA	202	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	**1,470**	NA	NA	NA	NA
E4	0-0.5	Grab	01/29/20	BTEX - NA	9.61 J	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	8.48 J	NA	NA	NA	NA
E5	0-0.5	Grab	01/29/20	BTEX - NA	37.7	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	60.2	NA	NA	NA	NA
E6	0-0.5	Grab	01/29/20	BTEX - NA	7.71 J	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10.2	NA	NA	NA	NA
E7	0 - 0.5	Grab	01/29/20	BTEX - NA	7.63	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	8.49	NA	NA	NA	NA
D1	0-0.5	Grab	01/29/20	BTEX - NA	37.8	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	36.4	NA	NA	NA	NA
D2	0-0.5	Grab	01/29/20	BTEX - NA	30.4	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	43	NA	NA	NA	NA
D3	0-0.5	Grab	01/29/20	BTEX - NA	348	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	215	NA	NA	NA	NA
D4	0-0.5	Grab	01/29/20	BTEX - NA	64.6	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	57.8	NA	NA	NA	NA
D5	0-0.5	Grab	01/29/20	BTEX - NA	8.69	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	19.6	NA	NA	NA	NA
D6	0 - 0.5	Grab	01/29/20	BTEX - NA	8.78	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	9.78	NA	NA	NA	NA
D7	0-0.5	Grab	01/29/20	BTEX - NA	8.36	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10	NA	NA	NA	NA
C1	0-0.5	Grab	01/29/20	BTEX - NA	6.21	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10	NA	NA	NA	NA
C2	0-0.5	Grab	01/29/20	BTEX - NA	39.8	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	54.1	NA	NA	NA	NA
C3	0-0.5	Grab	01/29/20	BTEX - NA	21.9	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	18.7	NA	NA	NA	NA
C4	0-0.5	Grab	01/29/20	BTEX - NA	7.47	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10.1	NA	NA	NA	NA
C5	0 - 0.5	Grab	01/29/20	BTEX - NA	8.62	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	8.28	NA	NA	NA	NA
C6	0-0.5	Grab	01/29/20	BTEX - NA	9.56	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	9.34	NA	NA	NA	NA
B2	0-0.5	Grab	01/29/20	BTEX - NA	10.3	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10.2	NA	NA	NA	NA
B3	0-0.5	Grab	01/29/20	BTEX - NA	10.6	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	9.89	NA	NA	NA	NA
B4	0-0.5	Grab	01/29/20	BTEX - NA	8.48	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	8.98	NA	NA	NA	NA
B5	0-0.5	Grab	01/29/20	BTEX - NA	8.62	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	10.3	NA	NA	NA	NA
A3	0 - 0.5	Grab	01/29/20	BTEX - NA	8.0	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	9.58	NA	NA	NA	NA
A4	0-0.5	Grab	01/29/20	BTEX - NA	8.46	NA	NA	NA	NA
	1.5-2	Grab	01/29/20	BTEX - NA	11.6	NA	NA	NA	NA
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
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TABLE 2
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Marathon Madera Line
Terracon Project No. AR197283

Sample I.D.	Sample Depth (ft. bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
HA-1	3.5-4	Grab	02/25/20	Benzene - <0.00904 Toluene - <0.00468 Ethylbenzene - <0.00616 Total Xylenes - 0.058 Total BTEX - 0.058	6.09 J	2.57 J	<7.43	<7.43	2.57 J
HA-2	3.5-4	Grab	02/25/20	Benzene - <0.00811 Toluene - <0.00420 Ethylbenzene - <0.00533 Total Xylenes - <0.00612 Total BTEX - <0.00612	4.95 J	<0.243	<7.51	<7.51	<0.243
	4.5-5	Grab	02/25/20	Benzene - <0.00886 Toluene - <0.00459 Ethylbenzene - <0.00604 Total Xylenes - <0.00669 Total BTEX - <0.00459	2.89 J	<0.266	<7.53	<7.53	<0.266
HA-3	3.5-4	Grab	02/25/20	Benzene - <0.00832 Toluene - <0.0431 Ethylbenzene - <0.00567 Total Xylenes - <0.00628 Total BTEX - <0.00431	68.9	<0.250	<7.49	<7.49	<0.250
	4.5-5	Grab	02/25/20	Benzene - <0.00888 Toluene - <0.00460 Ethylbenzene - <0.00605 Total Xylenes - <0.00670 Total BTEX - <0.00460	68.9	<0.266	<7.47	<7.47	<0.266
HA-4	3.5-4	Grab	02/25/20	Benzene - <0.00842 Toluene - <0.00436 Ethylbenzene - <0.00574 Total Xylenes - <0.00670 Total BTEX - <0.00436	2.41 J	<0.252	<7.47	<7.47	<0.252
	4.5-5	Grab	02/25/20	Benzene - <0.00874 Toluene - <0.00453 Ethylbenzene - <0.00596 Total Xylenes - <0.00660 Total BTEX - <0.00453	1.58 J	<0.262	<7.51	<7.51	<0.262
HA-5	3.5-4	Grab	02/25/20	Benzene - <0.00819 Toluene - <0.00424 Ethylbenzene - <0.00558 Total Xylenes - <0.00618 Total BTEX - <0.00424	**1,570**	<0.245	<7.52	<7.52	<0.245
	4.5-5	Grab	02/25/20	Benzene - <0.00806 Toluene - <0.00417 Ethylbenzene - <0.00549 Total Xylenes - <0.00608 Total BTEX - <0.00417	**1,750**	<0.242	<7.49	<7.49	<0.242
HA-6	3.5-4	Grab	02/25/20	Benzene - <0.00816 Toluene - <0.00422 Ethylbenzene - <0.00556 Total Xylenes - <0.00616 Total BTEX - <0.00422	9.20 J	<0.245	<7.46	<7.46	<0.245
	4.5-5	Grab	02/25/20	Benzene - <0.00846 Toluene - <0.00438 Ethylbenzene - <0.00577 Total Xylenes - <0.00639 Total BTEX - <0.00438	2.10 J	<0.254	<7.48	<7.48	<0.254
Final Confirmation Samples									
CS-1	1.5 - 2	Composite	04/09/19	Benzene - <0.00868 Toluene - 0.0134 Ethylbenzene - <0.00591 Total Xylenes - <0.00655 Total BTEX - 0.0134	8.05	<0.262	<2.43	<3.38	<0.262
	3.5 - 4	Composite	04/09/19	Benzene - <0.00869 Toluene - 0.00769 Ethylbenzene - <0.00592 Total Xylenes - <0.00656 Total BTEX - 0.00769	8.18	<0.268	<2.42	<3.37	<0.268
	4.5 - 5	Composite	04/09/19	Benzene - <0.00868 Total Xylenes - <0.00655 Total BTEX - <0.00449	10.7	<0.262	<2.43	<3.37	<0.262
CS-2	1.5 - 2	Composite	04/09/19	Benzene - <0.00806 Toluene - <0.00417 Ethylbenzene - <0.00549 Total Xylenes - <0.000608 Total BTEX - <0.00417	83.0	<0.264	4.95	14.0	18.95
	3.5 - 4	Composite	04/09/19	Benzene - <0.00904 Toluene - <0.00468 Ethylbenzene - <0.00616 Total Xylenes - <0.00682 Total BTEX - <0.00468	482	<0.239	<2.42	<3.37	<0.239
	4.5 - 5	Composite	04/09/19	Benzene - <0.00823 Total Xylenes - <0.00621 Total BTEX - 0.00546	**714**	<0.262	<2.43	6.40	6.40
CS-2.3	4.5-5	Grab	07/14/20	Benzene - <0.00201 Toluene - <0.00201 Ethylbenzene - <0.00201 Total Xylenes - <0.00201 Total BTEX - <0.00201	27.9	<50.0	<50.0	<50.0	<50.0
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B
2. Chloride = Chloride analyzed by EPA Method 300.
3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)
4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs
5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL
NA = Not Analyzed
N/A = Not Applicable
Bold and Highlight denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Reclamation and/or Remediation and Delineation Standards.

APPENDIX B – PHOTOGRAPHIC LOG

PHOTO 1: View of release point, facing East. 8/22/2019

PHOTO 2: View of release point, facing South. 8/22/2019

PHOTO 3: View of site, facing Northeast. 8/22/2019

PHOTO 4: View of site, facing Northwest. 8/22/2019

PHOTO 5: View of site, facing Southwest. 8/22/2019

PHOTO 6: View of site, facing East. 8/22/2019

PHOTO 7: View of Eastern portion of site near road, facing North. 8/22/2019

PHOTO 8: View of Western portion of site, facing northeast. 8/22/2019

PHOTO 9: View from center of site, facing East. 8/22/2019

PHOTO 10: View of release point, facing Southeast. 8/22/2019

PHOTO 11: View of HA-1, facing Northeast. 9/4/19

PHOTO 12: View of HA-2, facing Northeast. 9/4/19

PHOTO 13: View of HA-3 , facing East. 10/10/2019

PHOTO 14: View of HA-4, facing East. 9/4/19

PHOTO 15: View of HA-5, facing Northwest. 9/4/19

PHOTO 16: View of HA-6, facing East. 9/4/19

PHOTO 17: View of HA-7, facing Northeast. 9/4/19

PHOTO 18: View of HA-8, facing North. 9/4/19

PHOTO 19: View of remediation around HA-5. 6/4/19

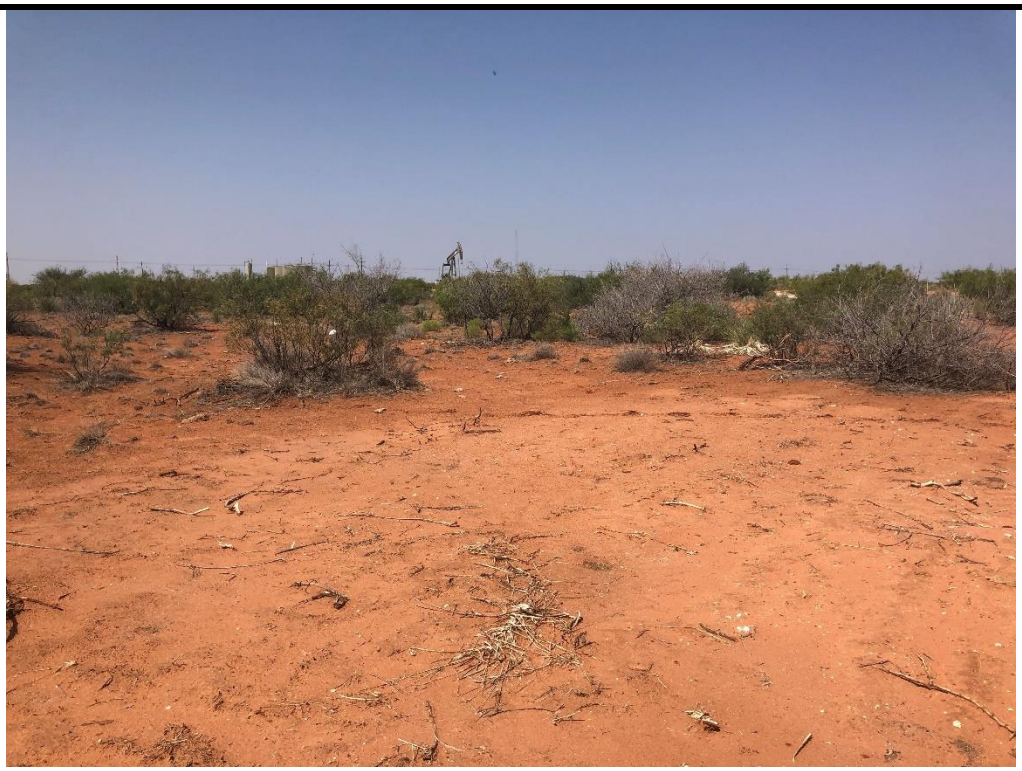

PHOTO 20: View of site post remediation. 9/15/20

APPENDIX C – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Certificate of Analysis Summary 636281

Terracon-Lubbock, Lubbock, TX

Project Name: Marathron Madera Line

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Fri Sep-06-19 04:55 pm
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636281-001		636281-002		636281-003		636281-004		636281-005		636281-006	
	Field Id:	HA - 1 (0-0.5)		HA - 1 (0.5-1)		HA - 1 (1.5-2)		HA - 1 (3.5-4)		HA - 2 (0-0.5)		HA - 2 (0.5-1)	
	Depth:	0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft		0-0.5 ft		0.5-1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-04-19 13:00		Sep-04-19 13:05		Sep-04-19 13:10		Sep-04-19 13:15		Sep-04-19 13:20		Sep-04-19 13:25	
BTEX by EPA 8021B	***Extracted:***	Sep-09-19 12:00		Sep-09-19 12:00						Sep-09-19 12:00		Sep-09-19 12:00	
	Analyzed:	Sep-10-19 09:58		Sep-10-19 12:22						Sep-10-19 12:46		Sep-10-19 13:10	
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RL
Benzene		<0.00806	0.0178	<0.00828	0.0183					<0.00765	0.0169	<0.00817	0.0181
Toluene		<0.00417	0.0178	<0.00429	0.0183					<0.00396	0.0169	<0.00423	0.0181
Ethylbenzene		<0.00549	0.0178	<0.00564	0.0183					<0.00521	0.0169	<0.00557	0.0181
m,p-Xylenes		0.0107 J	0.0357	<0.00625	0.0366					<0.00577	0.0338	<0.00617	0.0362
o-Xylene		<0.00608	0.0178	<0.00625	0.0183					<0.00577	0.0169	<0.00617	0.0181
Total Xylenes		0.0107 J	0.0178	<0.00625	0.0183					<0.00577	0.0169	<0.00617	0.0181
Total BTEX		0.0107 J	0.0178	<0.00429	0.0183					<0.00396	0.0169	<0.00423	0.0181
Chloride by EPA 300 **SUB: T104704215-19-29**	***Extracted:***	Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11	
	Analyzed:	Sep-10-19 20:18		Sep-10-19 20:42		Sep-10-19 21:06		Sep-10-19 21:31		Sep-10-19 21:39		Sep-10-19 21:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2620 X	10.0	1560	9.96	1880	9.98	7070	99.4	2510	9.88	1120	10.0
DRO By SW8015B	***Extracted:***	Sep-09-19 11:45		Sep-09-19 11:45						Sep-09-19 11:45		Sep-09-19 11:45	
	Analyzed:	Sep-09-19 17:10		Sep-09-19 19:39						Sep-10-19 12:14		Sep-09-19 20:54	
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.41	24.8	<7.46	24.9					21.4 J	24.9	<7.53	25.2
TPH GRO by EPA 8015 Mod.	***Extracted:***	Sep-09-19 12:00		Sep-09-19 12:00						Sep-09-19 12:00		Sep-09-19 12:00	
	Analyzed:	Sep-10-19 09:58		Sep-10-19 12:22						Sep-10-19 12:46		Sep-10-19 13:10	
	Units/RL:	mg/kg	RL	mg/kg	RL					mg/kg	RL	mg/kg	RL
TPH-GRO		0.357 J	3.57	<0.248	3.66					<0.229	3.38	<0.245	3.62

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Version: 1.%

Jessica Kramer
Project Assistant

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Certificate of Analysis Summary 636281

Terracon-Lubbock, Lubbock, TX

Project Name: Marathron Madera Line

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Fri Sep-06-19 04:55 pm
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	636281-007	636281-008	636281-009	636281-010	636281-011	636281-012
	Field Id:	HA - 2 (1.5-2)	HA - 2 (3.5-4)	HA - 3 (0-0.5)	HA - 3 (0.5-1)	HA - 3 (1.5-2)	HA - 4 (0-0.5)
	Depth:	1.5-2 ft	3.5-4 ft	0-0.5 ft	0.5-1 ft	1.5-2 ft	0-0.5 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-04-19 13:30	Sep-04-19 13:35	Sep-04-19 13:40	Sep-04-19 13:45	Sep-04-19 13:50	Sep-04-19 14:00
BTEX by EPA 8021B	**Extracted:**			Sep-09-19 12:00	Sep-09-19 12:00		Sep-09-19 12:00
	Analyzed:			Sep-10-19 13:34	Sep-10-19 13:58		Sep-10-19 14:23
	Units/RL:			mg/kg RL	mg/kg RL		mg/kg RL
Benzene				<0.00822 0.0182	<0.00843 0.0187		<0.00845 0.0187
Toluene				<0.00425 0.0182	<0.00437 0.0187		<0.00437 0.0187
Ethylbenzene				<0.00560 0.0182	<0.00575 0.0187		<0.00576 0.0187
m,p-Xylenes				<0.00620 0.0364	<0.00636 0.0373		<0.00637 0.0374
o-Xylene				<0.00620 0.0182	<0.00636 0.0187		<0.00637 0.0187
Total Xylenes				<0.00620 0.0182	<0.00636 0.0187		<0.00637 0.0187
Total BTEX				<0.00425 0.0182	<0.00437 0.0187		<0.00437 0.0187
Chloride by EPA 300 SUB: T104704215-19-29	**Extracted:**	Sep-10-19 15:11	Sep-10-19 15:11	Sep-10-19 15:11	Sep-10-19 15:11	Sep-10-19 15:11	Sep-10-19 15:11
	Analyzed:	Sep-10-19 21:55	Sep-10-19 22:03	Sep-10-19 22:11	Sep-10-19 22:19	Sep-10-19 22:27	Sep-10-19 22:35
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		919 9.98	297 10.0	943 10.1	834 10.1	2290 9.94	2130 9.84
DRO By SW8015B	**Extracted:**			Sep-09-19 11:45	Sep-09-19 11:45		Sep-09-19 11:45
	Analyzed:			Sep-09-19 21:31	Sep-09-19 22:07		Sep-09-19 22:46
	Units/RL:			mg/kg RL	mg/kg RL		mg/kg RL
Diesel Range Organics (DRO)				<7.46 24.9	13.5 J 24.9		<7.52 25.1
TPH GRO by EPA 8015 Mod.	**Extracted:**			Sep-09-19 12:00	Sep-09-19 12:00		Sep-09-19 12:00
	Analyzed:			Sep-10-19 13:34	Sep-10-19 13:58		Sep-10-19 14:23
	Units/RL:			mg/kg RL	mg/kg RL		mg/kg RL
TPH-GRO				<0.246 3.64	<0.253 3.73		<0.253 3.74

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 636281

Terracon-Lubbock, Lubbock, TX

Project Name: Marathron Madera Line

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Fri Sep-06-19 04:55 pm
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636281-013		636281-014		636281-015		636281-016		636281-017		636281-018	
	Field Id:	HA - 4 (0.5-1)		HA - 4 (1.5-2)		HA - 4 (3.5-4)		HA - 5 (0-0.5)		HA - 5 (0.5-1)		HA - 5 (1.5-2)	
	Depth:	0.5-1 ft		1.5-2 ft		3.5-4 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-04-19 14:05		Sep-04-19 14:10		Sep-04-19 14:15		Sep-04-19 14:20		Sep-04-19 14:25		Sep-04-19 14:30	
BTEX by EPA 8021B	*Extracted:*	Sep-09-19 12:00						Sep-09-19 12:00		Sep-09-19 12:00			
	Analyzed:	Sep-10-19 14:47						Sep-10-19 15:12		Sep-10-19 15:36			
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL		
Benzene		<0.00859	0.0190					<0.00885	0.0196	<0.00871	0.0193		
Toluene		<0.00445	0.0190					<0.00458	0.0196	<0.00451	0.0193		
Ethylbenzene		<0.00586	0.0190					<0.00603	0.0196	<0.00593	0.0193		
m,p-Xylenes		<0.00648	0.0380					<0.00667	0.0391	<0.00657	0.0385		
o-Xylene		<0.00648	0.0190					<0.00667	0.0196	<0.00657	0.0193		
Total Xylenes		<0.00648	0.0190					<0.00667	0.0196	<0.00657	0.0193		
Total BTEX		<0.00445	0.0190					<0.00458	0.0196	<0.00451	0.0193		
Chloride by EPA 300 SUB: T104704215-19-29	*Extracted:*	Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:11	
	Analyzed:	Sep-10-19 22:43		Sep-10-19 23:07		Sep-10-19 23:16		Sep-10-19 23:24		Sep-10-19 23:32		Sep-10-19 23:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1800	9.88	1900	9.98	7240	100	969	9.98	1740	10.0	1530	9.94
DRO By SW8015B	*Extracted:*	Sep-09-19 11:45						Sep-09-19 11:45		Sep-09-19 11:45			
	Analyzed:	Sep-09-19 23:20						Sep-09-19 23:59		Sep-10-19 00:35			
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL		
Diesel Range Organics (DRO)		12.5 J	24.9					51.2	24.9	11.0 J	24.9		
TPH GRO by EPA 8015 Mod.	*Extracted:*	Sep-09-19 12:00						Sep-09-19 12:00		Sep-09-19 12:00			
	Analyzed:	Sep-10-19 14:47						Sep-10-19 15:12		Sep-10-19 15:36			
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL		
TPH-GRO		<0.258	3.80					<0.265	3.91	<0.261	3.85		

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Jessica Kramer
Project Assistant

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Certificate of Analysis Summary 636281

Terracon-Lubbock, Lubbock, TX

Project Name: Marathron Madera Line

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Fri Sep-06-19 04:55 pm
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636281-019		636281-020		636281-021		636281-022		636281-023		636281-024	
	Field Id:	HA - 5 (3.5-4)		HA - 6 (0-0.5)		HA - 6 (0.5-1)		HA - 6 (1.5-2)		HA - 6 (3.5-4)		HA -7 (0-0.5)	
	Depth:	3.5-4 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft		3.5-4 ft		0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-04-19 14:35		Sep-04-19 14:40		Sep-04-19 14:45		Sep-04-19 14:50		Sep-04-19 14:55		Sep-04-19 15:00	
BTEX by EPA 8021B	***Extracted:***			Sep-09-19 12:00		Sep-09-19 12:00						Sep-09-19 12:00	
	Analyzed:			Sep-10-19 17:39		Sep-10-19 18:03						Sep-10-19 18:27	
	Units/RL:			mg/kg	RL	mg/kg	RL					mg/kg	RL
Benzene				<0.00856	0.0189	<0.00804	0.0178					<0.00789	0.0175
Toluene				<0.00443	0.0189	<0.00416	0.0178					<0.00408	0.0175
Ethylbenzene				<0.00583	0.0189	<0.00548	0.0178					<0.00538	0.0175
m,p-Xylenes				<0.00646	0.0379	<0.00607	0.0356					<0.00595	0.0349
o-Xylene				<0.00646	0.0189	<0.00607	0.0178					<0.00595	0.0175
Total Xylenes				<0.00646	0.0189	<0.00607	0.0178					<0.00595	0.0175
Total BTEX				<0.00443	0.0189	<0.00416	0.0178					<0.00408	0.0175
Chloride by EPA 300 **SUB: T104704215-19-29**	***Extracted:***	Sep-10-19 15:11		Sep-10-19 15:11		Sep-10-19 15:00		Sep-10-19 15:00		Sep-10-19 15:00		Sep-10-19 15:00	
	Analyzed:	Sep-10-19 23:48		Sep-10-19 23:56		Sep-10-19 16:56		Sep-10-19 17:20		Sep-10-19 17:28		Sep-10-19 17:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		5070	98.8	1720	9.96	1580	9.98	1640	9.94	3280	9.90	7.40 J	10.0
DRO By SW8015B	***Extracted:***			Sep-09-19 11:45		Sep-09-19 11:45						Sep-09-19 11:45	
	Analyzed:			Sep-10-19 01:13		Sep-10-19 01:49						Sep-10-19 02:28	
	Units/RL:			mg/kg	RL	mg/kg	RL					mg/kg	RL
Diesel Range Organics (DRO)				<7.55	25.2	<7.55	25.2					<7.51	25.1
TPH GRO by EPA 8015 Mod.	***Extracted:***			Sep-09-19 12:00		Sep-09-19 12:00						Sep-09-19 12:00	
	Analyzed:			Sep-10-19 17:39		Sep-10-19 18:03						Sep-10-19 18:27	
	Units/RL:			mg/kg	RL	mg/kg	RL					mg/kg	RL
TPH-GRO				<0.257	3.79	<0.241	3.56					<0.236	3.49

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 636281

Terracon-Lubbock, Lubbock, TX

Project Name: Marathron Madera Line

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Spur

Date Received in Lab: Fri Sep-06-19 04:55 pm
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested		636281-025		636281-026		636281-027		636281-028		636281-029		
	Field Id:	HA - 7 (0.5-1)		HA -7 (1.5-2)		HA - 8 (0-0.5)		HA - 8 (0.5-1)		HA - 8 (1.5-2)		
	Depth:	0.5-1 ft		1.5-2 ft		0-0.5 ft		0.5-1 ft		1.5-2 ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Sep-04-19 15:05		Sep-04-19 15:10		Sep-04-19 15:20		Sep-04-19 15:25		Sep-04-19 15:30		
BTEX by EPA 8021B	*Extracted:*	Sep-09-19 12:00				Sep-09-19 12:00		Sep-09-19 12:00				
	Analyzed:	Sep-10-19 18:52				Sep-10-19 19:16		Sep-10-19 19:41				
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL			
Benzene		<0.00886	0.0196			<0.00839	0.0186	<0.00858	0.0190			
Toluene		<0.00459	0.0196			<0.00434	0.0186	<0.00444	0.0190			
Ethylbenzene		<0.00604	0.0196			<0.00571	0.0186	<0.00584	0.0190			
m,p-Xylenes		<0.00669	0.0392			<0.00633	0.0371	<0.00647	0.0380			
o-Xylene		<0.00669	0.0196			<0.00633	0.0186	<0.00647	0.0190			
Total Xylenes		<0.00669	0.0196			<0.00633	0.0186	<0.00647	0.0190			
Total BTEX		<0.00459	0.0196			<0.00434	0.0186	<0.00444	0.0190			
Chloride by EPA 300 **SUB: T104704215-19-29**	*Extracted:*	Sep-10-19 15:00		Sep-10-19 15:00		Sep-10-19 15:00		Sep-10-19 15:00		Sep-10-19 15:00		
	Analyzed:	Sep-10-19 17:45		Sep-10-19 18:09		Sep-10-19 18:33		Sep-10-19 18:57		Sep-10-19 19:05		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		8.69 J	10.0	8.52 J	10.1	13.4	10.0	8.85 J	9.96	8.80 J	9.94	
DRO By SW8015B	*Extracted:*	Sep-09-19 11:45				Sep-09-19 11:45		Sep-09-19 11:45				
	Analyzed:	Sep-10-19 03:07				Sep-10-19 03:44		Sep-10-19 04:19				
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL			
Diesel Range Organics (DRO)		<7.53	25.2			<7.53	25.2	<7.55	25.2			
TPH GRO by EPA 8015 Mod.	*Extracted:*	Sep-09-19 12:00				Sep-09-19 12:00		Sep-09-19 12:00				
	Analyzed:	Sep-10-19 18:52				Sep-10-19 19:16		Sep-10-19 19:41				
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL			
TPH-GRO		<0.266	3.92			<0.251	3.71	<0.257	3.80			

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Analytical Report 636281

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Marathron Madera Line

AR197283

12-SEP-19

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-SEP-19

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **636281**
Marathron Madera Line
Project Address: Spur

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 636281. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 636281 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA - 1 (0-0.5)	S	09-04-19 13:00	0 - 0.5 ft	636281-001
HA - 1 (0.5-1)	S	09-04-19 13:05	0.5 - 1 ft	636281-002
HA - 1 (1.5-2)	S	09-04-19 13:10	1.5 - 2 ft	636281-003
HA - 1 (3.5-4)	S	09-04-19 13:15	3.5 - 4 ft	636281-004
HA - 2 (0-0.5)	S	09-04-19 13:20	0 - 0.5 ft	636281-005
HA - 2 (0.5-1)	S	09-04-19 13:25	0.5 - 1 ft	636281-006
HA - 2 (1.5-2)	S	09-04-19 13:30	1.5 - 2 ft	636281-007
HA - 2 (3.5-4)	S	09-04-19 13:35	3.5 - 4 ft	636281-008
HA - 3 (0-0.5)	S	09-04-19 13:40	0 - 0.5 ft	636281-009
HA - 3 (0.5-1)	S	09-04-19 13:45	0.5 - 1 ft	636281-010
HA - 3 (1.5-2)	S	09-04-19 13:50	1.5 - 2 ft	636281-011
HA - 4 (0-0.5)	S	09-04-19 14:00	0 - 0.5 ft	636281-012
HA - 4 (0.5-1)	S	09-04-19 14:05	0.5 - 1 ft	636281-013
HA - 4 (1.5-2)	S	09-04-19 14:10	1.5 - 2 ft	636281-014
HA - 4 (3.5-4)	S	09-04-19 14:15	3.5 - 4 ft	636281-015
HA - 5 (0-0.5)	S	09-04-19 14:20	0 - 0.5 ft	636281-016
HA - 5 (0.5-1)	S	09-04-19 14:25	0.5 - 1 ft	636281-017
HA - 5 (1.5-2)	S	09-04-19 14:30	1.5 - 2 ft	636281-018
HA - 5 (3.5-4)	S	09-04-19 14:35	3.5 - 4 ft	636281-019
HA - 6 (0-0.5)	S	09-04-19 14:40	0 - 0.5 ft	636281-020
HA - 6 (0.5-1)	S	09-04-19 14:45	0.5 - 1 ft	636281-021
HA - 6 (1.5-2)	S	09-04-19 14:50	1.5 - 2 ft	636281-022
HA - 6 (3.5-4)	S	09-04-19 14:55	3.5 - 4 ft	636281-023
HA -7 (0-0.5)	S	09-04-19 15:00	0 - 0.5 ft	636281-024
HA - 7 (0.5-1)	S	09-04-19 15:05	0.5 - 1 ft	636281-025
HA -7 (1.5-2)	S	09-04-19 15:10	1.5 - 2 ft	636281-026
HA - 8 (0-0.5)	S	09-04-19 15:20	0 - 0.5 ft	636281-027
HA - 8 (0.5-1)	S	09-04-19 15:25	0.5 - 1 ft	636281-028
HA - 8 (1.5-2)	S	09-04-19 15:30	1.5 - 2 ft	636281-029

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathron Madera Line

Project ID: *AR197283*
Work Order Number(s): *636281*

Report Date: *12-SEP-19*
Date Received: *09/06/2019*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100963 DRO By SW8015B
Surrogate Tricosane, Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 636281-016.

Batch: LBA-3101020 Chloride by EPA 300
Lab Sample ID 636281-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 636281-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3101105 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3101108 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7685858-1-BKS.

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-001	Date Collected:	09.04.19 13.00	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2620**	10.0	0.354	mg/kg	09.10.19 20.18	X	1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.41	24.8	7.41	mg/kg	09.09.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	117	%	65-144	09.09.19 17.10	
n-Triacontane	638-68-6	119	%	46-152	09.09.19 17.10	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00806	0.0178	0.00806	mg/kg	09.10.19 09.58	U	1
Toluene	108-88-3	<0.00417	0.0178	0.00417	mg/kg	09.10.19 09.58	U	1
Ethylbenzene	100-41-4	<0.00549	0.0178	0.00549	mg/kg	09.10.19 09.58	U	1
m,p-Xylenes	179601-23-1	**0.0107**	0.0357	0.00608	mg/kg	09.10.19 09.58	J	1
o-Xylene	95-47-6	<0.00608	0.0178	0.00608	mg/kg	09.10.19 09.58	U	1
Total Xylenes	1330-20-7	**0.0107**	0.0178	0.00608	mg/kg	09.10.19 09.58	J	1
Total BTEX		**0.0107**	0.0178	0.00417	mg/kg	09.10.19 09.58	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	09.10.19 09.58	
a,a,a-Trifluorotoluene	98-08-8	103	%	71-121	09.10.19 09.58	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-001	Date Collected:	09.04.19 13.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**0.357**	3.57	0.242	mg/kg	09.10.19 09.58	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	09.10.19 09.58	
a,a,a-Trifluorotoluene	98-08-8	90	%	69-120	09.10.19 09.58	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-002	Date Collected:	09.04.19 13.05	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1560**	9.96	0.353	mg/kg	09.10.19 20.42		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	09.09.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	117	%	65-144	09.09.19 19.39	
n-Triacontane	638-68-6	116	%	46-152	09.09.19 19.39	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00828	0.0183	0.00828	mg/kg	09.10.19 12.22	U	1
Toluene	108-88-3	<0.00429	0.0183	0.00429	mg/kg	09.10.19 12.22	U	1
Ethylbenzene	100-41-4	<0.00564	0.0183	0.00564	mg/kg	09.10.19 12.22	U	1
m,p-Xylenes	179601-23-1	<0.00625	0.0366	0.00625	mg/kg	09.10.19 12.22	U	1
o-Xylene	95-47-6	<0.00625	0.0183	0.00625	mg/kg	09.10.19 12.22	U	1
Total Xylenes	1330-20-7	<0.00625	0.0183	0.00625	mg/kg	09.10.19 12.22	U	1
Total BTEX		<0.00429	0.0183	0.00429	mg/kg	09.10.19 12.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	68-120	09.10.19 12.22	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	09.10.19 12.22	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-002	Date Collected:	09.04.19 13.05	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.248	3.66	0.248	mg/kg	09.10.19 12.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	76-123	09.10.19 12.22	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	09.10.19 12.22	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-003	Date Collected:	09.04.19 13.10	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1880**	9.98	0.353	mg/kg	09.10.19 21.06		1

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 1 (3.5-4)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-004	Date Collected:	09.04.19 13.15	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7070**	99.4	3.52	mg/kg	09.10.19 21.31		10

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-005	Date Collected:	09.04.19 13.20	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2510**	9.88	0.350	mg/kg	09.10.19 21.39		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**21.4**	24.9	7.44	mg/kg	09.10.19 12.14	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	122	%	65-144	09.10.19 12.14	
n-Triacontane	638-68-6	137	%	46-152	09.10.19 12.14	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00765	0.0169	0.00765	mg/kg	09.10.19 12.46	U	1
Toluene	108-88-3	<0.00396	0.0169	0.00396	mg/kg	09.10.19 12.46	U	1
Ethylbenzene	100-41-4	<0.00521	0.0169	0.00521	mg/kg	09.10.19 12.46	U	1
m,p-Xylenes	179601-23-1	<0.00577	0.0338	0.00577	mg/kg	09.10.19 12.46	U	1
o-Xylene	95-47-6	<0.00577	0.0169	0.00577	mg/kg	09.10.19 12.46	U	1
Total Xylenes	1330-20-7	<0.00577	0.0169	0.00577	mg/kg	09.10.19 12.46	U	1
Total BTEX		<0.00396	0.0169	0.00396	mg/kg	09.10.19 12.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	68-120	09.10.19 12.46	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	09.10.19 12.46	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-005	Date Collected:	09.04.19 13.20	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.229	3.38	0.229	mg/kg	09.10.19 12.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	76-123	09.10.19 12.46	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	09.10.19 12.46	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-006	Date Collected:	09.04.19 13.25	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1120**	10.0	0.355	mg/kg	09.10.19 21.47		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	09.09.19 20.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	114	%	65-144	09.09.19 20.54	
n-Triacontane	638-68-6	127	%	46-152	09.09.19 20.54	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00817	0.0181	0.00817	mg/kg	09.10.19 13.10	U	1
Toluene	108-88-3	<0.00423	0.0181	0.00423	mg/kg	09.10.19 13.10	U	1
Ethylbenzene	100-41-4	<0.00557	0.0181	0.00557	mg/kg	09.10.19 13.10	U	1
m,p-Xylenes	179601-23-1	<0.00617	0.0362	0.00617	mg/kg	09.10.19 13.10	U	1
o-Xylene	95-47-6	<0.00617	0.0181	0.00617	mg/kg	09.10.19 13.10	U	1
Total Xylenes	1330-20-7	<0.00617	0.0181	0.00617	mg/kg	09.10.19 13.10	U	1
Total BTEX		<0.00423	0.0181	0.00423	mg/kg	09.10.19 13.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	09.10.19 13.10	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	09.10.19 13.10	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-006	Date Collected:	09.04.19 13.25	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.245	3.62	0.245	mg/kg	09.10.19 13.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	09.10.19 13.10	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	09.10.19 13.10	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-007	Date Collected:	09.04.19 13.30	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**919**	9.98	0.353	mg/kg	09.10.19 21.55		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 2 (3.5-4)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-008	Date Collected:	09.04.19 13.35	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**297**	10.0	0.354	mg/kg	09.10.19 22.03		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id: **HA - 3 (0-0.5)** Matrix: Soil Date Received:09.06.19 16.55

Lab Sample Id: 636281-009 Date Collected: 09.04.19 13.40 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 09.10.19 15.11 Basis: Wet Weight

Seq Number: 3101020 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**943**	10.1	0.356	mg/kg	09.10.19 22.11		1

Analytical Method: DRO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 11.45 Basis: Wet Weight

Seq Number: 3100963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	09.09.19 21.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	110	%	65-144	09.09.19 21.31	
n-Triacontane	638-68-6	123	%	46-152	09.09.19 21.31	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 12.00 Basis: Wet Weight

Seq Number: 3101105

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00822	0.0182	0.00822	mg/kg	09.10.19 13.34	U	1
Toluene	108-88-3	<0.00425	0.0182	0.00425	mg/kg	09.10.19 13.34	U	1
Ethylbenzene	100-41-4	<0.00560	0.0182	0.00560	mg/kg	09.10.19 13.34	U	1
m,p-Xylenes	179601-23-1	<0.00620	0.0364	0.00620	mg/kg	09.10.19 13.34	U	1
o-Xylene	95-47-6	<0.00620	0.0182	0.00620	mg/kg	09.10.19 13.34	U	1
Total Xylenes	1330-20-7	<0.00620	0.0182	0.00620	mg/kg	09.10.19 13.34	U	1
Total BTEX		<0.00425	0.0182	0.00425	mg/kg	09.10.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	09.10.19 13.34	
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	09.10.19 13.34	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 3 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-009	Date Collected:	09.04.19 13.40	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.246	3.64	0.246	mg/kg	09.10.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	76-123	09.10.19 13.34	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	09.10.19 13.34	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 3 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-010	Date Collected:	09.04.19 13.45	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**834**	10.1	0.357	mg/kg	09.10.19 22.19		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**13.5**	24.9	7.45	mg/kg	09.09.19 22.07	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	110	%	65-144	09.09.19 22.07	
n-Triacontane	638-68-6	127	%	46-152	09.09.19 22.07	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00843	0.0187	0.00843	mg/kg	09.10.19 13.58	U	1
Toluene	108-88-3	<0.00437	0.0187	0.00437	mg/kg	09.10.19 13.58	U	1
Ethylbenzene	100-41-4	<0.00575	0.0187	0.00575	mg/kg	09.10.19 13.58	U	1
m,p-Xylenes	179601-23-1	<0.00636	0.0373	0.00636	mg/kg	09.10.19 13.58	U	1
o-Xylene	95-47-6	<0.00636	0.0187	0.00636	mg/kg	09.10.19 13.58	U	1
Total Xylenes	1330-20-7	<0.00636	0.0187	0.00636	mg/kg	09.10.19 13.58	U	1
Total BTEX		<0.00437	0.0187	0.00437	mg/kg	09.10.19 13.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	68-120	09.10.19 13.58	
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	09.10.19 13.58	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 3 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-010	Date Collected:	09.04.19 13.45	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.253	3.73	0.253	mg/kg	09.10.19 13.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	76-123	09.10.19 13.58	
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	09.10.19 13.58	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 3 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-011	Date Collected:	09.04.19 13.50	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2290**	9.94	0.352	mg/kg	09.10.19 22.27		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-012	Date Collected:	09.04.19 14.00	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2130**	9.84	0.348	mg/kg	09.10.19 22.35		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	09.09.19 22.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	118	%	65-144	09.09.19 22.46	
n-Triacontane	638-68-6	139	%	46-152	09.09.19 22.46	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00845	0.0187	0.00845	mg/kg	09.10.19 14.23	U	1
Toluene	108-88-3	<0.00437	0.0187	0.00437	mg/kg	09.10.19 14.23	U	1
Ethylbenzene	100-41-4	<0.00576	0.0187	0.00576	mg/kg	09.10.19 14.23	U	1
m,p-Xylenes	179601-23-1	<0.00637	0.0374	0.00637	mg/kg	09.10.19 14.23	U	1
o-Xylene	95-47-6	<0.00637	0.0187	0.00637	mg/kg	09.10.19 14.23	U	1
Total Xylenes	1330-20-7	<0.00637	0.0187	0.00637	mg/kg	09.10.19 14.23	U	1
Total BTEX		<0.00437	0.0187	0.00437	mg/kg	09.10.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	09.10.19 14.23	
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	09.10.19 14.23	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-012	Date Collected:	09.04.19 14.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.253	3.74	0.253	mg/kg	09.10.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	76-123	09.10.19 14.23	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	09.10.19 14.23	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-013	Date Collected:	09.04.19 14.05	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1800**	9.88	0.350	mg/kg	09.10.19 22.43		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**12.5**	24.9	7.44	mg/kg	09.09.19 23.20	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	119	%	65-144	09.09.19 23.20	
n-Triacontane	638-68-6	139	%	46-152	09.09.19 23.20	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00859	0.0190	0.00859	mg/kg	09.10.19 14.47	U	1
Toluene	108-88-3	<0.00445	0.0190	0.00445	mg/kg	09.10.19 14.47	U	1
Ethylbenzene	100-41-4	<0.00586	0.0190	0.00586	mg/kg	09.10.19 14.47	U	1
m,p-Xylenes	179601-23-1	<0.00648	0.0380	0.00648	mg/kg	09.10.19 14.47	U	1
o-Xylene	95-47-6	<0.00648	0.0190	0.00648	mg/kg	09.10.19 14.47	U	1
Total Xylenes	1330-20-7	<0.00648	0.0190	0.00648	mg/kg	09.10.19 14.47	U	1
Total BTEX		<0.00445	0.0190	0.00445	mg/kg	09.10.19 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	09.10.19 14.47	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	09.10.19 14.47	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-013	Date Collected:	09.04.19 14.05	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.258	3.80	0.258	mg/kg	09.10.19 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	09.10.19 14.47	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	09.10.19 14.47	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-014	Date Collected:	09.04.19 14.10	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1900**	9.98	0.353	mg/kg	09.10.19 23.07		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 4 (3.5-4)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-015	Date Collected:	09.04.19 14.15	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7240**	100	3.55	mg/kg	09.10.19 23.16		10

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-016	Date Collected:	09.04.19 14.20	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**969**	9.98	0.353	mg/kg	09.10.19 23.24		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**51.2**	24.9	7.44	mg/kg	09.09.19 23.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	167	%	65-144	09.09.19 23.59	**
n-Triacontane	638-68-6	167	%	46-152	09.09.19 23.59	**

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00885	0.0196	0.00885	mg/kg	09.10.19 15.12	U	1
Toluene	108-88-3	<0.00458	0.0196	0.00458	mg/kg	09.10.19 15.12	U	1
Ethylbenzene	100-41-4	<0.00603	0.0196	0.00603	mg/kg	09.10.19 15.12	U	1
m,p-Xylenes	179601-23-1	<0.00667	0.0391	0.00667	mg/kg	09.10.19 15.12	U	1
o-Xylene	95-47-6	<0.00667	0.0196	0.00667	mg/kg	09.10.19 15.12	U	1
Total Xylenes	1330-20-7	<0.00667	0.0196	0.00667	mg/kg	09.10.19 15.12	U	1
Total BTEX		<0.00458	0.0196	0.00458	mg/kg	09.10.19 15.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	09.10.19 15.12	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	09.10.19 15.12	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-016	Date Collected:	09.04.19 14.20	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	09.10.19 15.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	09.10.19 15.12	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	09.10.19 15.12	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-017	Date Collected:	09.04.19 14.25	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1740**	10.0	0.355	mg/kg	09.10.19 23.32		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	**11.0**	24.9	7.44	mg/kg	09.10.19 00.35	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	114	%	65-144	09.10.19 00.35	
n-Triacontane	638-68-6	132	%	46-152	09.10.19 00.35	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00871	0.0193	0.00871	mg/kg	09.10.19 15.36	U	1
Toluene	108-88-3	<0.00451	0.0193	0.00451	mg/kg	09.10.19 15.36	U	1
Ethylbenzene	100-41-4	<0.00593	0.0193	0.00593	mg/kg	09.10.19 15.36	U	1
m,p-Xylenes	179601-23-1	<0.00657	0.0385	0.00657	mg/kg	09.10.19 15.36	U	1
o-Xylene	95-47-6	<0.00657	0.0193	0.00657	mg/kg	09.10.19 15.36	U	1
Total Xylenes	1330-20-7	<0.00657	0.0193	0.00657	mg/kg	09.10.19 15.36	U	1
Total BTEX		<0.00451	0.0193	0.00451	mg/kg	09.10.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	68-120	09.10.19 15.36	
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	09.10.19 15.36	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-017	Date Collected:	09.04.19 14.25	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.261	3.85	0.261	mg/kg	09.10.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	76-123	09.10.19 15.36	
a,a,a-Trifluorotoluene	98-08-8	96	%	69-120	09.10.19 15.36	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-018	Date Collected:	09.04.19 14.30	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1530**	9.94	0.352	mg/kg	09.10.19 23.40		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 5 (3.5-4)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-019	Date Collected:	09.04.19 14.35	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5070**	98.8	3.50	mg/kg	09.10.19 23.48		10

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-020	Date Collected:	09.04.19 14.40	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.11	Basis:	Wet Weight
Seq Number:	3101020			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1720**	9.96	0.353	mg/kg	09.10.19 23.56		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	09.10.19 01.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	113	%	65-144	09.10.19 01.13	
n-Triacontane	638-68-6	136	%	46-152	09.10.19 01.13	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00856	0.0189	0.00856	mg/kg	09.10.19 17.39	U	1
Toluene	108-88-3	<0.00443	0.0189	0.00443	mg/kg	09.10.19 17.39	U	1
Ethylbenzene	100-41-4	<0.00583	0.0189	0.00583	mg/kg	09.10.19 17.39	U	1
m,p-Xylenes	179601-23-1	<0.00646	0.0379	0.00646	mg/kg	09.10.19 17.39	U	1
o-Xylene	95-47-6	<0.00646	0.0189	0.00646	mg/kg	09.10.19 17.39	U	1
Total Xylenes	1330-20-7	<0.00646	0.0189	0.00646	mg/kg	09.10.19 17.39	U	1
Total BTEX		<0.00443	0.0189	0.00443	mg/kg	09.10.19 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	09.10.19 17.39	
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	09.10.19 17.39	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-020	Date Collected:	09.04.19 14.40	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.257	3.79	0.257	mg/kg	09.10.19 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	76-123	09.10.19 17.39	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	09.10.19 17.39	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-021	Date Collected:	09.04.19 14.45	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1580**	9.98	0.353	mg/kg	09.10.19 16.56		1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	09.10.19 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	115	%	65-144	09.10.19 01.49	
n-Triacontane	638-68-6	135	%	46-152	09.10.19 01.49	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00804	0.0178	0.00804	mg/kg	09.10.19 18.03	U	1
Toluene	108-88-3	<0.00416	0.0178	0.00416	mg/kg	09.10.19 18.03	U	1
Ethylbenzene	100-41-4	<0.00548	0.0178	0.00548	mg/kg	09.10.19 18.03	U	1
m,p-Xylenes	179601-23-1	<0.00607	0.0356	0.00607	mg/kg	09.10.19 18.03	U	1
o-Xylene	95-47-6	<0.00607	0.0178	0.00607	mg/kg	09.10.19 18.03	U	1
Total Xylenes	1330-20-7	<0.00607	0.0178	0.00607	mg/kg	09.10.19 18.03	U	1
Total BTEX		<0.00416	0.0178	0.00416	mg/kg	09.10.19 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	09.10.19 18.03	
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	09.10.19 18.03	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-021	Date Collected:	09.04.19 14.45	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.241	3.56	0.241	mg/kg	09.10.19 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	09.10.19 18.03	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	09.10.19 18.03	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-022	Date Collected:	09.04.19 14.50	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1640**	9.94	0.352	mg/kg	09.10.19 17.20		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 6 (3.5-4)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-023	Date Collected:	09.04.19 14.55	Sample Depth:	3.5 - 4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3280**	9.90	0.350	mg/kg	09.10.19 17.28		1

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA -7 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-024	Date Collected:	09.04.19 15.00	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.40**	10.0	0.355	mg/kg	09.10.19 17.37	J	1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	09.10.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	106	%	65-144	09.10.19 02.28	
n-Triacontane	638-68-6	118	%	46-152	09.10.19 02.28	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00789	0.0175	0.00789	mg/kg	09.10.19 18.27	U	1
Toluene	108-88-3	<0.00408	0.0175	0.00408	mg/kg	09.10.19 18.27	U	1
Ethylbenzene	100-41-4	<0.00538	0.0175	0.00538	mg/kg	09.10.19 18.27	U	1
m,p-Xylenes	179601-23-1	<0.00595	0.0349	0.00595	mg/kg	09.10.19 18.27	U	1
o-Xylene	95-47-6	<0.00595	0.0175	0.00595	mg/kg	09.10.19 18.27	U	1
Total Xylenes	1330-20-7	<0.00595	0.0175	0.00595	mg/kg	09.10.19 18.27	U	1
Total BTEX		<0.00408	0.0175	0.00408	mg/kg	09.10.19 18.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	09.10.19 18.27	
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	09.10.19 18.27	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA -7 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-024	Date Collected:	09.04.19 15.00	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.236	3.49	0.236	mg/kg	09.10.19 18.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	76-123	09.10.19 18.27	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	09.10.19 18.27	

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Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 7 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-025	Date Collected:	09.04.19 15.05	Sample Depth:	0.5 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.69**	10.0	0.354	mg/kg	09.10.19 17.45	J	1

Analytical Method:	DRO By SW8015B			Prep Method:	SW8015P
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 11.45	Basis:	Wet Weight
Seq Number:	3100963				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	09.10.19 03.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	116	%	65-144	09.10.19 03.07	
n-Triacontane	638-68-6	132	%	46-152	09.10.19 03.07	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101105				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00886	0.0196	0.00886	mg/kg	09.10.19 18.52	U	1
Toluene	108-88-3	<0.00459	0.0196	0.00459	mg/kg	09.10.19 18.52	U	1
Ethylbenzene	100-41-4	<0.00604	0.0196	0.00604	mg/kg	09.10.19 18.52	U	1
m,p-Xylenes	179601-23-1	<0.00669	0.0392	0.00669	mg/kg	09.10.19 18.52	U	1
o-Xylene	95-47-6	<0.00669	0.0196	0.00669	mg/kg	09.10.19 18.52	U	1
Total Xylenes	1330-20-7	<0.00669	0.0196	0.00669	mg/kg	09.10.19 18.52	U	1
Total BTEX		<0.00459	0.0196	0.00459	mg/kg	09.10.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	09.10.19 18.52	
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	09.10.19 18.52	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 7 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-025	Date Collected:	09.04.19 15.05	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.266	3.92	0.266	mg/kg	09.10.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	76-123	09.10.19 18.52	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	09.10.19 18.52	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA -7 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-026	Date Collected:	09.04.19 15.10	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.52**	10.1	0.356	mg/kg	09.10.19 18.09	J	1

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id: **HA - 8 (0-0.5)** Matrix: Soil Date Received:09.06.19 16.55

Lab Sample Id: 636281-027 Date Collected: 09.04.19 15.20 Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 09.10.19 15.00 Basis: Wet Weight

Seq Number: 3101023 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.4**	10.0	0.355	mg/kg	09.10.19 18.33		1

Analytical Method: DRO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 11.45 Basis: Wet Weight

Seq Number: 3100963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	09.10.19 03.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	107	%	65-144	09.10.19 03.44	
n-Triacontane	638-68-6	123	%	46-152	09.10.19 03.44	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 12.00 Basis: Wet Weight

Seq Number: 3101105

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00839	0.0186	0.00839	mg/kg	09.10.19 19.16	U	1
Toluene	108-88-3	<0.00434	0.0186	0.00434	mg/kg	09.10.19 19.16	U	1
Ethylbenzene	100-41-4	<0.00571	0.0186	0.00571	mg/kg	09.10.19 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00633	0.0371	0.00633	mg/kg	09.10.19 19.16	U	1
o-Xylene	95-47-6	<0.00633	0.0186	0.00633	mg/kg	09.10.19 19.16	U	1
Total Xylenes	1330-20-7	<0.00633	0.0186	0.00633	mg/kg	09.10.19 19.16	U	1
Total BTEX		<0.00434	0.0186	0.00434	mg/kg	09.10.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	09.10.19 19.16	
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	09.10.19 19.16	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 8 (0-0.5)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-027	Date Collected:	09.04.19 15.20	Sample Depth:	0 - 0.5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.251	3.71	0.251	mg/kg	09.10.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	76-123	09.10.19 19.16	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	09.10.19 19.16	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id: **HA - 8 (0.5-1)** Matrix: Soil Date Received:09.06.19 16.55

Lab Sample Id: 636281-028 Date Collected: 09.04.19 15.25 Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: JYM % Moisture:

Analyst: JYM Date Prep: 09.10.19 15.00 Basis: Wet Weight

Seq Number: 3101023 SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.85**	9.96	0.353	mg/kg	09.10.19 18.57	J	1

Analytical Method: DRO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 11.45 Basis: Wet Weight

Seq Number: 3100963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	09.10.19 04.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	113	%	65-144	09.10.19 04.19	
n-Triacontane	638-68-6	131	%	46-152	09.10.19 04.19	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 09.09.19 12.00 Basis: Wet Weight

Seq Number: 3101105

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00858	0.0190	0.00858	mg/kg	09.10.19 19.41	U	1
Toluene	108-88-3	<0.00444	0.0190	0.00444	mg/kg	09.10.19 19.41	U	1
Ethylbenzene	100-41-4	<0.00584	0.0190	0.00584	mg/kg	09.10.19 19.41	U	1
m,p-Xylenes	179601-23-1	<0.00647	0.0380	0.00647	mg/kg	09.10.19 19.41	U	1
o-Xylene	95-47-6	<0.00647	0.0190	0.00647	mg/kg	09.10.19 19.41	U	1
Total Xylenes	1330-20-7	<0.00647	0.0190	0.00647	mg/kg	09.10.19 19.41	U	1
Total BTEX		<0.00444	0.0190	0.00444	mg/kg	09.10.19 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	09.10.19 19.41	
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	09.10.19 19.41	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 8 (0.5-1)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-028	Date Collected:	09.04.19 15.25	Sample Depth:	0.5 - 1 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	09.09.19 12.00	Basis:	Wet Weight
Seq Number:	3101108				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.257	3.80	0.257	mg/kg	09.10.19 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	76-123	09.10.19 19.41	
a,a,a-Trifluorotoluene	98-08-8	91	%	69-120	09.10.19 19.41	

Certificate of Analytical Results 636281

Terracon-Lubbock, Lubbock, TX

Marathron Madera Line

Sample Id:	**HA - 8 (1.5-2)**	Matrix:	Soil	Date Received:	09.06.19 16.55
Lab Sample Id:	636281-029	Date Collected:	09.04.19 15.30	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	09.10.19 15.00	Basis:	Wet Weight
Seq Number:	3101023			SUB:	T104704215-19-29

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.80**	9.94	0.352	mg/kg	09.10.19 19.05	J	1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 636281

Terracon-Lubbock

Marathron Madera Line

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101023 — Matrix: Solid — Date Prep: 09.10.19
MB Sample Id: 7685845-1-BLK — LCS Sample Id: 7685845-1-BKS — LCSD Sample Id: 7685845-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	106	106	102	102	80-120	4	20	mg/kg	09.10.19 15:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101020 — Matrix: Solid — Date Prep: 09.10.19
MB Sample Id: 7685896-1-BLK — LCS Sample Id: 7685896-1-BKS — LCSD Sample Id: 7685896-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	106	106	102	102	80-120	4	20	mg/kg	09.10.19 20:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101023 — Matrix: Soil — Date Prep: 09.10.19
Parent Sample Id: 636281-025 — MS Sample Id: 636281-025 S — MSD Sample Id: 636281-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.69	99.8	104	96	104	95	80-120	0	20	mg/kg	09.10.19 17:53	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101023 — Matrix: Soil — Date Prep: 09.10.19
Parent Sample Id: 636281-026 — MS Sample Id: 636281-026 S — MSD Sample Id: 636281-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.52	101	109	99	109	99	80-120	0	20	mg/kg	09.10.19 18:17	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101020 — Matrix: Soil — Date Prep: 09.10.19
Parent Sample Id: 636281-001 — MS Sample Id: 636281-001 S — MSD Sample Id: 636281-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2620	99.8	2670	50	2690	70	80-120	1	20	mg/kg	09.10.19 20:26	X

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 636281

Terracon-Lubbock

Marathron Madera Line

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3101020 — Matrix: Soil — Date Prep: 09.10.19
Parent Sample Id: 636281-002 — MS Sample Id: 636281-002 S — MSD Sample Id: 636281-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1560	100	1650	90	1650	90	80-120	0	20	mg/kg	09.10.19 20:50	

Analytical Method: DRO By SW8015B — Prep Method: SW8015P
Seq Number: 3100963 — Matrix: Solid — Date Prep: 09.09.19
MB Sample Id: 7685862-1-BLK — LCS Sample Id: 7685862-1-BKS — LCSD Sample Id: 7685862-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	91.7	92	88.6	89	63-139	3	20	mg/kg	09.09.19 14:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	124		118		122		65-144	%	09.09.19 14:04
n-Triacontane	122		107		112		46-152	%	09.09.19 14:04

Analytical Method: DRO By SW8015B — Prep Method: SW8015P
Seq Number: 3100963 — Matrix: Soil — Date Prep: 09.09.19
Parent Sample Id: 636281-001 — MS Sample Id: 636281-001 S — MSD Sample Id: 636281-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.47	99.9	86.1	86	83.4	83	63-139	3	20	mg/kg	09.09.19 17:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	134		129		65-144	%	09.09.19 17:48
n-Triacontane	126		129		46-152	%	09.09.19 17:48

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3101105 — Matrix: Solid — Date Prep: 09.09.19
MB Sample Id: 7685856-1-BLK — LCS Sample Id: 7685856-1-BKS — LCSD Sample Id: 7685856-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.90	95	1.91	96	55-120	1	20	mg/kg	09.10.19 06:45	
Toluene	<0.00468	2.00	1.93	97	1.90	95	77-120	2	20	mg/kg	09.10.19 06:45	
Ethylbenzene	<0.00616	2.00	2.00	100	2.07	104	77-120	3	20	mg/kg	09.10.19 06:45	
m,p-Xylenes	<0.00682	4.00	4.01	100	4.04	101	78-120	1	20	mg/kg	09.10.19 06:45	
o-Xylene	<0.00682	2.00	2.02	101	2.04	102	78-120	1	20	mg/kg	09.10.19 06:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		100		101		68-120	%	09.10.19 06:45
a,a,a-Trifluorotoluene	102		102		100		71-121	%	09.10.19 06:45

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

QC Summary 636281

Terracon-Lubbock

Marathron Madera Line

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3101105 Matrix: Soil Date Prep: 09.09.19
Parent Sample Id: 636281-001 MS Sample Id: 636281-001 S MSD Sample Id: 636281-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00853	1.89	1.80	95	1.90	98	54-120	5	25	mg/kg	09.10.19 10:22	
Toluene	<0.00442	1.89	1.81	96	1.86	96	57-120	3	25	mg/kg	09.10.19 10:22	
Ethylbenzene	<0.00581	1.89	1.92	102	1.95	101	58-131	2	25	mg/kg	09.10.19 10:22	
m,p-Xylenes	0.0107	3.77	3.73	99	3.80	98	62-124	2	25	mg/kg	09.10.19 10:22	
o-Xylene	<0.00643	1.89	1.85	98	1.89	98	62-124	2	25	mg/kg	09.10.19 10:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	94		100		68-120	%	09.10.19 10:22
a,a,a-Trifluorotoluene	102		110		71-121	%	09.10.19 10:22

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3101108 Matrix: Solid Date Prep: 09.09.19
MB Sample Id: 7685858-1-BLK LCS Sample Id: 7685858-1-BKS LCSD Sample Id: 7685858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	19.0	95	17.7	89	35-129	7	20	mg/kg	09.10.19 07:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		129	**	120		76-123	%	09.10.19 07:33
a,a,a-Trifluorotoluene	90		99		89		69-120	%	09.10.19 07:33

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3101108 Matrix: Soil Date Prep: 09.09.19
Parent Sample Id: 636281-001 MS Sample Id: 636281-001 S MSD Sample Id: 636281-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	0.357	19.0	14.3	73	14.5	78	35-129	1	20	mg/kg	09.10.19 11:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		117		76-123	%	09.10.19 11:09
a,a,a-Trifluorotoluene	91		95		69-120	%	09.10.19 11:09

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

636281

636281

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:
Sampler's Signature

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier

Project Number: AR197283
Project Name: Marathon Madera Line

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.1 2.1 2.2

Page 1 of 2

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	9/4/2019	13:00		X	HA-1 (0-0.5)	0'	0.5'		X			X	X	X		1
S	9/4/2019	13:05		X	HA-1 (0.5-1)	0.5'	1'		X			X	X	X		2
S	9/4/2019	13:10		X	HA-1 (1.5-2)	1.5'	2'		X			X				3
S	9/4/2019	13:15		X	HA-1 (3.5-4)	3.5'	4'		X			X				4
S	9/4/2019	13:20		X	HA-2 (0-0.5)	0'	0.5'		X			X	X	X		5
S	9/4/2019	13:25		X	HA-2 (0.5-1)	0.5'	1'		X			X	X	X		6
S	9/4/2019	13:30		X	HA-2 (1.5-2)	1.5'	2'		X			X				7
S	9/4/2019	13:35		X	HA-2 (3.5-4)	3.5'	4'		X			X				8
S	9/4/2019	13:40		X	HA-3 (0-0.5)	0'	0.5'		X			X	X	X		9
S	9/4/2019	13:45		X	HA-3 (0.5-1)	0.5'	1'		X			X	X	X		10
S	9/4/2019	13:50		X	HA-3 (1.5-2)	1.5'	2'		X			X				11
~~S~~	~~9/4/2019~~	~~13:55~~		X	SG HA-3 (3.5-4)	3.5'	4'		X			X				
S	9/4/2019	14:00		X	HA-4 (0-0.5)	0'	0.5'		X			X	X	X		12
S	9/4/2019	14:05		X	HA-4 (0.5-1)	0.5'	1'		X			X	X	X		13
S	9/4/2019	14:10		X	HA-4 (1.5-2)	1.5'	2'		X			X				14
S	9/4/2019	14:15		X	HA-4 (3.5-4)	3.5	4'		X			X				15

TURNAROUND TIME: ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	9-6-19	4:55			
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur

e-mail results to:

john.fergerson@terracon.com

jrguesnier@terracon.com

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

C 3028

2 1/2'

Terracon

CHAIN OF CUSTODY RECORD

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Joseph Guesnier
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Page 2 of 2

Project Number: AR197283
Project Name: Marathon Madera Line

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	9/4/2019	14:20		X	HA-5 (0-0.5)	0'	0.5'		X			X	X	X		16
S	9/4/2019	14:25		X	HA-5 (0.5-1)	0.5'	1'		X			X	X	X		17
S	9/4/2019	14:30		X	HA-5 (1.5-2)	1.5'	2'		X			X				18
S	9/4/2019	14:35		X	HA-5 (3.5-4)	3.5'	4'		X			X				19
S	9/4/2019	14:40		X	HA-6 (0-0.5)	0'	0.5'		X			X	X	X		20
S	9/4/2019	14:45		X	HA-6 (0.5-1)	0.5'	1'		X			X	X	X		21
S	9/4/2019	14:50		X	HA-6 (1.5-2)	1.5'	2'		X			X				22
S	9/4/2019	14:55		X	HA-6 (3.5-4)	3.5'	4'		X			X				23
S	9/4/2019	15:00		X	HA-7 (0-0.5)	0'	0.5'		X			X	X	X		24
S	9/4/2019	15:05		X	HA-7 (0.5-1)	0.5'	1'		X			X	X	X		25
S	9/4/2019	15:10		X	HA-7 (1.5-2)	1.5'	2'		X			X				26
~~S~~	~~9/4/2019~~	~~15:15~~		~~X~~	~~HA-7 (3.5-4)~~	~~3.5'~~	~~4'~~		~~X~~			~~X~~				
S	9/4/2019	15:20		X	HA-8 (0-0.5)	0'	0.5'		X			X	X	X		27
S	9/4/2019	15:25		X	HA-8 (0.5-1)	0.5'	1'		X			X	X	X		28
S	9/4/2019	15:30		X	HA-8 (1.5-2)	1.5'	2'		X			X				29
~~S~~	~~9/4/2019~~	~~15:35~~		~~X~~	~~HA-8 (3.5-4)~~	~~3.5'~~	~~4'~~		~~X~~			~~X~~				

TAT

TURNAROUND TIME: ☒ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	9-6-19	4:55	Received by (Signature)	9/6/19	4:55
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client: Spur

e-mail results to:
john.fergerson@terracon.com
jrguesnier@terracon.com

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

Inter-Office Shipment

IOS Number : 47639

Date/Time:	09.09.2019	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	776194121479	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636281-001	S	HA - 1 (0-0.5)	09.04.2019 13:00	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-002	S	HA - 1 (0.5-1)	09.04.2019 13:05	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-003	S	HA - 1 (1.5-2)	09.04.2019 13:10	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-004	S	HA - 1 (3.5-4)	09.04.2019 13:15	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-005	S	HA - 2 (0-0.5)	09.04.2019 13:20	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-006	S	HA - 2 (0.5-1)	09.04.2019 13:25	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-007	S	HA - 2 (1.5-2)	09.04.2019 13:30	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-008	S	HA - 2 (3.5-4)	09.04.2019 13:35	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-009	S	HA - 3 (0-0.5)	09.04.2019 13:40	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-010	S	HA - 3 (0.5-1)	09.04.2019 13:45	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-011	S	HA - 3 (1.5-2)	09.04.2019 13:50	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-012	S	HA - 4 (0-0.5)	09.04.2019 14:00	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-013	S	HA - 4 (0.5-1)	09.04.2019 14:05	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-014	S	HA - 4 (1.5-2)	09.04.2019 14:10	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-015	S	HA - 4 (3.5-4)	09.04.2019 14:15	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-016	S	HA - 5 (0-0.5)	09.04.2019 14:20	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-017	S	HA - 5 (0.5-1)	09.04.2019 14:25	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-018	S	HA - 5 (1.5-2)	09.04.2019 14:30	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-019	S	HA - 5 (3.5-4)	09.04.2019 14:35	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-020	S	HA - 6 (0-0.5)	09.04.2019 14:40	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-021	S	HA - 6 (0.5-1)	09.04.2019 14:45	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-022	S	HA - 6 (1.5-2)	09.04.2019 14:50	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-023	S	HA - 6 (3.5-4)	09.04.2019 14:55	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-024	S	HA -7 (0-0.5)	09.04.2019 15:00	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	
636281-025	S	HA - 7 (0.5-1)	09.04.2019 15:05	E300_CL	Chloride by EPA 300	09.12.2019	03.02.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 47639

Date/Time:	09.09.2019	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	776194121479	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636281-026	S	HA -7 (1.5-2)	09.04.2019 15:10	E300_CL	Chloride by EPA 300	**09.12.2019**	03.02.2020	JKR	CL	
636281-027	S	HA - 8 (0-0.5)	09.04.2019 15:20	E300_CL	Chloride by EPA 300	**09.12.2019**	03.02.2020	JKR	CL	
636281-028	S	HA - 8 (0.5-1)	09.04.2019 15:25	E300_CL	Chloride by EPA 300	**09.12.2019**	03.02.2020	JKR	CL	
636281-029	S	HA - 8 (1.5-2)	09.04.2019 15:30	E300_CL	Chloride by EPA 300	**09.12.2019**	03.02.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward

Date Relinquished: 09.09.2019

Received By: Maria Paula Guerra
Maria Paula Guerra

Date Received: 09.10.2019

Cooler Temperature: 2.9

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 47639

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR:HOU068

Sent By: Brenda Ward **Date Sent:** 09.09.2019 10.27 AM

Received By: Maria Paula Guerra **Date Received:** 09.10.2019 09.30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: mPaula Guerra Date: 09.10.2019

Maria Paula Guerra

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 09/06/2019 04:55:00 PM

Work Order #: 636281

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-3

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	CL sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 09/09/2019
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 09/10/2019
Jessica Kramer

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-001		650960-002		650960-003		650960-004		650960-005		650960-006	
	Field Id:	E1 - (0-0.5)		E1 - (1.5-2)		E2 - (0-0.5)		E2 - (1.5-2)		E3 - (0-0.5)		E3 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.52-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 11:55		Jan-29-20 11:57		Jan-29-20 11:59		Jan-29-20 12:01		Jan-29-20 12:03		Jan-29-20 12:05	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29	
	Analyzed:	Feb-03-20 19:15		Feb-03-20 19:42		Feb-03-20 19:51		Feb-03-20 20:36		Feb-03-20 20:45		Feb-03-20 20:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		93.6	9.98	49.7	9.84	33.9	9.94	31.7	9.96	202	10.1	1470	10.1

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-007		650960-008		650960-009		650960-010		650960-011		650960-012	
	Field Id:	E4 - (0-0.5)		E4-(1.5-2)		E5 - (0-0.5)		E5 - (1.5-2)		E6 - (0-0.5)		E6 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 12:07		Jan-29-20 12:09		Jan-29-20 12:11		Jan-29-20 12:13		Jan-29-20 12:15		Jan-29-20 12:17	
Chloride by EPA 300 SUB: T104704215-19-30	***Extracted:***	Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29	
	Analyzed:	Feb-03-20 21:02		Feb-03-20 21:11		Feb-03-20 21:20		Feb-03-20 21:29		Feb-03-20 21:38		Feb-03-20 21:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9.61 J	10.0	8.48 J	9.96	37.7	9.84	60.2	9.88	7.71 J	10.1	10.2	10.1

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-013		650960-014		650960-015		650960-016		650960-017		650960-018	
	Field Id:	E7 -(0-0.5)		E7 - (1.5-2)		D1 -(0-0.5)		D1- (1.5-2)		D2 - (0-0.5)		D2 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 12:19		Jan-29-20 12:21		Jan-29-20 12:23		Jan-29-20 12:25		Jan-29-20 12:27		Jan-29-20 12:29	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 15:29	
	Analyzed:	Feb-03-20 21:56		Feb-03-20 22:23		Feb-03-20 22:32		Feb-03-20 22:41		Feb-03-20 22:49		Feb-03-20 22:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7.63 J	10.1	8.49 J	10.0	37.8	9.88	36.4	9.82	30.4	9.84	43.0	9.92

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-019		650960-020		650960-021		650960-022		650960-023		650960-024	
	Field Id:	D3 - (0-0.5)		D3 - (1.5-2)		D4 - (0-0.5)		D4 - (1.5-2)		D5 - (0-0.5)		D5 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 12:31		Jan-29-20 12:33		Jan-29-20 12:35		Jan-29-20 12:37		Jan-29-20 12:39		Jan-29-20 12:41	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 15:29		Feb-03-20 15:29		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10	
	Analyzed:	Feb-03-20 23:07		Feb-03-20 23:16		Feb-04-20 00:10		Feb-04-20 00:37		Feb-04-20 00:45		Feb-04-20 01:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		348	9.98	215	10.0	64.6	9.96	57.8	10.0	8.69 J	10.0	19.6	10.0

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-025		650960-026		650960-027		650960-028		650960-029		650960-030	
	Field Id:	D6 - (0-0.5)		D6 - (1.5-2)		D7 - (0-0.5)		D7 - (1.5-2)		C1 - (0-0.5)		C1 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 12:43		Jan-29-20 12:45		Jan-29-20 12:47		Jan-29-20 12:49		Jan-29-20 12:51		Jan-29-20 12:53	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10	
	Analyzed:	Feb-04-20 01:39		Feb-04-20 01:48		Feb-04-20 01:57		Feb-04-20 02:06		Feb-04-20 02:15		Feb-04-20 02:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.78 J	10.1	9.78 J	10.0	8.36 J	9.94	10.0	9.94	6.21 J	9.88	10.0 J	10.0

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-031		650960-032		650960-033		650960-034		650960-035		650960-036	
	Field Id:	C2 - (0-0.5)		C2- (1.5-2)		C3 - (0-0.5)		C3 - (1.5-2)		C4 - (0-0.5)		C4 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 12:55		Jan-29-20 12:57		Jan-29-20 12:59		Jan-29-20 13:01		Jan-29-20 13:03		Jan-29-20 13:05	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10	
	Analyzed:	Feb-04-20 02:33		Feb-04-20 02:41		Feb-04-20 02:50		Feb-04-20 03:17		Feb-04-20 03:26		Feb-04-20 03:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		39.8	9.84	54.1	9.96	21.9	10.0	18.7	10.0	7.47 J	10.0	10.1	9.84

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-037		650960-038		650960-039		650960-040		650960-043		650960-044	
	Field Id:	C5 - (0-0.5)		C5 - (1.5-2)		C6 - (0-0.5)		C6 - (1.5-2)		B2 -(0-0.5)		B2 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 13:07		Jan-29-20 13:09		Jan-29-20 13:11		Jan-29-20 13:13		Jan-29-20 13:19		Jan-29-20 13:21	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 16:10		Feb-03-20 17:00		Feb-03-20 17:00	
	Analyzed:	Feb-04-20 03:44		Feb-04-20 03:53		Feb-04-20 04:02		Feb-04-20 04:11		Feb-04-20 05:01		Feb-04-20 05:39	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.62 J	9.98	8.28 J	9.96	9.56 J	9.84	9.34 J	9.96	10.3	9.96	10.2	9.96

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-045		650960-046		650960-047		650960-048		650960-049		650960-050	
	Field Id:	B3 - (0-0.5)		B3 - (1.5-2)		B4 - (0-0.5)		B4 - (1.5-2)		B5- (0-0.5)		B5 - (1.5-2)	
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-29-20 13:23		Jan-29-20 13:25		Jan-29-20 13:27		Jan-29-20 13:29		Jan-29-20 13:31		Jan-29-20 13:33	
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00	
	Analyzed:	Feb-04-20 06:17		Feb-04-20 06:55		Feb-04-20 07:07		Feb-04-20 07:20		Feb-04-20 07:33		Feb-04-20 07:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.6	10.0	9.89 J	10.0	8.48 J	9.96	8.98 J	10.2	8.62 J	10.0	10.3	10.0

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 650960

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location: Client: Spur

Date Received in Lab: Thu Jan-30-20 02:45 pm
Report Date: 06-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	650960-051		650960-052		650960-053		650960-054					
	Field Id:	A3 - (0-0.5)		A3 - (1.5-2)		A4 - (0-0.5)		A4 - (1.5-2)					
	Depth:	0-0.5 ft		1.5-2 ft		0-0.5 ft		1.5-2 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jan-29-20 13:35		Jan-29-20 13:37		Jan-29-20 13:39		Jan-29-20 13:41					
Chloride by EPA 300 **SUB: T104704215-19-30**	***Extracted:***	Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00		Feb-03-20 17:00					
	Analyzed:	Feb-04-20 07:58		Feb-04-20 08:11		Feb-04-20 08:23		Feb-04-20 08:36					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		8.00 J	9.96	9.58 J	9.90	8.46 J	9.96	11.6	9.84				

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Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 650960

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Marathon Madera

AR197283

06-FEB-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

06-FEB-20

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **650960**
Marathon Madera
Project Address: Client: Spur

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 650960. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 650960 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
E1 - (0-0.5)	S	01-29-20 11:55	0 - 0.5 ft	650960-001
E1 - (1.5-2)	S	01-29-20 11:57	1.5 - 2 ft	650960-002
E2 - (0-0.5)	S	01-29-20 11:59	0 - 0.5 ft	650960-003
E2 - (1.5-2)	S	01-29-20 12:01	1.5 - 2 ft	650960-004
E3 - (0-0.5)	S	01-29-20 12:03	0 - 0.5 ft	650960-005
E3 - (1.5-2)	S	01-29-20 12:05	1.52 - 0.5 ft	650960-006
E4 - (0-0.5)	S	01-29-20 12:07	0 - 0.5 ft	650960-007
E4-(1.5-2)	S	01-29-20 12:09	1.5 - 2 ft	650960-008
E5 - (0-0.5)	S	01-29-20 12:11	0 - 0.5 ft	650960-009
E5 - (1.5-2)	S	01-29-20 12:13	1.5 - 2 ft	650960-010
E6 - (0-0.5)	S	01-29-20 12:15	0 - 0.5 ft	650960-011
E6 - (1.5-2)	S	01-29-20 12:17	1.5 - 2 ft	650960-012
E7 -(0-0.5)	S	01-29-20 12:19	0 - 0.5 ft	650960-013
E7 - (1.5-2)	S	01-29-20 12:21	1.5 - 2 ft	650960-014
D1 -(0-0.5)	S	01-29-20 12:23	0 - 0.5 ft	650960-015
D1- (1.5-2)	S	01-29-20 12:25	1.5 - 2 ft	650960-016
D2 - (0-0.5)	S	01-29-20 12:27	0 - 0.5 ft	650960-017
D2 - (1.5-2)	S	01-29-20 12:29	1.5 - 2 ft	650960-018
D3 - (0-0.5)	S	01-29-20 12:31	0 - 0.5 ft	650960-019
D3 - (1.5-2)	S	01-29-20 12:33	1.5 - 2 ft	650960-020
D4 - (0-0.5)	S	01-29-20 12:35	0 - 0.5 ft	650960-021
D4 - (1.5-2)	S	01-29-20 12:37	1.5 - 2 ft	650960-022
D5 - (0-0.5)	S	01-29-20 12:39	0 - 0.5 ft	650960-023
D5 - (1.5-2)	S	01-29-20 12:41	1.5 - 2 ft	650960-024
D6 - (0-0.5)	S	01-29-20 12:43	0 - 0.5 ft	650960-025
D6 - (1.5-2)	S	01-29-20 12:45	1.5 - 2 ft	650960-026
D7 - (0-0.5)	S	01-29-20 12:47	0 - 0.5 ft	650960-027
D7 - (1.5-2)	S	01-29-20 12:49	1.5 - 2 ft	650960-028
C1 - (0-0.5)	S	01-29-20 12:51	0 - 0.5 ft	650960-029
C1 - (1.5-2)	S	01-29-20 12:53	1.5 - 2 ft	650960-030
C2 - (0-0.5)	S	01-29-20 12:55	0 - 0.5 ft	650960-031
C2- (1.5-2)	S	01-29-20 12:57	1.5 - 2 ft	650960-032
C3 - (0-0.5)	S	01-29-20 12:59	0 - 0.5 ft	650960-033
C3 - (1.5-2)	S	01-29-20 13:01	1.5 - 2 ft	650960-034
C4 - (0-0.5)	S	01-29-20 13:03	0 - 0.5 ft	650960-035
C4 - (1.5-2)	S	01-29-20 13:05	1.5 - 2 ft	650960-036
C5 - (0-0.5)	S	01-29-20 13:07	0 - 0.5 ft	650960-037
C5 - (1.5-2)	S	01-29-20 13:09	1.5 - 2 ft	650960-038
C6 - (0-0.5)	S	01-29-20 13:11	0 - 0.5 ft	650960-039
C6 - (1.5-2)	S	01-29-20 13:13	1.5 - 2 ft	650960-040
B2 -(0-0.5)	S	01-29-20 13:19	0 - 0.5 ft	650960-043
B2 - (1.5-2)	S	01-29-20 13:21	1.5 - 2 ft	650960-044
B3 - (0-0.5)	S	01-29-20 13:23	0 - 0.5 ft	650960-045

Version: 1.%

Sample Cross Reference 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

B3 - (1.5-2)	S	01-29-20 13:25	1.5 - 2 ft	650960-046
B4 - (0-0.5)	S	01-29-20 13:27	0 - 0.5 ft	650960-047
B4 - (1.5-2)	S	01-29-20 13:29	1.5 - 2 ft	650960-048
B5- (0-0.5)	S	01-29-20 13:31	0 - 0.5 ft	650960-049
B5 - (1.5-2)	S	01-29-20 13:33	1.5 - 2 ft	650960-050
A3 - (0-0.5)	S	01-29-20 13:35	0 - 0.5 ft	650960-051
A3 - (1.5-2)	S	01-29-20 13:37	1.5 - 2 ft	650960-052
A4 - (0-0.5)	S	01-29-20 13:39	0 - 0.5 ft	650960-053
A4 - (1.5-2)	S	01-29-20 13:41	1.5 - 2 ft	650960-054
C7 - (0-0.5)	S	01-29-20 13:15	0 - 0.5 ft	Not Analyzed
C7 - (1.5-2)	S	01-29-20 13:17	1.5 - 2 ft	Not Analyzed

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathon Madera

Project ID: *AR197283*
Work Order Number(s): *650960*

Report Date: *06-FEB-20*
Date Received: *01/30/2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E1 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-001	Date Collected:	01.29.20 11.55	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**93.6**	9.98	0.353	mg/kg	02.03.20 19.15		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E1 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-002	Date Collected:	01.29.20 11.57	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.7**	9.84	0.348	mg/kg	02.03.20 19.42		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E2 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-003	Date Collected:	01.29.20 11.59	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33.9**	9.94	0.352	mg/kg	02.03.20 19.51		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E2 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-004	Date Collected:	01.29.20 12.01	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.7**	9.96	0.353	mg/kg	02.03.20 20.36		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E3 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-005	Date Collected:	01.29.20 12.03	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**202**	10.1	0.358	mg/kg	02.03.20 20.45		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E3 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-006	Date Collected:	01.29.20 12.05	Sample Depth:	1.52 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1470**	10.1	0.358	mg/kg	02.03.20 20.53		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E4 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-007	Date Collected:	01.29.20 12.07	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.61**	10.0	0.354	mg/kg	02.03.20 21.02	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E4-(1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-008	Date Collected:	01.29.20 12.09	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.48**	9.96	0.353	mg/kg	02.03.20 21.11	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E5 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-009	Date Collected:	01.29.20 12.11	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.7**	9.84	0.348	mg/kg	02.03.20 21.20		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E5 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-010	Date Collected:	01.29.20 12.13	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.2**	9.88	0.350	mg/kg	02.03.20 21.29		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E6 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-011	Date Collected:	01.29.20 12.15	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.71**	10.1	0.358	mg/kg	02.03.20 21.38	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E6 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-012	Date Collected:	01.29.20 12.17	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.2**	10.1	0.358	mg/kg	02.03.20 21.47		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E7 -(0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-013	Date Collected:	01.29.20 12.19	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.63**	10.1	0.358	mg/kg	02.03.20 21.56	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**E7 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-014	Date Collected:	01.29.20 12.21	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.49**	10.0	0.355	mg/kg	02.03.20 22.23	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D1 -(0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-015	Date Collected:	01.29.20 12.23	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.8**	9.88	0.350	mg/kg	02.03.20 22.32		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D1- (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-016	Date Collected:	01.29.20 12.25	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.4**	9.82	0.348	mg/kg	02.03.20 22.41		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D2 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-017	Date Collected:	01.29.20 12.27	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.4**	9.84	0.348	mg/kg	02.03.20 22.49		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D2 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-018	Date Collected:	01.29.20 12.29	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.0**	9.92	0.351	mg/kg	02.03.20 22.58		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D3 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-019	Date Collected:	01.29.20 12.31	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**348**	9.98	0.353	mg/kg	02.03.20 23.07		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D3 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-020	Date Collected:	01.29.20 12.33	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 15.29	Basis:	Wet Weight
Seq Number:	3115402			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**215**	10.0	0.355	mg/kg	02.03.20 23.16		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D4 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-021	Date Collected:	01.29.20 12.35	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.6**	9.96	0.353	mg/kg	02.04.20 00.10		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D4 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-022	Date Collected:	01.29.20 12.37	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**57.8**	10.0	0.355	mg/kg	02.04.20 00.37		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D5 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-023	Date Collected:	01.29.20 12.39	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.69**	10.0	0.355	mg/kg	02.04.20 00.45	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D5 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-024	Date Collected:	01.29.20 12.41	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.6**	10.0	0.355	mg/kg	02.04.20 01.30		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D6 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-025	Date Collected:	01.29.20 12.43	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.78**	10.1	0.358	mg/kg	02.04.20 01.39	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D6 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-026	Date Collected:	01.29.20 12.45	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.78**	10.0	0.355	mg/kg	02.04.20 01.48	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D7 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-027	Date Collected:	01.29.20 12.47	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.36**	9.94	0.352	mg/kg	02.04.20 01.57	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**D7 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-028	Date Collected:	01.29.20 12.49	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.0**	9.94	0.352	mg/kg	02.04.20 02.06		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C1 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-029	Date Collected:	01.29.20 12.51	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.21**	9.88	0.350	mg/kg	02.04.20 02.15	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C1 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-030	Date Collected:	01.29.20 12.53	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.0**	10.0	0.355	mg/kg	02.04.20 02.24	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C2 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-031	Date Collected:	01.29.20 12.55	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.8**	9.84	0.348	mg/kg	02.04.20 02.33		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C2- (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-032	Date Collected:	01.29.20 12.57	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**54.1**	9.96	0.353	mg/kg	02.04.20 02.41		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C3 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-033	Date Collected:	01.29.20 12.59	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.9**	10.0	0.355	mg/kg	02.04.20 02.50		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C3 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-034	Date Collected:	01.29.20 13.01	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.7**	10.0	0.355	mg/kg	02.04.20 03.17		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C4 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-035	Date Collected:	01.29.20 13.03	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.47**	10.0	0.355	mg/kg	02.04.20 03.26	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C4 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-036	Date Collected:	01.29.20 13.05	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.1**	9.84	0.348	mg/kg	02.04.20 03.35		1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C5 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-037	Date Collected:	01.29.20 13.07	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.62**	9.98	0.353	mg/kg	02.04.20 03.44	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C5 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-038	Date Collected:	01.29.20 13.09	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.28**	9.96	0.353	mg/kg	02.04.20 03.53	J	1

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Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C6 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-039	Date Collected:	01.29.20 13.11	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.56**	9.84	0.348	mg/kg	02.04.20 04.02	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**C6 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-040	Date Collected:	01.29.20 13.13	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 16.10	Basis:	Wet Weight
Seq Number:	3115404			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.34**	9.96	0.353	mg/kg	02.04.20 04.11	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B2 -(0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-043	Date Collected:	01.29.20 13.19	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.3**	9.96	0.353	mg/kg	02.04.20 05.01		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B2 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-044	Date Collected:	01.29.20 13.21	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.2**	9.96	0.353	mg/kg	02.04.20 05.39		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B3 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-045	Date Collected:	01.29.20 13.23	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.6**	10.0	0.355	mg/kg	02.04.20 06.17		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B3 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-046	Date Collected:	01.29.20 13.25	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.89**	10.0	0.354	mg/kg	02.04.20 06.55	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B4 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-047	Date Collected:	01.29.20 13.27	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.48**	9.96	0.353	mg/kg	02.04.20 07.07	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B4 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-048	Date Collected:	01.29.20 13.29	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.98**	10.2	0.360	mg/kg	02.04.20 07.20	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B5- (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-049	Date Collected:	01.29.20 13.31	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.62**	10.0	0.355	mg/kg	02.04.20 07.33	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**B5 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-050	Date Collected:	01.29.20 13.33	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.3**	10.0	0.355	mg/kg	02.04.20 07.45		1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**A3 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-051	Date Collected:	01.29.20 13.35	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.00**	9.96	0.353	mg/kg	02.04.20 07.58	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**A3 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-052	Date Collected:	01.29.20 13.37	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.58**	9.90	0.350	mg/kg	02.04.20 08.11	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**A4 - (0-0.5)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-053	Date Collected:	01.29.20 13.39	Sample Depth:	0 - 0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.46**	9.96	0.353	mg/kg	02.04.20 08.23	J	1

Certificate of Analytical Results 650960

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**A4 - (1.5-2)**	Matrix:	Soil	Date Received:	01.30.20 14.45
Lab Sample Id:	650960-054	Date Collected:	01.29.20 13.41	Sample Depth:	1.5 - 2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	JYM			% Moisture:	
Analyst:	JYM	Date Prep:	02.03.20 17.00	Basis:	Wet Weight
Seq Number:	3115412			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.6**	9.84	0.348	mg/kg	02.04.20 08.36		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 650960

Terracon-Lubbock

Marathon Madera

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3115402 — Matrix: Solid — Date Prep: 02.03.20
MB Sample Id: 7695842-1-BLK — LCS Sample Id: 7695842-1-BKS — LCSD Sample Id: 7695842-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	98.8	99	101	101	80-120	2	20	mg/kg	02.03.20 18:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3115404 — Matrix: Solid — Date Prep: 02.03.20
MB Sample Id: 7695849-1-BLK — LCS Sample Id: 7695849-1-BKS — LCSD Sample Id: 7695849-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	98.6	99	100	100	80-120	1	20	mg/kg	02.03.20 23:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3115412 — Matrix: Solid — Date Prep: 02.03.20
MB Sample Id: 7695855-1-BLK — LCS Sample Id: 7695855-1-BKS — LCSD Sample Id: 7695855-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	108	108	108	108	80-120	0	20	mg/kg	02.04.20 04:36	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3115402 — Matrix: Soil — Date Prep: 02.03.20
Parent Sample Id: 650960-001 — MS Sample Id: 650960-001 S — MSD Sample Id: 650960-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	93.6	100	179	85	181	87	80-120	1	20	mg/kg	02.03.20 19:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3115402 — Matrix: Soil — Date Prep: 02.03.20
Parent Sample Id: 650960-003 — MS Sample Id: 650960-003 S — MSD Sample Id: 650960-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.9	99.8	119	85	119	85	80-120	0	20	mg/kg	02.03.20 20:00	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 650960

Terracon-Lubbock

Marathon Madera

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3115404 Matrix: Soil Date Prep: 02.03.20
Parent Sample Id: 650960-021 MS Sample Id: 650960-021 S MSD Sample Id: 650960-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	64.6	99.4	150	86	151	87	80-120	1	20	mg/kg	02.04.20 00:19	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3115404 Matrix: Soil Date Prep: 02.03.20
Parent Sample Id: 650960-023 MS Sample Id: 650960-023 S MSD Sample Id: 650960-023 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.69	99.6	94.1	86	93.8	86	80-120	0	20	mg/kg	02.04.20 00:54	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3115412 Matrix: Soil Date Prep: 02.03.20
Parent Sample Id: 650960-043 MS Sample Id: 650960-043 S MSD Sample Id: 650960-043 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.3	99.8	109	99	109	99	80-120	0	20	mg/kg	02.04.20 05:14	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3115412 Matrix: Soil Date Prep: 02.03.20
Parent Sample Id: 650960-044 MS Sample Id: 650960-044 S MSD Sample Id: 650960-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.2	98.4	108	99	109	100	80-120	1	20	mg/kg	02.04.20 05:52	

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

650960

Terracon

CHAIN OF CUSTODY RECORD

650960

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Bryant McBrayer/Paige Gaona
Sampler's Signature:

Project Number: AR197283
Project Name: Marathon Madera

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.6/1.7

Page ___1 of ___3

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	1/29/2020	11:55		x	E1 - (0 - .5)	0	0.5		X			X	X	X		1
S	1/29/2020	11:57		x	E1 - (1.5 - 2)	1.5	2		X			X	X	X		2
S	1/29/2020	11:59		x	E2 - (0 - .5)	0	0.5		X			X	X	X		3
S	1/29/2020	12:01		x	E2 - (1.5 - 2)	1.5	2		X			X	X	X		4
S	1/29/2020	12:03		x	E3 - (0 - .5)	0	0.5		X			X	X	X		5
S	1/29/2020	12:05		x	E3 - (1.5 - 2)	1.5	2		X			X	X	X		6
S	1/29/2020	12:07		x	E4 - (0 - .5)	0	0.5		X			X	X	X		7
S	1/29/2020	12:09		x	E4 - (1.5 - 2)	1.5	2		X			X	X	X		8
S	1/29/2020	12:11		x	E5 - (0 - .5)	0	0.5		X			X	X	X		9
S	1/29/2020	12:13		x	E5 - (1.5 - 2)	1.5	2		X			X	X	X		10
S	1/29/2020	12:15		x	E6 - (0 - .5)	0	0.5		X			X	X	X		11
S	1/29/2020	12:17		x	E6 - (1.5 - 2)	1.5	2		X			X	X	X		12
S	1/29/2020	12:19		x	E7 - (0 - .5)	0	0.5		X			X	X	X		13
S	1/29/2020	12:21		x	E7 - (1.5 - 2)	1.5	2		X			X	X	X		14
S	1/29/2020	12:23		x	D1 - (0 - .5)	0	0.5		X			X	X	X		15
S	1/29/2020	12:25		x	D1 - (1.5 - 2)	1.5	2		X			X	X	X		16
S	1/29/2020	12:27		x	D2 - (0 - .5)	0	0.5		X			X	X	X		17
S	1/29/2020	12:29		x	D2 - (1.5 - 2)	1.5	2		X			X	X	X		18
S	1/29/2020	12:31		x	D3 - (0 - .5)	0	0.5		X			X	X	X		19
S	1/29/2020	12:33		x	D3 - (1.5 - 2)	1.5	2		X			X	X	X		20
S	1/29/2020	12:35		x	D4 - (0 - .5)	0	0.5		X			X	X	X		21
S	1/29/2020	12:37		x	D4 - (1.5 - 2)	1.5	2		X			X	X	X		22
S	1/29/2020	12:39		x	D5 - (0 - .5)	0	0.5		X			X	X	X		23

TURNAROUND TIME: x Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	1/30/2020	14:45	Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client: Spur

e-mail results to:
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Terracon

CHAIN OF CUSTODY RECORD

650960

Office Location	Lubbock	Laboratory:	Xenco
Project Manager	Joseph Guesnier	Address:	6701 Aberdeen, Lubbock, Texas 79424
Sampler's Name	Bryant McBrayer/Paige Gaona	Phone:	
Project Number	AR197283	Contact:	Joseph Guesnier (806-544-9276)
Project Name	Marathon Madera	SRS #:	
		Sampler's Signature	PG

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.6/1.7

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	1/29/2020	12:41		x	D5 - (1.5 - 2)	0	0.5		X			X	X	X		24
S	1/29/2020	12:43		x	D6 - (0 - .5)	1.5	2		X			X	X	X		25
S	1/29/2020	12:45		x	D6 - (1.5 - 2)	0	0.5		X			X	X	X		26
S	1/29/2020	12:47		x	D7 - (0 - .5)	1.5	2		X			X	X	X		27
S	1/29/2020	12:49		x	D7 - (1.5 - 2)	0	0.5		X			X	X	X		28
S	1/29/2020	12:51		x	C1 - (0 - .5)	1.5	2		X			X	X	X		29
S	1/29/2020	12:53		x	C1 - (1.5 - 2)	0	0.5		X			X	X	X		30
S	1/29/2020	12:55		x	C2 - (0 - .5)	1.5	2		X			X	X	X		31
S	1/29/2020	12:57		x	C2 - (1.5 - 2)	0	0.5		X			X	X	X		32
S	1/29/2020	12:59		x	C3 - (0 - .5)	1.5	2		X			X	X	X		33
S	1/29/2020	13:01		x	C3 - (1.5 - 2)	0	0.5		X			X	X	X		34
S	1/29/2020	13:03		x	C4 - (0 - .5)	1.5	2		X			X	X	X		35
S	1/29/2020	13:05		x	C4 - (1.5 - 2)	0	0.5		X			X	X	X		36
S	1/29/2020	13:07		x	C5 - (0 - .5)	1.5	2		X			X	X	X		37
S	1/29/2020	13:09		x	C5 - (1.5 - 2)	0	0.5		X			X	X	X		38
S	1/29/2020	13:11		x	C6 - (0 - .5)	1.5	2		X			X	X	X		39
S	1/29/2020	13:13		x	C6 - (1.5 - 2)	0	0.5		X			X	X	X		40
S	1/29/2020	13:15		x	C7 - (0 - .5)	1.5	2		X			X	X	X		41
S	1/29/2020	13:17		x	C7 - (1.5 - 2)	0	0.5		X			X	X	X		42
S	1/29/2020	13:19		x	B2 - (0 - .5)	1.5	2		X			X	X	X		43
S	1/29/2020	13:21		x	B2 - (1.5 - 2)	0	0.5		X			X	X	X		44
S	1/29/2020	13:23		x	B3 - (0 - .5)	1.5	2		X			X	X	X		45
S	1/29/2020	13:25		x	B3 - (1.5 - 2)	0	0.5		X			X	X	X		46

TURNAROUND TIME: x Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date: 1/30/2020	Time: 14:45	Received by (Signature) Brenda Ward	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Spur

e-mail results to:

bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Terracon

CHAIN OF CUSTODY RECORD 650960

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Bryant McBrayer/Paige Gaona
Sampler's Signature:

Project Number: AR197283
Project Name: Marathon Madera

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	1/29/2020	13:27		x	B4 - (0 - .5)	0	0.5		X			X	X	X		47
S	1/29/2020	13:29		x	B4 - (1.5 - 2)	1.5	2		X			X	X	X		48
S	1/29/2020	13:31		x	B5 - (0 - .5)	0	0.5		X			X	X	X		49
S	1/29/2020	13:33		x	B5 - (1.5 - 2)	1.5	2		X			X	X	X		50
S	1/29/2020	13:35		x	A3 - (0 - .5)	0	0.5		X			X	X	X		51
S	1/29/2020	13:37		x	A3 - (1.5 - 2)	1.5	2		X			X	X	X		52
S	1/29/2020	13:39		x	A4 - (0 - .5)	0	0.5		X			X	X	X		53
S	1/29/2020	13:41		x	A4 - (1.5 - 2)	1.5	2		X			X	X	X		54

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.6 / 1.7

TURNAROUND TIME: x Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	11/30/2020	14:25	Brenda Ward		

NOTES: Client: Spur

e-mail results to:
bryant.mcbraver@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Inter-Office Shipment

IOS Number **57244**

Date/Time: 01/31/20 12:12
Created by: Brenda Ward
Please send report to: Jessica Kramer

Lab# From: **Lubbock**
Delivery Priority:
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**
Air Bill No.: 777663039858
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
650960-001	S	E1 - (0-0.5)	01/29/20 11:55	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-002	S	E1 - (1.5-2)	01/29/20 11:57	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-003	S	E2 - (0-0.5)	01/29/20 11:59	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-004	S	E2 - (1.5-2)	01/29/20 12:01	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-005	S	E3 - (0-0.5)	01/29/20 12:03	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-006	S	E3 - (1.5-2)	01/29/20 12:05	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-007	S	E4 - (0-0.5)	01/29/20 12:07	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-008	S	E4-(1.5-2)	01/29/20 12:09	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-009	S	E5 - (0-0.5)	01/29/20 12:11	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-010	S	E5 - (1.5-2)	01/29/20 12:13	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-011	S	E6 - (0-0.5)	01/29/20 12:15	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-012	S	E6 - (1.5-2)	01/29/20 12:17	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-013	S	E7 -(0-0.5)	01/29/20 12:19	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-014	S	E7 - (1.5-2)	01/29/20 12:21	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-015	S	D1 -(0-0.5)	01/29/20 12:23	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-016	S	D1- (1.5-2)	01/29/20 12:25	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-017	S	D2 - (0-0.5)	01/29/20 12:27	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-018	S	D2 - (1.5-2)	01/29/20 12:29	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-019	S	D3 - (0-0.5)	01/29/20 12:31	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-020	S	D3 - (1.5-2)	01/29/20 12:33	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-021	S	D4 - (0-0.5)	01/29/20 12:35	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-022	S	D4 - (1.5-2)	01/29/20 12:37	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-023	S	D5 - (0-0.5)	01/29/20 12:39	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-024	S	D5 - (1.5-2)	01/29/20 12:41	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-025	S	D6 - (0-0.5)	01/29/20 12:43	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	

Inter-Office Shipment

IOS Number **57244**

Date/Time: 01/31/20 12:12
Created by: Brenda Ward
Please send report to: Jessica Kramer

Lab# From: **Lubbock**
Delivery Priority:
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**
Air Bill No.: 777663039858
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
650960-026	S	D6 - (1.5-2)	01/29/20 12:45	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-027	S	D7 - (0-0.5)	01/29/20 12:47	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-028	S	D7 - (1.5-2)	01/29/20 12:49	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-029	S	C1 - (0-0.5)	01/29/20 12:51	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-030	S	C1 - (1.5-2)	01/29/20 12:53	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-031	S	C2 - (0-0.5)	01/29/20 12:55	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-032	S	C2- (1.5-2)	01/29/20 12:57	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-033	S	C3 - (0-0.5)	01/29/20 12:59	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-034	S	C3 - (1.5-2)	01/29/20 13:01	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-035	S	C4 - (0-0.5)	01/29/20 13:03	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-036	S	C4 - (1.5-2)	01/29/20 13:05	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-037	S	C5 - (0-0.5)	01/29/20 13:07	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-038	S	C5 - (1.5-2)	01/29/20 13:09	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-039	S	C6 - (0-0.5)	01/29/20 13:11	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-040	S	C6 - (1.5-2)	01/29/20 13:13	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-041	S	C7 - (0-0.5)	01/29/20 13:15	E300_CL	Chloride by EPA 300	HOLD	02/26/20	JKR	CL	
650960-042	S	C7 - (1.5-2)	01/29/20 13:17	E300_CL	Chloride by EPA 300	HOLD	02/26/20	JKR	CL	
650960-043	S	B2 -(0-0.5)	01/29/20 13:19	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-044	S	B2 - (1.5-2)	01/29/20 13:21	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-045	S	B3 - (0-0.5)	01/29/20 13:23	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-046	S	B3 - (1.5-2)	01/29/20 13:25	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-047	S	B4 - (0-0.5)	01/29/20 13:27	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-048	S	B4 - (1.5-2)	01/29/20 13:29	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-049	S	B5- (0-0.5)	01/29/20 13:31	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	
650960-050	S	B5 - (1.5-2)	01/29/20 13:33	E300_CL	Chloride by EPA 300	02/05/20	02/26/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Samples 041 & 042 didn't receive. Put on hold 02/03/2020 BW

Inter-Office Shipment

IOS Number **57244**

Date/Time: 01/31/20 12:12
Lab# From: **Lubbock**
Lab# To: **Houston**

Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 777663039858

Please send report to: Jessica Kramer
Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
650960-051	S	A3 - (0-0.5)	01/29/20 13:35	E300_CL	Chloride by EPA 300	**02/05/20**	02/26/20	JKR	CL	
650960-052	S	A3 - (1.5-2)	01/29/20 13:37	E300_CL	Chloride by EPA 300	**02/05/20**	02/26/20	JKR	CL	
650960-053	S	A4 - (0-0.5)	01/29/20 13:39	E300_CL	Chloride by EPA 300	**02/05/20**	02/26/20	JKR	CL	
650960-054	S	A4 - (1.5-2)	01/29/20 13:41	E300_CL	Chloride by EPA 300	**02/05/20**	02/26/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward
Brenda Ward
Date Relinquished: 01/31/2020

Received By: Abdhija Saidurga
Abdhija Saidurga
Date Received: 02/01/2020 09:34
Cooler Temperature: 3.0

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 57244

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : Hou-068

Sent By: Brenda Ward **Date Sent:** 01.31.2020 12.12 PM

Received By: Abdhija Saidurga **Date Received:** 02.01.2020 09.34 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Abdhija Saidurga Date: 02.01.2020

Abdhija Saidurga

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 01/30/2020 02:45:00 PM

Work Order #: 650960

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.7	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Test sent to Safford
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 01/31/2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 01/31/2020
Jessica Kramer

Certificate of Analysis Summary 654203

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Medera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Feb-28-20 04:45 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested		654203-001		654203-002		654203-003		654203-004		654203-005		654203-006	
	Field Id:	HA-1 (3.5-4)		HA-2 (3.5-4)		HA-2 (4.5-5)		HA-3 (3.5-4)		HA-3 (4.5-5)		HA-4 (3.5-4)	
	Depth:	3.5-4		3.5-4		4.5-5		3.5-4		4.5-5		3.5-4	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-25-20 14:07		Feb-25-20 14:54		Feb-25-20 15:01		Feb-25-20 13:40		Feb-25-20 13:53		Feb-25-20 14:27	
BTEX by EPA 8021B	Extracted:	Mar-02-20 12:00		Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00	
	Analyzed:	Mar-03-20 05:55		Mar-04-20 03:33		Mar-04-20 03:57		Mar-04-20 04:21		Mar-04-20 04:45		Mar-04-20 11:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00904	0.0200	<0.00811	0.0180	<0.00886	0.0196	<0.00832	0.0184	<0.00888	0.0196	<0.00842	0.0186
Toluene		<0.00468	0.0200	<0.00420	0.0180	<0.00459	0.0196	<0.00431	0.0184	<0.00460	0.0196	<0.00436	0.0186
Ethylbenzene		<0.00616	0.0200	<0.00553	0.0180	<0.00604	0.0196	<0.00567	0.0184	<0.00605	0.0196	<0.00574	0.0186
m,p-Xylenes		0.0360 J	0.0400	<0.00612	0.0359	<0.00669	0.0392	<0.00628	0.0368	<0.00670	0.0393	<0.00635	0.0372
o-Xylene		0.0220	0.0200	<0.00612	0.0180	<0.00669	0.0196	<0.00628	0.0184	<0.00670	0.0196	<0.00635	0.0186
Total Xylenes		0.0580	0.0200	<0.00612	0.0180	<0.00669	0.0196	<0.00628	0.0184	<0.00670	0.0196	<0.00635	0.0186
Total BTEX		0.0580	0.0200	<0.00420	0.0180	<0.00459	0.0196	<0.00431	0.0184	<0.00460	0.0196	<0.00436	0.0186
Chloride by EPA 300	Extracted:	Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30	
	Analyzed:	Mar-04-20 11:03		Mar-04-20 11:24		Mar-04-20 11:31		Mar-04-20 11:38		Mar-04-20 11:45		Mar-04-20 11:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6.09 J	25.0	4.95 J	25.0	2.89 J	25.0	71.2	25.0	68.9	25.0	2.41 J	25.0
DRO-ORO By SW8015B	Extracted:	Mar-02-20 13:30		Mar-02-20 13:30		Mar-02-20 13:30		Mar-02-20 13:30		Mar-02-20 13:30		Mar-02-20 13:30	
	Analyzed:	Mar-03-20 22:19		Mar-03-20 22:53		Mar-03-20 23:28		Mar-04-20 00:03		Mar-04-20 00:37		Mar-04-20 01:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<7.43	24.8	<7.51	25.1	<7.53	25.2	<7.49	25.1	<7.47	25.0	<7.47	25.0
Oil Range Hydrocarbons (ORO)		<7.43	24.8	<7.51	25.1	<7.53	25.2	<7.49	25.1	<7.47	25.0	<7.47	25.0
TPH GRO by EPA 8015 Mod.	Extracted:	Mar-02-20 12:00		Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30	
	Analyzed:	Mar-03-20 05:55		Mar-04-20 03:33		Mar-04-20 03:57		Mar-04-20 04:21		Mar-04-20 04:45		Mar-04-20 11:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		2.57 J	4.00	<0.243	3.59	<0.266	3.92	<0.250	3.68	<0.266	3.93	<0.252	3.72

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 654203

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Medera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Feb-28-20 04:45 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested																	
	Lab Id:	654203-007		654203-008		654203-009		654203-010		654203-011							
	Field Id:	HA-4 (4.5-5)		HA-5 (3.5-4)		HA-5 (4.5-5)		HA-6 (3.5-4)		HA-6 (4.5-5)							
	Depth:	4.5-5		3.5-4		4.5-5		3.5-4		4.5-5							
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL							
	Sampled:	Feb-25-20 14:35		Feb-25-20 14:04		Feb-25-20 14:12		Feb-25-20 14:18		Feb-25-20 14:24							
BTEX by EPA 8021B	***Extracted:***	Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00		Mar-03-20 13:00							
	Analyzed:	Mar-04-20 11:26		Mar-04-20 11:51		Mar-04-20 12:15		Mar-04-20 12:40		Mar-04-20 13:04							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00874	0.0193	<0.00819	0.0181	<0.00806	0.0178	<0.00816	0.0181	<0.00846	0.0187						
Toluene		<0.00453	0.0193	<0.00424	0.0181	<0.00417	0.0178	<0.00422	0.0181	<0.00438	0.0187						
Ethylbenzene		<0.00596	0.0193	<0.00558	0.0181	<0.00549	0.0178	<0.00556	0.0181	<0.00577	0.0187						
m,p-Xylenes		<0.00660	0.0387	<0.00618	0.0362	<0.00608	0.0357	<0.00616	0.0361	<0.00639	0.0375						
o-Xylene		<0.00660	0.0193	<0.00618	0.0181	<0.00608	0.0178	<0.00616	0.0181	<0.00639	0.0187						
Total Xylenes		<0.00660	0.0193	<0.00618	0.0181	<0.00608	0.0178	<0.00616	0.0181	<0.00639	0.0187						
Total BTEX		<0.00453	0.0193	<0.00424	0.0181	<0.00417	0.0178	<0.00422	0.0181	<0.00438	0.0187						
Chloride by EPA 300	***Extracted:***	Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30		Mar-04-20 08:30							
	Analyzed:	Mar-04-20 12:06		Mar-04-20 12:12		Mar-04-20 12:19		Mar-04-20 12:26		Mar-04-20 12:33							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		1.58 J	25.0	1570	125	1750	125	9.20 J	25.0	2.10 J	25.0						
DRO-ORO By SW8015B	***Extracted:***	Mar-02-20 13:30		Mar-04-20 12:00		Mar-04-20 12:00		Mar-02-20 13:30		Mar-02-20 13:30							
	Analyzed:	Mar-04-20 01:47		Mar-06-20 14:19		Mar-06-20 15:01		Mar-04-20 03:35		Mar-04-20 04:12							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Diesel Range Organics (DRO)		<7.51	25.1	<7.52	25.1	<7.49	25.1	<7.46	24.9	<7.48	25.0						
Oil Range Hydrocarbons (ORO)		<7.51	25.1	<7.52	25.1	<7.49	25.1	<7.46	24.9	<7.48	25.0						
TPH GRO by EPA 8015 Mod.	***Extracted:***	Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30		Mar-03-20 14:30							
	Analyzed:	Mar-04-20 11:26		Mar-04-20 11:51		Mar-04-20 12:15		Mar-04-20 12:40		Mar-04-20 13:04							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
TPH-GRO		<0.262	3.87	<0.245	3.62	<0.242	3.57	<0.245	3.61	<0.254	3.75						

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 654203

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Marathon Medera

AR197283

09-MAR-20

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

09-MAR-20

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **654203**
Marathon Medera
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 654203. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 654203 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (3.5-4)	S	02-25-20 14:07	3.5 - 4	654203-001
HA-2 (3.5-4)	S	02-25-20 14:54	3.5 - 4	654203-002
HA-2 (4.5-5)	S	02-25-20 15:01	4.5 - 5	654203-003
HA-3 (3.5-4)	S	02-25-20 13:40	3.5 - 4	654203-004
HA-3 (4.5-5)	S	02-25-20 13:53	4.5 - 5	654203-005
HA-4 (3.5-4)	S	02-25-20 14:27	3.5 - 4	654203-006
HA-4 (4.5-5)	S	02-25-20 14:35	4.5 - 5	654203-007
HA-5 (3.5-4)	S	02-25-20 14:04	3.5 - 4	654203-008
HA-5 (4.5-5)	S	02-25-20 14:12	4.5 - 5	654203-009
HA-6 (3.5-4)	S	02-25-20 14:18	3.5 - 4	654203-010
HA-6 (4.5-5)	S	02-25-20 14:24	4.5 - 5	654203-011

Version: 1.%

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathon Medera

Project ID: *AR197283*
Work Order Number(s): *654203*

Report Date: *09-MAR-20*
Date Received: *02/28/2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118303 BTEX by EPA 8021B
Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7697930-1-BKS,7697930-1-BLK,654105-001 S.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118307 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7697931-1-BKS,7697931-1-BSD,654105-001 S,654105-001 SD.

Batch: LBA-3118436 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 654203-003,654203-001.

Batch: LBA-3118553 BTEX by EPA 8021B
Surrogate a,a,a-Trifluorotoluene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7698097-1-BKS,7698097-1-BLK,654170-001 S,654170-001 SD,654203-010,654203-009,654203-006,654203-003,654203-011,654203-002.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7698097-1-BKS,7698097-1-BSD,654170-001 S,654170-001 SD,654203-010,654203-009,654203-008,654203-006,654203-002,654203-011.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118554 TPH GRO by EPA 8015 Mod.
Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7698099-1-BKS,654170-001 S.

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathon Medera

Project ID: *AR197283*
Work Order Number(s): *654203*

Report Date: *09-MAR-20*
Date Received: *02/28/2020*

Batch: LBA-3118853 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7698230-1-BKS,7698230-1-BSD,654203-008.

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-1 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-001 Date Collected: 02.25.20 14.07 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.09**	25.0	0.572	mg/kg	03.04.20 11.03	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.43	24.8	7.43	mg/kg	03.03.20 22.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.43	24.8	7.43	mg/kg	03.03.20 22.19	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	61	%	65-144	03.03.20 22.19	**
n-Triacontane	638-68-6	96	%	46-152	03.03.20 22.19	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 12.00 Basis: Wet Weight

Seq Number: 3118303

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	03.03.20 05.55	U	1
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	03.03.20 05.55	U	1
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	03.03.20 05.55	U	1
m,p-Xylenes	179601-23-1	**0.0360**	0.0400	0.00682	mg/kg	03.03.20 05.55	J	1
o-Xylene	95-47-6	**0.0220**	0.0200	0.00682	mg/kg	03.03.20 05.55		1
Total Xylenes	1330-20-7	**0.0580**	0.0200	0.00682	mg/kg	03.03.20 05.55		1
Total BTEX		**0.0580**	0.0200	0.00468	mg/kg	03.03.20 05.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	03.03.20 05.55	
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	03.03.20 05.55	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-1 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-001	Date Collected:	02.25.20 14.07	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	03.02.20 12.00	Basis:	Wet Weight
Seq Number:	3118307				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	**2.57**	4.00	0.271	mg/kg	03.03.20 05.55	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	76-123	03.03.20 05.55	
a,a,a-Trifluorotoluene	98-08-8	83	%	69-120	03.03.20 05.55	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-2 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-002 Date Collected: 02.25.20 14.54 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4.95**	25.0	0.572	mg/kg	03.04.20 11.24	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.03.20 22.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.03.20 22.53	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	69	%	65-144	03.03.20 22.53	
n-Triacontane	638-68-6	105	%	46-152	03.03.20 22.53	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00811	0.0180	0.00811	mg/kg	03.04.20 03.33	U	1
Toluene	108-88-3	<0.00420	0.0180	0.00420	mg/kg	03.04.20 03.33	U	1
Ethylbenzene	100-41-4	<0.00553	0.0180	0.00553	mg/kg	03.04.20 03.33	U	1
m,p-Xylenes	179601-23-1	<0.00612	0.0359	0.00612	mg/kg	03.04.20 03.33	U	1
o-Xylene	95-47-6	<0.00612	0.0180	0.00612	mg/kg	03.04.20 03.33	U	1
Total Xylenes	1330-20-7	<0.00612	0.0180	0.00612	mg/kg	03.04.20 03.33	U	1
Total BTEX		<0.00420	0.0180	0.00420	mg/kg	03.04.20 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	68-120	03.04.20 03.33	**
a,a,a-Trifluorotoluene	98-08-8	127	%	71-121	03.04.20 03.33	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-2 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-002	Date Collected:	02.25.20 14.54	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.243	3.59	0.243	mg/kg	03.04.20 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.04.20 03.33	
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.04.20 03.33	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-2 (4.5-5)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-003 Date Collected: 02.25.20 15.01 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.89**	25.0	0.572	mg/kg	03.04.20 11.31	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	03.03.20 23.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	03.03.20 23.28	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	55	%	65-144	03.03.20 23.28	**
n-Triacontane	638-68-6	83	%	46-152	03.03.20 23.28	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00886	0.0196	0.00886	mg/kg	03.04.20 03.57	U	1
Toluene	108-88-3	<0.00459	0.0196	0.00459	mg/kg	03.04.20 03.57	U	1
Ethylbenzene	100-41-4	<0.00604	0.0196	0.00604	mg/kg	03.04.20 03.57	U	1
m,p-Xylenes	179601-23-1	<0.00669	0.0392	0.00669	mg/kg	03.04.20 03.57	U	1
o-Xylene	95-47-6	<0.00669	0.0196	0.00669	mg/kg	03.04.20 03.57	U	1
Total Xylenes	1330-20-7	<0.00669	0.0196	0.00669	mg/kg	03.04.20 03.57	U	1
Total BTEX		<0.00459	0.0196	0.00459	mg/kg	03.04.20 03.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	68-120	03.04.20 03.57	
a,a,a-Trifluorotoluene	98-08-8	124	%	71-121	03.04.20 03.57	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-2 (4.5-5)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-003	Date Collected:	02.25.20 15.01	Sample Depth:	4.5 - 5
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.266	3.92	0.266	mg/kg	03.04.20 03.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	76-123	03.04.20 03.57	
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	03.04.20 03.57	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-3 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-004 Date Collected: 02.25.20 13.40 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**71.2**	25.0	0.572	mg/kg	03.04.20 11.38		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	03.04.20 00.03	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	03.04.20 00.03	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	67	%	65-144	03.04.20 00.03	
n-Triacontane	638-68-6	103	%	46-152	03.04.20 00.03	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00832	0.0184	0.00832	mg/kg	03.04.20 04.21	U	1
Toluene	108-88-3	<0.00431	0.0184	0.00431	mg/kg	03.04.20 04.21	U	1
Ethylbenzene	100-41-4	<0.00567	0.0184	0.00567	mg/kg	03.04.20 04.21	U	1
m,p-Xylenes	179601-23-1	<0.00628	0.0368	0.00628	mg/kg	03.04.20 04.21	U	1
o-Xylene	95-47-6	<0.00628	0.0184	0.00628	mg/kg	03.04.20 04.21	U	1
Total Xylenes	1330-20-7	<0.00628	0.0184	0.00628	mg/kg	03.04.20 04.21	U	1
Total BTEX		<0.00431	0.0184	0.00431	mg/kg	03.04.20 04.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	68-120	03.04.20 04.21	
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	03.04.20 04.21	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-3 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-004	Date Collected:	02.25.20 13.40	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.250	3.68	0.250	mg/kg	03.04.20 04.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	76-123	03.04.20 04.21	
a,a,a-Trifluorotoluene	98-08-8	91	%	69-120	03.04.20 04.21	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-3 (4.5-5)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-005 Date Collected: 02.25.20 13.53 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.9**	25.0	0.572	mg/kg	03.04.20 11.45		1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	03.04.20 00.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	03.04.20 00.37	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	65	%	65-144	03.04.20 00.37	
n-Triacontane	638-68-6	99	%	46-152	03.04.20 00.37	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00888	0.0196	0.00888	mg/kg	03.04.20 04.45	U	1
Toluene	108-88-3	<0.00460	0.0196	0.00460	mg/kg	03.04.20 04.45	U	1
Ethylbenzene	100-41-4	<0.00605	0.0196	0.00605	mg/kg	03.04.20 04.45	U	1
m,p-Xylenes	179601-23-1	<0.00670	0.0393	0.00670	mg/kg	03.04.20 04.45	U	1
o-Xylene	95-47-6	<0.00670	0.0196	0.00670	mg/kg	03.04.20 04.45	U	1
Total Xylenes	1330-20-7	<0.00670	0.0196	0.00670	mg/kg	03.04.20 04.45	U	1
Total BTEX		<0.00460	0.0196	0.00460	mg/kg	03.04.20 04.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	68-120	03.04.20 04.45	
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	03.04.20 04.45	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-3 (4.5-5)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-005	Date Collected:	02.25.20 13.53	Sample Depth:	4.5 - 5
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.266	3.93	0.266	mg/kg	03.04.20 04.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	76-123	03.04.20 04.45	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	03.04.20 04.45	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-4 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-006 Date Collected: 02.25.20 14.27 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.41**	25.0	0.572	mg/kg	03.04.20 11.59	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	03.04.20 01.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	03.04.20 01.12	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	70	%	65-144	03.04.20 01.12	
n-Triacontane	638-68-6	109	%	46-152	03.04.20 01.12	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00842	0.0186	0.00842	mg/kg	03.04.20 11.02	U	1
Toluene	108-88-3	<0.00436	0.0186	0.00436	mg/kg	03.04.20 11.02	U	1
Ethylbenzene	100-41-4	<0.00574	0.0186	0.00574	mg/kg	03.04.20 11.02	U	1
m,p-Xylenes	179601-23-1	<0.00635	0.0372	0.00635	mg/kg	03.04.20 11.02	U	1
o-Xylene	95-47-6	<0.00635	0.0186	0.00635	mg/kg	03.04.20 11.02	U	1
Total Xylenes	1330-20-7	<0.00635	0.0186	0.00635	mg/kg	03.04.20 11.02	U	1
Total BTEX		<0.00436	0.0186	0.00436	mg/kg	03.04.20 11.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	68-120	03.04.20 11.02	**
a,a,a-Trifluorotoluene	98-08-8	128	%	71-121	03.04.20 11.02	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-4 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-006	Date Collected:	02.25.20 14.27	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.252	3.72	0.252	mg/kg	03.04.20 11.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	76-123	03.04.20 11.02	
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.04.20 11.02	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-4 (4.5-5)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-007 Date Collected: 02.25.20 14.35 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1.58**	25.0	0.572	mg/kg	03.04.20 12.06	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.04.20 01.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.04.20 01.47	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	69	%	65-144	03.04.20 01.47	
n-Triacontane	638-68-6	105	%	46-152	03.04.20 01.47	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00874	0.0193	0.00874	mg/kg	03.04.20 11.26	U	1
Toluene	108-88-3	<0.00453	0.0193	0.00453	mg/kg	03.04.20 11.26	U	1
Ethylbenzene	100-41-4	<0.00596	0.0193	0.00596	mg/kg	03.04.20 11.26	U	1
m,p-Xylenes	179601-23-1	<0.00660	0.0387	0.00660	mg/kg	03.04.20 11.26	U	1
o-Xylene	95-47-6	<0.00660	0.0193	0.00660	mg/kg	03.04.20 11.26	U	1
Total Xylenes	1330-20-7	<0.00660	0.0193	0.00660	mg/kg	03.04.20 11.26	U	1
Total BTEX		<0.00453	0.0193	0.00453	mg/kg	03.04.20 11.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	68-120	03.04.20 11.26	
a,a,a-Trifluorotoluene	98-08-8	118	%	71-121	03.04.20 11.26	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-4 (4.5-5)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-007	Date Collected:	02.25.20 14.35	Sample Depth:	4.5 - 5
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.262	3.87	0.262	mg/kg	03.04.20 11.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	76-123	03.04.20 11.26	
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	03.04.20 11.26	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-5 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-008 Date Collected: 02.25.20 14.04 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1570**	125	2.86	mg/kg	03.04.20 12.12		5

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.04.20 12.00 Basis: Wet Weight

Seq Number: 3118853

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	03.06.20 14.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	03.06.20 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	62	%	65-144	03.06.20 14.19	**
n-Triacontane	638-68-6	89	%	46-152	03.06.20 14.19	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00819	0.0181	0.00819	mg/kg	03.04.20 11.51	U	1
Toluene	108-88-3	<0.00424	0.0181	0.00424	mg/kg	03.04.20 11.51	U	1
Ethylbenzene	100-41-4	<0.00558	0.0181	0.00558	mg/kg	03.04.20 11.51	U	1
m,p-Xylenes	179601-23-1	<0.00618	0.0362	0.00618	mg/kg	03.04.20 11.51	U	1
o-Xylene	95-47-6	<0.00618	0.0181	0.00618	mg/kg	03.04.20 11.51	U	1
Total Xylenes	1330-20-7	<0.00618	0.0181	0.00618	mg/kg	03.04.20 11.51	U	1
Total BTEX		<0.00424	0.0181	0.00424	mg/kg	03.04.20 11.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	68-120	03.04.20 11.51	**
a,a,a-Trifluorotoluene	98-08-8	121	%	71-121	03.04.20 11.51	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-5 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-008	Date Collected:	02.25.20 14.04	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.245	3.62	0.245	mg/kg	03.04.20 11.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	76-123	03.04.20 11.51	
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	03.04.20 11.51	

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Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-5 (4.5-5)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-009 Date Collected: 02.25.20 14.12 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1750**	125	2.86	mg/kg	03.04.20 12.19		5

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.04.20 12.00 Basis: Wet Weight

Seq Number: 3118853

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	03.06.20 15.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	03.06.20 15.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	68	%	65-144	03.06.20 15.01	
n-Triacontane	638-68-6	102	%	46-152	03.06.20 15.01	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00806	0.0178	0.00806	mg/kg	03.04.20 12.15	U	1
Toluene	108-88-3	<0.00417	0.0178	0.00417	mg/kg	03.04.20 12.15	U	1
Ethylbenzene	100-41-4	<0.00549	0.0178	0.00549	mg/kg	03.04.20 12.15	U	1
m,p-Xylenes	179601-23-1	<0.00608	0.0357	0.00608	mg/kg	03.04.20 12.15	U	1
o-Xylene	95-47-6	<0.00608	0.0178	0.00608	mg/kg	03.04.20 12.15	U	1
Total Xylenes	1330-20-7	<0.00608	0.0178	0.00608	mg/kg	03.04.20 12.15	U	1
Total BTEX		<0.00417	0.0178	0.00417	mg/kg	03.04.20 12.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	131	%	68-120	03.04.20 12.15	**
a,a,a-Trifluorotoluene	98-08-8	133	%	71-121	03.04.20 12.15	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-5 (4.5-5)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-009	Date Collected:	02.25.20 14.12	Sample Depth:	4.5 - 5
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.242	3.57	0.242	mg/kg	03.04.20 12.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	76-123	03.04.20 12.15	
a,a,a-Trifluorotoluene	98-08-8	107	%	69-120	03.04.20 12.15	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-6 (3.5-4)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-010 Date Collected: 02.25.20 14.18 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.20**	25.0	0.572	mg/kg	03.04.20 12.26	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	03.04.20 03.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	03.04.20 03.35	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	72	%	65-144	03.04.20 03.35	
n-Triacontane	638-68-6	109	%	46-152	03.04.20 03.35	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00816	0.0181	0.00816	mg/kg	03.04.20 12.40	U	1
Toluene	108-88-3	<0.00422	0.0181	0.00422	mg/kg	03.04.20 12.40	U	1
Ethylbenzene	100-41-4	<0.00556	0.0181	0.00556	mg/kg	03.04.20 12.40	U	1
m,p-Xylenes	179601-23-1	<0.00616	0.0361	0.00616	mg/kg	03.04.20 12.40	U	1
o-Xylene	95-47-6	<0.00616	0.0181	0.00616	mg/kg	03.04.20 12.40	U	1
Total Xylenes	1330-20-7	<0.00616	0.0181	0.00616	mg/kg	03.04.20 12.40	U	1
Total BTEX		<0.00422	0.0181	0.00422	mg/kg	03.04.20 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	68-120	03.04.20 12.40	**
a,a,a-Trifluorotoluene	98-08-8	129	%	71-121	03.04.20 12.40	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-6 (3.5-4)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-010	Date Collected:	02.25.20 14.18	Sample Depth:	3.5 - 4
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.245	3.61	0.245	mg/kg	03.04.20 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	76-123	03.04.20 12.40	
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.04.20 12.40	

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id: **HA-6 (4.5-5)** Matrix: Soil Date Received:02.28.20 16.45

Lab Sample Id: 654203-011 Date Collected: 02.25.20 14.24 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: RNL % Moisture:

Analyst: RNL Date Prep: 03.04.20 08.30 Basis: Wet Weight

Seq Number: 3118502

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2.10**	25.0	0.572	mg/kg	03.04.20 12.33	J	1

Analytical Method: DRO-ORO By SW8015B Prep Method: SW8015P

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.02.20 13.30 Basis: Wet Weight

Seq Number: 3118436

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	03.04.20 04.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	03.04.20 04.12	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	71	%	65-144	03.04.20 04.12	
n-Triacontane	638-68-6	109	%	46-152	03.04.20 04.12	

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MIT % Moisture:

Analyst: MIT Date Prep: 03.03.20 13.00 Basis: Wet Weight

Seq Number: 3118553

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00846	0.0187	0.00846	mg/kg	03.04.20 13.04	U	1
Toluene	108-88-3	<0.00438	0.0187	0.00438	mg/kg	03.04.20 13.04	U	1
Ethylbenzene	100-41-4	<0.00577	0.0187	0.00577	mg/kg	03.04.20 13.04	U	1
m,p-Xylenes	179601-23-1	<0.00639	0.0375	0.00639	mg/kg	03.04.20 13.04	U	1
o-Xylene	95-47-6	<0.00639	0.0187	0.00639	mg/kg	03.04.20 13.04	U	1
Total Xylenes	1330-20-7	<0.00639	0.0187	0.00639	mg/kg	03.04.20 13.04	U	1
Total BTEX		<0.00438	0.0187	0.00438	mg/kg	03.04.20 13.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	131	%	68-120	03.04.20 13.04	**
a,a,a-Trifluorotoluene	98-08-8	130	%	71-121	03.04.20 13.04	**

Certificate of Analytical Results 654203

Terracon-Lubbock, Lubbock, TX

Marathon Medera

Sample Id:	**HA-6 (4.5-5)**	Matrix:	Soil	Date Received:	02.28.20 16.45
Lab Sample Id:	654203-011	Date Collected:	02.25.20 14.24	Sample Depth:	4.5 - 5
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	JGR			% Moisture:	
Analyst:	MIT	Date Prep:	03.03.20 14.30	Basis:	Wet Weight
Seq Number:	3118554				

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.254	3.75	0.254	mg/kg	03.04.20 13.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	76-123	03.04.20 13.04	
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.04.20 13.04	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 654203

Terracon-Lubbock

Marathon Medera

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118502 Matrix: Solid Date Prep: 03.04.20
MB Sample Id: 7698057-1-BLK LCS Sample Id: 7698057-1-BKS LCSD Sample Id: 7698057-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.572	250	253	101	253	101	90-110	0	20	mg/kg	03.04.20 10:15	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118502 Matrix: Soil Date Prep: 03.04.20
Parent Sample Id: 654203-001 MS Sample Id: 654203-001 S MSD Sample Id: 654203-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.09	250	273	107	278	109	80-120	2	20	mg/kg	03.04.20 11:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118502 Matrix: Soil Date Prep: 03.04.20
Parent Sample Id: 654203-011 MS Sample Id: 654203-011 S MSD Sample Id: 654203-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.10	250	249	99	250	99	80-120	0	20	mg/kg	03.04.20 12:40	

Analytical Method: **DRO-ORO By SW8015B** Prep Method: SW8015P
Seq Number: 3118436 Matrix: Solid Date Prep: 03.02.20
MB Sample Id: 7697922-1-BLK LCS Sample Id: 7697922-1-BKS LCSD Sample Id: 7697922-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	74.3	74	69.8	70	63-139	6	20	mg/kg	03.03.20 13:06	
Oil Range Hydrocarbons (ORO)	<7.48	100	<7.48	0	<7.48	0	63-139	NC	20	mg/kg	03.03.20 13:06	L

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	70		71		71		65-144	%	03.03.20 13:06
n-Triacontane	96		96		94		46-152	%	03.03.20 13:06

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 654203

Terracon-Lubbock

Marathon Medera

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118853 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698230-1-BLK — LCS Sample Id: 7698230-1-BKS — LCSD Sample Id: 7698230-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	98.1	98	87.8	88	63-139	11	20	mg/kg	03.06.20 08:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	70		64	**	64	**	65-144	%	03.06.20 08:16
n-Triacontane	98		84		83		46-152	%	03.06.20 08:16

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118853 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698230-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Oil Range Hydrocarbons (ORO)	<7.48	mg/kg	03.06.20 11:16	

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118436 — Matrix: Soil — Date Prep: 03.02.20
Parent Sample Id: 654170-001 — MS Sample Id: 654170-001 S — MSD Sample Id: 654170-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.44	99.5	78.0	78	69.7	69	63-139	11	20	mg/kg	03.03.20 17:24	
Oil Range Hydrocarbons (ORO)	<7.44	99.5	<7.44	0	<7.53	0	63-139	NC	20	mg/kg	03.03.20 17:24	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	70		69		65-144	%	03.03.20 17:24
n-Triacontane	100		102		46-152	%	03.03.20 17:24

Analytical Method: DRO-ORO By SW8015B — Prep Method: SW8015P
Seq Number: 3118853 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 654163-001 — MS Sample Id: 654163-001 S — MSD Sample Id: 654163-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.53	101	82.5	82	74.2	74	63-139	11	20	mg/kg	03.06.20 12:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Tricosane	68		66		65-144	%	03.06.20 12:27
n-Triacontane	96		93		46-152	%	03.06.20 12:27

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 654203

Terracon-Lubbock

Marathon Medera

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118303 — Matrix: Solid — Date Prep: 03.02.20
MB Sample Id: 7697930-1-BLK — LCS Sample Id: 7697930-1-BKS — LCSD Sample Id: 7697930-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.91	96	1.93	97	55-120	1	20	mg/kg	03.02.20 15:46	
Toluene	<0.00468	2.00	2.00	100	2.00	100	77-120	0	20	mg/kg	03.02.20 15:46	
Ethylbenzene	<0.00616	2.00	2.05	103	2.10	105	77-120	2	20	mg/kg	03.02.20 15:46	
m,p-Xylenes	<0.00682	4.00	4.05	101	4.16	104	78-120	3	20	mg/kg	03.02.20 15:46	
o-Xylene	<0.00682	2.00	2.05	103	2.10	105	78-120	2	20	mg/kg	03.02.20 15:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	120		120		119		68-120	%	03.02.20 15:46
a,a,a-Trifluorotoluene	122	**	124	**	121		71-121	%	03.02.20 15:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118553 — Matrix: Solid — Date Prep: 03.03.20
MB Sample Id: 7698097-1-BLK — LCS Sample Id: 7698097-1-BKS — LCSD Sample Id: 7698097-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.97	99	1.95	98	55-120	1	20	mg/kg	03.03.20 20:17	
Toluene	<0.00468	2.00	2.16	108	2.13	107	77-120	1	20	mg/kg	03.03.20 20:17	
Ethylbenzene	<0.00616	2.00	2.25	113	2.25	113	77-120	0	20	mg/kg	03.03.20 20:17	
m,p-Xylenes	<0.00682	4.00	4.47	112	4.47	112	78-120	0	20	mg/kg	03.03.20 20:17	
o-Xylene	<0.00682	2.00	2.19	110	2.20	110	78-120	0	20	mg/kg	03.03.20 20:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	117		125	**	125	**	68-120	%	03.03.20 20:17
a,a,a-Trifluorotoluene	122	**	122	**	121		71-121	%	03.03.20 20:17

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3118303 — Matrix: Soil — Date Prep: 03.02.20
Parent Sample Id: 654105-001 — MS Sample Id: 654105-001 S — MSD Sample Id: 654105-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00909	2.01	1.87	93	1.81	98	54-120	3	25	mg/kg	03.02.20 19:01	
Toluene	<0.00471	2.01	1.94	97	1.92	104	57-120	1	25	mg/kg	03.02.20 19:01	
Ethylbenzene	<0.00620	2.01	1.99	99	1.99	108	58-131	0	25	mg/kg	03.02.20 19:01	
m,p-Xylenes	<0.00686	4.02	3.93	98	3.93	106	62-124	0	25	mg/kg	03.02.20 19:01	
o-Xylene	<0.00686	2.01	1.94	97	1.94	105	62-124	0	25	mg/kg	03.02.20 19:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	115		91		68-120	%	03.02.20 19:01
a,a,a-Trifluorotoluene	128	**	100		71-121	%	03.02.20 19:01

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 654203

Terracon-Lubbock

Marathon Medera

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3118553 Matrix: Soil Date Prep: 03.03.20
Parent Sample Id: 654170-001 MS Sample Id: 654170-001 S MSD Sample Id: 654170-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00840	1.86	1.81	97	1.85	97	54-120	2	25	mg/kg	03.03.20 23:31	
Toluene	<0.00435	1.86	1.94	104	2.00	105	57-120	3	25	mg/kg	03.03.20 23:31	
Ethylbenzene	<0.00572	1.86	2.02	109	2.11	110	58-131	4	25	mg/kg	03.03.20 23:31	
m,p-Xylenes	<0.00634	3.72	4.00	108	4.18	109	62-124	4	25	mg/kg	03.03.20 23:31	
o-Xylene	<0.00634	1.86	1.95	105	2.04	107	62-124	5	25	mg/kg	03.03.20 23:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	121	**	122	**	68-120	%	03.03.20 23:31
a,a,a-Trifluorotoluene	126	**	127	**	71-121	%	03.03.20 23:31

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3118307 Matrix: Solid Date Prep: 03.02.20
MB Sample Id: 7697931-1-BLK LCS Sample Id: 7697931-1-BKS LCSD Sample Id: 7697931-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	20.5	103	21.4	107	35-129	4	20	mg/kg	03.02.20 16:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		136	**	141	**	76-123	%	03.02.20 16:34
a,a,a-Trifluorotoluene	97		102		100		69-120	%	03.02.20 16:34

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3118554 Matrix: Solid Date Prep: 03.03.20
MB Sample Id: 7698099-1-BLK LCS Sample Id: 7698099-1-BKS LCSD Sample Id: 7698099-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	18.4	92	19.2	96	35-129	4	20	mg/kg	03.03.20 21:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		143	**	122		76-123	%	03.03.20 21:05
a,a,a-Trifluorotoluene	99		104		84		69-120	%	03.03.20 21:05

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 654203

Terracon-Lubbock

Marathon Medera

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3118307 Matrix: Soil Date Prep: 03.02.20
Parent Sample Id: 654105-001 MS Sample Id: 654105-001 S MSD Sample Id: 654105-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	0.448	19.4	18.0	90	16.3	84	35-129	10	20	mg/kg	03.02.20 19:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	137	**	137	**	76-123	%	03.02.20 19:50
a,a,a-Trifluorotoluene	108		102		69-120	%	03.02.20 19:50

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B
Seq Number: 3118554 Matrix: Soil Date Prep: 03.03.20
Parent Sample Id: 654170-001 MS Sample Id: 654170-001 S MSD Sample Id: 654170-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.239	17.7	16.8	95	20.9	105	35-129	22	20	mg/kg	03.04.20 00:20	F

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	138	**	119		76-123	%	03.04.20 00:20
a,a,a-Trifluorotoluene	106		79		69-120	%	03.04.20 00:20

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

654203

IR 4 to 1

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: Joseph Guesnier (806-544-9276)
SRS #:

Office Location: Lubbock
Project Manager: Joseph Guesnier
Sampler's Name: Charles Cannon
Sampler's Signature:

Project Number: AR197283
Project Name: Marathon Madera

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.0/1.1
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)		Start Depth	End Depth	No. Type of Containers: 2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Hold	Lab Sample ID
S	2/25/2020	14:07	X		HA-1 (3.5-4)	3.5	0	0.5'	4	X			X	X	X		
S	2/25/2020	14:54	X		HA-2 (3.5-4)	3.5	1'	1.5'	4	X			X	X	X		
S	2/25/2020	15:01	X		HA-2 (4.5-5)	4.5	2'	2.5'	5	X			X	X	X		
S	2/25/2020	13:40	X		HA-3 (3.5-4)	3.5	0	0.5'	4	X			X	X	X		
S	2/25/2020	13:53	X		HA-3 (4.5-5)	4.5	1'	1.5'	5	X			X	X	X		
S	2/25/2020	14:27	X		HA-4 (3.5-4)	3.5	2'	2.5'	4	X			X	X	X		
S	2/25/2020	14:35	X		HA-4 (4.5-5)	4.5	0	0.5'	5	X			X	X	X		
S	2/25/2020	14:04	X		HA-5 (3.5-4)	3.5	1'	1.5'	4	X			X	X	X		
S	2/25/2020	14:12	X		HA-5 (4.5-5)	4.5	2'	2.5'	5	X			X	X	X		
S	2/25/2020	14:18	X		HA-6 (3.5-4)	3.5	0	0.5'	4	X			X	X	X		
S	2/25/2020	14:24	X		HA-6 (4.5-5)	4.5	1'	1.5'	5	X			X	X	X		

TURNAROUND TIME ☐ Normal ☒ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	2/24/20	4:45	Received by (Signature) Brenda Ward		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES: Client:

e-mail results to:

bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 02.28.2020 04.45.00 PM

Work Order #: 654203

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 03.02.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 03.04.2020
Jessica Kramer

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Certificate of Analysis Summary 667201

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 07.15.2020 09:00
Report Date: 07.17.2020 14:53
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	667201-001					
	Field Id:	CS-2.3 (4.5-5)					
	Depth:	5-4.5					
	Matrix:	SOIL					
	Sampled:	07.14.2020 13:01					
BTEX by EPA 8021B	***Extracted:***	07.16.2020 11:00					
SUB: T104704400-19-19	***Analyzed:***	07.16.2020 14:58					
	Units/RL:	mg/kg RL					
Benzene		<0.00201 0.00201					
Toluene		<0.00201 0.00201					
Ethylbenzene		<0.00201 0.00201					
m,p-Xylenes		<0.00402 0.00402					
o-Xylene		<0.00201 0.00201					
Xylenes, Total		<0.00201 0.00201					
Total BTEX		<0.00201 0.00201					
Chloride by EPA 300	***Extracted:***	07.16.2020 15:20					
SUB: T104704400-19-19	***Analyzed:***	07.16.2020 20:44					
	Units/RL:	mg/kg RL					
Chloride		27.9 5.00					
TPH by SW8015 Mod	***Extracted:***	07.16.2020 12:00					
SUB: T104704400-19-19	***Analyzed:***	07.16.2020 12:38					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0					
Diesel Range Organics (DRO)		<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					
Total TPH		<50.0 50.0					

BRL - Below Reporting Limit

Jessica Kramer

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Final 1.000

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Analytical Report 667201

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Marathon Madera

AR197283

07.17.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.17.2020

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **667201**
Marathon Madera
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667201. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 667201 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 667201

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS-2.3 (4.5-5)	S	07.14.2020 13:01	5 - 4.5	667201-001

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathon Madera

Project ID: *AR197283*
Work Order Number(s): *667201*

Report Date: *07.17.2020*
Date Received: *07.15.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 667201

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS-2.3 (4.5-5)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667201-001	Date Collected:	07.14.2020 13:01	Sample Depth:	5 - 4.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.16.2020 15:20	Basis:	Wet Weight
Seq Number:	3131896			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.9**	5.00	mg/kg	07.16.2020 20:44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3131957			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 12:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 12:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 12:38	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 12:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-130	07.16.2020 12:38	
o-Terphenyl	84-15-1	102	%	70-130	07.16.2020 12:38	

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Certificate of Analytical Results 667201

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS-2.3 (4.5-5)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667201-001	Date Collected:	07.14.2020 13:01	Sample Depth:	5 - 4.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.16.2020 11:00	Basis:	Wet Weight
Seq Number:	3131855			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.16.2020 14:58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.16.2020 14:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	07.16.2020 14:58	
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.16.2020 14:58	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 667201

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Terracon-Lubbock

Marathon Madera

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3131896 — Matrix: Solid — Date Prep: 07.16.2020
MB Sample Id: 7707518-1-BLK — LCS Sample Id: 7707518-1-BKS — LCSD Sample Id: 7707518-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	263	105	263	105	90-110	0	20	mg/kg	07.16.2020 17:52	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3131896 — Matrix: Soil — Date Prep: 07.16.2020
Parent Sample Id: 667044-030 — MS Sample Id: 667044-030 S — MSD Sample Id: 667044-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	264	248	544	113	524	105	90-110	4	20	mg/kg	07.16.2020 18:10	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3131896 — Matrix: Soil — Date Prep: 07.16.2020
Parent Sample Id: 667044-037 — MS Sample Id: 667044-037 S — MSD Sample Id: 667044-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.6	250	292	111	281	107	90-110	4	20	mg/kg	07.16.2020 19:36	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3131957 — Matrix: Solid — Date Prep: 07.16.2020
MB Sample Id: 7707521-1-BLK — LCS Sample Id: 7707521-1-BKS — LCSD Sample Id: 7707521-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	893	89	889	89	70-130	0	20	mg/kg	07.16.2020 11:54	
Diesel Range Organics (DRO)	<50.0	1000	906	91	903	90	70-130	0	20	mg/kg	07.16.2020 11:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		106		96		70-130	%	07.16.2020 11:54
o-Terphenyl	102		92		96		70-130	%	07.16.2020 11:54

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3131957 — Matrix: Solid — Date Prep: 07.16.2020
MB Sample Id: 7707521-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.16.2020 11:33	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

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QC Summary 667201

Terracon-Lubbock

Marathon Madera

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3131957 Matrix: Soil Date Prep: 07.16.2020
Parent Sample Id: 667201-001 MS Sample Id: 667201-001 S MSD Sample Id: 667201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1020	102	1020	102	70-130	0	20	mg/kg	07.16.2020 13:00	
Diesel Range Organics (DRO)	<49.9	997	1090	109	1100	110	70-130	1	20	mg/kg	07.16.2020 13:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		111		70-130	%	07.16.2020 13:00
o-Terphenyl	101		102		70-130	%	07.16.2020 13:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3131855 Matrix: Solid Date Prep: 07.15.2020
MB Sample Id: 7707439-1-BLK LCS Sample Id: 7707439-1-BKS LCSD Sample Id: 7707439-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.0931	93	70-130	8	35	mg/kg	07.16.2020 06:37	
Toluene	<0.00200	0.100	0.103	103	0.0955	96	70-130	8	35	mg/kg	07.16.2020 06:37	
Ethylbenzene	<0.00200	0.100	0.103	103	0.0949	95	70-130	8	35	mg/kg	07.16.2020 06:37	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.184	92	70-130	8	35	mg/kg	07.16.2020 06:37	
o-Xylene	<0.00200	0.100	0.104	104	0.0958	96	70-130	8	35	mg/kg	07.16.2020 06:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		96		94		70-130	%	07.16.2020 06:37
4-Bromofluorobenzene	103		105		101		70-130	%	07.16.2020 06:37

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3131855 Matrix: Soil Date Prep: 07.15.2020
Parent Sample Id: 666985-031 MS Sample Id: 666985-031 S MSD Sample Id: 666985-031 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0891	89	0.0833	83	70-130	7	35	mg/kg	07.16.2020 07:18	
Toluene	<0.00199	0.0996	0.0902	91	0.0845	85	70-130	7	35	mg/kg	07.16.2020 07:18	
Ethylbenzene	<0.00199	0.0996	0.0868	87	0.0829	83	70-130	5	35	mg/kg	07.16.2020 07:18	
m,p-Xylenes	<0.00398	0.199	0.166	83	0.160	80	70-130	4	35	mg/kg	07.16.2020 07:18	
o-Xylene	<0.00199	0.0996	0.0866	87	0.0833	83	70-130	4	35	mg/kg	07.16.2020 07:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		95		70-130	%	07.16.2020 07:18
4-Bromofluorobenzene	102		102		70-130	%	07.16.2020 07:18

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

CHAIN OF CUSTODY RECORD 667201

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424
Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)

Project Number: AR197283
Project Name: Marathon Madera

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	7/14/2020	13:01	X		CS-2.3 (4.5-5)	4.5	5	X				X	X	X					667201-001

TURNAROUND TIME ☐ Normal ☒ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	7/15/20	8:55		7/15/2020	9:00
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Solaris Midstream

e-mail results to: ro.3/10.17
bryant.mcbrayer@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

Inter-Office Shipment

IOS Number : 67107

Date/Time:	07.15.2020	Created by:	Michael J Turner	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Midland**	Air Bill No.:	770966887317	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
667201-001	S	CS-2.3 (4.5-5)	07.14.2020 13:01	SW8015MOD_NM	TPH by SW8015 Mod	07.17.2020	07.28.2020	JKR	PHCC10C28 PHCC28C3	
667201-001	S	CS-2.3 (4.5-5)	07.14.2020 13:01	SW8021B	BTEX by EPA 8021B	07.17.2020	07.28.2020	JKR	BR4FBZ BZ BZME EBZ	
667201-001	S	CS-2.3 (4.5-5)	07.14.2020 13:01	E300_CL	Chloride by EPA 300	07.17.2020	08.11.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 07.15.2020

Received By: Brianna Teel

Date Received: 07.16.2020

Cooler Temperature: 0.9

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 67107

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-8

Sent By: Michael J Turner **Date Sent:** 07.15.2020 09.50 AM

Received By: Brianna Teel **Date Received:** 07.16.2020 10.08 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.9	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 07.16.2020

Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.15.2020 09.00.00 AM

Work Order #: 667201

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	10.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 07.15.2020

Checklist reviewed by: Jessica Kramer Date: 07.17.2020

Certificate of Analysis Summary 658556

Terracon-Lubbock, Lubbock, TX

Project Name: Marathon Madera

Project Id: AR197283
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 04.10.2020 11:14
Report Date: 04.21.2020 17:40
Project Manager: Jessica Kramer

Analysis Requested		658556-001		658556-002		658556-003		658556-004		658556-005		658556-006	
	Field Id:	CS1 (1.5-2')		CS1 (3.5-4')		CS1 (4.5-5')		CS2 (1.5-2')		CS2 (3.5-4')		CS2 (4.5-5')	
	Depth:	1.5-2 ft		3.5-4 ft		4.5-5 ft		1.5-2 ft		3.5-4 ft		4.5-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.09.2020 12:50		04.09.2020 12:55		04.09.2020 13:00		04.09.2020 13:20		04.09.2020 13:25		04.09.2020 13:25	
BTEX-MTBE by EPA 8021B	*Extracted:*	04.10.2020 13:00		04.10.2020 13:00		04.10.2020 13:00		04.10.2020 13:00		04.10.2020 13:00		04.10.2020 13:00	
	Analyzed:	04.10.2020 20:26		04.10.2020 22:03		04.10.2020 22:27		04.10.2020 22:52		04.10.2020 23:16		04.10.2020 23:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00868	0.0192	<0.00869	0.0192	<0.00868	0.0192	<0.00806	0.0178	<0.00904	0.0200	<0.00823	0.0182
Toluene		0.0134 J	0.0192	0.00769 J	0.0192	<0.00449	0.0192	<0.00417	0.0178	<0.00468	0.0200	0.00546 J	0.0182
Ethylbenzene		<0.00591	0.0192	<0.00592	0.0192	<0.00591	0.0192	<0.00549	0.0178	<0.00616	0.0200	<0.00561	0.0182
m,p-Xylenes		<0.00655	0.0384	<0.00656	0.0385	<0.00655	0.0384	<0.00608	0.0357	<0.00682	0.0400	<0.00621	0.0364
o-Xylene		<0.00655	0.0192	<0.00656	0.0192	<0.00655	0.0192	<0.00608	0.0178	<0.00682	0.0200	<0.00621	0.0182
MTBE		<0.00960	0.0192	<0.00962	0.0192	<0.00960	0.0192	<0.00891	0.0178	<0.0100	0.0200	<0.00911	0.0182
Total Xylenes		<0.00655	0.0192	<0.00656	0.0192	<0.00655	0.0192	<0.00608	0.0178	<0.00682	0.0200	<0.00621	0.0182
Total BTEX		0.0134 J	0.0192	0.00769 J	0.0192	<0.00449	0.0192	<0.00417	0.0178	<0.00468	0.0200	0.00546 J	0.0182
Chloride by EPA 300 SUB: T104704215-19-30	*Extracted:*	04.13.2020 11:49		04.13.2020 11:49		04.13.2020 11:49		04.13.2020 11:49		04.13.2020 11:49		04.13.2020 11:49	
	Analyzed:	04.13.2020 19:47		04.13.2020 20:24		04.13.2020 20:36		04.13.2020 20:48		04.13.2020 21:00		04.13.2020 21:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.05 J	9.96	8.18 J	9.88	10.7	10.1	83.0	10.2	482	9.96	714	9.84
TPH DRO-ORO by SW-846 8015 SUB: T104704215-19-30	*Extracted:*	04.17.2020 16:18		04.17.2020 16:21		04.17.2020 16:24		04.17.2020 16:27		04.17.2020 16:30		04.17.2020 16:33	
	Analyzed:	04.20.2020 14:49		04.20.2020 15:11		04.20.2020 15:34		04.20.2020 15:56		04.20.2020 16:19		04.20.2020 16:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-DRO (C10-28)		<2.43	6.68	<2.42	6.66	<2.43	6.67	4.95 J	6.66	<2.42	6.66	<2.43	6.66
TPH-ORO (Oil Range Organics) - (C28-C35)		<3.38	6.68	<3.37	6.66	<3.37	6.67	14.0	6.66	<3.37	6.66	6.40 J	6.66
TPH GRO by EPA 8015 Mod. SUB: T104704215-19-30	*Extracted:*	04.14.2020 14:10		04.14.2020 14:10		04.14.2020 14:10		04.14.2020 14:10		04.14.2020 14:10		04.14.2020 14:10	
	Analyzed:	04.15.2020 02:45		04.15.2020 03:10		04.15.2020 03:34		04.15.2020 03:59		04.15.2020 04:23		04.15.2020 04:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<0.262	3.86	<0.268	3.96	<0.262	3.87	<0.264	3.89	<0.239	3.53	<0.262	3.87

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Manager

Analytical Report 658556

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Marathon Madera

AR197283

04.21.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04.21.2020

Project Manager: **Joseph Guesnier**
Terracon-Lubbock
5827 50th st, Suite 1
Lubbock, TX 79424

Reference: XENCO Report No(s): **658556**
Marathon Madera
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 658556. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 658556 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Sample Cross Reference 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
CS1 (1.5-2')	S	04.09.2020 12:50	1.5 - 2 ft	658556-001
CS1 (3.5-4')	S	04.09.2020 12:55	3.5 - 4 ft	658556-002
CS1 (4.5-5')	S	04.09.2020 13:00	4.5 - 5 ft	658556-003
CS2 (1.5-2')	S	04.09.2020 13:20	1.5 - 2 ft	658556-004
CS2 (3.5-4')	S	04.09.2020 13:25	3.5 - 4 ft	658556-005
CS2 (4.5-5')	S	04.09.2020 13:25	4.5 - 5 ft	658556-006

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathon Madera

Project ID: *AR197283*
Work Order Number(s): *658556*

Report Date: *04.21.2020*
Date Received: *04.10.2020*

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3122769 BTEX-MTBE by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3123086 TPH GRO by EPA 8015 Mod.

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7701318-1-BKS,7701318-1-BSD,658556-006 S,658556-006 SD.

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS1 (1.5-2')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-001 Date Collected: 04.09.2020 12:50 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.05**	9.96	0.353	mg/kg	04.13.2020 19:47	J	1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:18 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.43	6.68	2.43	mg/kg	04.20.2020 14:49	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	<3.38	6.68	3.38	mg/kg	04.20.2020 14:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	83	%	40-130	04.20.2020 14:49	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00868	0.0192	0.00868	mg/kg	04.10.2020 20:26	U	1
Toluene	108-88-3	**0.0134**	0.0192	0.00449	mg/kg	04.10.2020 20:26	J	1
Ethylbenzene	100-41-4	<0.00591	0.0192	0.00591	mg/kg	04.10.2020 20:26	U	1
m,p-Xylenes	179601-23-1	<0.00655	0.0384	0.00655	mg/kg	04.10.2020 20:26	U	1
o-Xylene	95-47-6	<0.00655	0.0192	0.00655	mg/kg	04.10.2020 20:26	U	1
MTBE	1634-04-4	<0.00960	0.0192	0.00960	mg/kg	04.10.2020 20:26	U	1
Total Xylenes	1330-20-7	<0.00655	0.0192	0.00655	mg/kg	04.10.2020 20:26	U	1
Total BTEX		**0.0134**	0.0192	0.00449	mg/kg	04.10.2020 20:26	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	04.10.2020 20:26	
a,a,a-Trifluorotoluene	98-08-8	101	%	71-121	04.10.2020 20:26	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS1 (1.5-2')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-001	Date Collected:	04.09.2020 12:50	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.262	3.86	0.262	mg/kg	04.15.2020 02:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	76-123	04.15.2020 02:45	
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	04.15.2020 02:45	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS1 (3.5-4')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-002 Date Collected: 04.09.2020 12:55 Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.18**	9.88	0.350	mg/kg	04.13.2020 20:24	J	1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:21 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.42	6.66	2.42	mg/kg	04.20.2020 15:11	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	<3.37	6.66	3.37	mg/kg	04.20.2020 15:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	96	%	40-130	04.20.2020 15:11	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00869	0.0192	0.00869	mg/kg	04.10.2020 22:03	U	1
Toluene	108-88-3	**0.00769**	0.0192	0.00450	mg/kg	04.10.2020 22:03	J	1
Ethylbenzene	100-41-4	<0.00592	0.0192	0.00592	mg/kg	04.10.2020 22:03	U	1
m,p-Xylenes	179601-23-1	<0.00656	0.0385	0.00656	mg/kg	04.10.2020 22:03	U	1
o-Xylene	95-47-6	<0.00656	0.0192	0.00656	mg/kg	04.10.2020 22:03	U	1
MTBE	1634-04-4	<0.00962	0.0192	0.00962	mg/kg	04.10.2020 22:03	U	1
Total Xylenes	1330-20-7	<0.00656	0.0192	0.00656	mg/kg	04.10.2020 22:03	U	1
Total BTEX		**0.00769**	0.0192	0.00450	mg/kg	04.10.2020 22:03	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	68-120	04.10.2020 22:03	
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	04.10.2020 22:03	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS1 (3.5-4')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-002	Date Collected:	04.09.2020 12:55	Sample Depth:	3.5 - 4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.96	0.268	mg/kg	04.15.2020 03:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	76-123	04.15.2020 03:10	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	04.15.2020 03:10	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS1 (4.5-5')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-003 Date Collected: 04.09.2020 13:00 Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.7**	10.1	0.359	mg/kg	04.13.2020 20:36		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:24 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.43	6.67	2.43	mg/kg	04.20.2020 15:34	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	<3.37	6.67	3.37	mg/kg	04.20.2020 15:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	101	%	40-130	04.20.2020 15:34	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00868	0.0192	0.00868	mg/kg	04.10.2020 22:27	U	1
Toluene	108-88-3	<0.00449	0.0192	0.00449	mg/kg	04.10.2020 22:27	U	1
Ethylbenzene	100-41-4	<0.00591	0.0192	0.00591	mg/kg	04.10.2020 22:27	U	1
m,p-Xylenes	179601-23-1	<0.00655	0.0384	0.00655	mg/kg	04.10.2020 22:27	U	1
o-Xylene	95-47-6	<0.00655	0.0192	0.00655	mg/kg	04.10.2020 22:27	U	1
MTBE	1634-04-4	<0.00960	0.0192	0.00960	mg/kg	04.10.2020 22:27	U	1
Total Xylenes	1330-20-7	<0.00655	0.0192	0.00655	mg/kg	04.10.2020 22:27	U	1
Total BTEX		<0.00449	0.0192	0.00449	mg/kg	04.10.2020 22:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	04.10.2020 22:27	
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	04.10.2020 22:27	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS1 (4.5-5')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-003	Date Collected:	04.09.2020 13:00	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.262	3.87	0.262	mg/kg	04.15.2020 03:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	76-123	04.15.2020 03:34	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	04.15.2020 03:34	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS2 (1.5-2')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-004 Date Collected: 04.09.2020 13:20 Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**83.0**	10.2	0.360	mg/kg	04.13.2020 20:48		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:27 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	**4.95**	6.66	2.43	mg/kg	04.20.2020 15:56	J	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**14.0**	6.66	3.37	mg/kg	04.20.2020 15:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	87	%	40-130	04.20.2020 15:56	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00806	0.0178	0.00806	mg/kg	04.10.2020 22:52	U	1
Toluene	108-88-3	<0.00417	0.0178	0.00417	mg/kg	04.10.2020 22:52	U	1
Ethylbenzene	100-41-4	<0.00549	0.0178	0.00549	mg/kg	04.10.2020 22:52	U	1
m,p-Xylenes	179601-23-1	<0.00608	0.0357	0.00608	mg/kg	04.10.2020 22:52	U	1
o-Xylene	95-47-6	<0.00608	0.0178	0.00608	mg/kg	04.10.2020 22:52	U	1
MTBE	1634-04-4	<0.00891	0.0178	0.00891	mg/kg	04.10.2020 22:52	U	1
Total Xylenes	1330-20-7	<0.00608	0.0178	0.00608	mg/kg	04.10.2020 22:52	U	1
Total BTEX		<0.00417	0.0178	0.00417	mg/kg	04.10.2020 22:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	04.10.2020 22:52	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	04.10.2020 22:52	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS2 (1.5-2')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-004	Date Collected:	04.09.2020 13:20	Sample Depth:	1.5 - 2 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.264	3.89	0.264	mg/kg	04.15.2020 03:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	76-123	04.15.2020 03:59	
a,a,a-Trifluorotoluene	98-08-8	92	%	69-120	04.15.2020 03:59	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS2 (3.5-4')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-005 Date Collected: 04.09.2020 13:25 Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**482**	9.96	0.353	mg/kg	04.13.2020 21:00		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:30 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.42	6.66	2.42	mg/kg	04.20.2020 16:19	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	<3.37	6.66	3.37	mg/kg	04.20.2020 16:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	93	%	40-130	04.20.2020 16:19	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00904	0.0200	0.00904	mg/kg	04.10.2020 23:16	U	1
Toluene	108-88-3	<0.00468	0.0200	0.00468	mg/kg	04.10.2020 23:16	U	1
Ethylbenzene	100-41-4	<0.00616	0.0200	0.00616	mg/kg	04.10.2020 23:16	U	1
m,p-Xylenes	179601-23-1	<0.00682	0.0400	0.00682	mg/kg	04.10.2020 23:16	U	1
o-Xylene	95-47-6	<0.00682	0.0200	0.00682	mg/kg	04.10.2020 23:16	U	1
MTBE	1634-04-4	<0.0100	0.0200	0.0100	mg/kg	04.10.2020 23:16	U	1
Total Xylenes	1330-20-7	<0.00682	0.0200	0.00682	mg/kg	04.10.2020 23:16	U	1
Total BTEX		<0.00468	0.0200	0.00468	mg/kg	04.10.2020 23:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	04.10.2020 23:16	
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	04.10.2020 23:16	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS2 (3.5-4')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-005	Date Collected:	04.09.2020 13:25	Sample Depth:	3.5 - 4 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.239	3.53	0.239	mg/kg	04.15.2020 04:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	76-123	04.15.2020 04:23	
a,a,a-Trifluorotoluene	98-08-8	90	%	69-120	04.15.2020 04:23	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id: **CS2 (4.5-5')** Matrix: Soil Date Received:04.10.2020 11:14
Lab Sample Id: 658556-006 Date Collected: 04.09.2020 13:25 Sample Depth: 4.5 - 5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: JYM % Moisture:
Analyst: JYM Date Prep: 04.13.2020 11:49 Basis: Wet Weight
Seq Number: 3122881 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**714**	9.84	0.348	mg/kg	04.13.2020 21:37		1

Analytical Method: TPH DRO-ORO by SW-846 8015 Prep Method: SW3550
Tech: JUN % Moisture: 0
Analyst: ISU Date Prep: 04.17.2020 16:33 Basis: Dry Weight
Seq Number: 3123508 SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-DRO (C10-28)	68334-30-5	<2.43	6.66	2.43	mg/kg	04.20.2020 16:42	U	1
TPH-ORO (Oil Range Organics) - (C28-C35)	ORO	**6.40**	6.66	3.37	mg/kg	04.20.2020 16:42	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Pentacosane	629-99-2	88	%	40-130	04.20.2020 16:42	

Analytical Method: BTEX-MTBE by EPA 8021B Prep Method: SW5030B
Tech: MIT % Moisture: 0
Analyst: MIT Date Prep: 04.10.2020 13:00 Basis: Dry Weight
Seq Number: 3122769

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00823	0.0182	0.00823	mg/kg	04.10.2020 23:40	U	1
Toluene	108-88-3	**0.00546**	0.0182	0.00426	mg/kg	04.10.2020 23:40	J	1
Ethylbenzene	100-41-4	<0.00561	0.0182	0.00561	mg/kg	04.10.2020 23:40	U	1
m,p-Xylenes	179601-23-1	<0.00621	0.0364	0.00621	mg/kg	04.10.2020 23:40	U	1
o-Xylene	95-47-6	<0.00621	0.0182	0.00621	mg/kg	04.10.2020 23:40	U	1
MTBE	1634-04-4	<0.00911	0.0182	0.00911	mg/kg	04.10.2020 23:40	U	1
Total Xylenes	1330-20-7	<0.00621	0.0182	0.00621	mg/kg	04.10.2020 23:40	U	1
Total BTEX		**0.00546**	0.0182	0.00426	mg/kg	04.10.2020 23:40	J	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	04.10.2020 23:40	
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	04.10.2020 23:40	

Certificate of Analytical Results 658556

Terracon-Lubbock, Lubbock, TX

Marathon Madera

Sample Id:	**CS2 (4.5-5')**	Matrix:	Soil	Date Received:	04.10.2020 11:14
Lab Sample Id:	658556-006	Date Collected:	04.09.2020 13:25	Sample Depth:	4.5 - 5 ft
Analytical Method:	TPH GRO by EPA 8015 Mod.			Prep Method:	SW5030B
Tech:	MIT			% Moisture:	
Analyst:	MIT	Date Prep:	04.14.2020 14:10	Basis:	Wet Weight
Seq Number:	3123086			SUB:	T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.262	3.87	0.262	mg/kg	04.15.2020 04:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	76-123	04.15.2020 04:48	
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	04.15.2020 04:48	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 658556

Terracon-Lubbock

Marathon Madera

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3122881 Matrix: Solid Date Prep: 04.13.2020
MB Sample Id: 7701139-1-BLK LCS Sample Id: 7701139-1-BKS LCSD Sample Id: 7701139-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	110	110	109	109	80-120	1	20	mg/kg	04.13.2020 19:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3122881 Matrix: Soil Date Prep: 04.13.2020
Parent Sample Id: 658556-001 MS Sample Id: 658556-001 S MSD Sample Id: 658556-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.05	100	108	100	108	100	80-120	0	20	mg/kg	04.13.2020 19:59	

Analytical Method: **TPH DRO-ORO by SW-846 8015** Prep Method: SW3550
Seq Number: 3123508 Matrix: Solid Date Prep: 04.17.2020
MB Sample Id: 7701432-1-BLK LCS Sample Id: 7701432-1-BKS LCSD Sample Id: 7701432-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (C10-28)	<2.43	33.3	27.3	82	28.4	85	54-124	4	35	mg/kg	04.20.2020 12:57	
TPH-ORO (Oil Range Organics) - (C28	<3.37	33.3	38.4	115	29.1	87	63-142	28	35	mg/kg	04.20.2020 12:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Pentacosane	86		92		88		40-130	%	04.20.2020 12:57

Analytical Method: **TPH DRO-ORO by SW-846 8015** Prep Method: SW3550
Seq Number: 3123508 Matrix: Soil Date Prep: 04.17.2020
Parent Sample Id: 658742-001 MS Sample Id: 658742-001 S MSD Sample Id: 658742-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (C10-28)	<2.71	37.2	26.5	71	30.0	81	54-124	12	35	mg/kg	04.20.2020 14:04	
TPH-ORO (Oil Range Organics) - (C28	<3.76	37.2	28.3	76	30.4	82	63-142	7	35	mg/kg	04.20.2020 14:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Pentacosane	81		89		40-130	%	04.20.2020 14:04

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 658556

Terracon-Lubbock

Marathon Madera

Analytical Method: BTEX-MTBE by EPA 8021B — Prep Method: SW5030B
Seq Number: 3122769 — Matrix: Solid — Date Prep: 04.10.2020
MB Sample Id: 7701052-1-BLK — LCS Sample Id: 7701052-1-BKS — LCSD Sample Id: 7701052-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00904	2.00	1.88	94	1.92	96	55-120	2	20	mg/kg	04.10.2020 18:25	
Toluene	<0.00468	2.00	1.91	96	1.94	97	77-120	2	20	mg/kg	04.10.2020 18:25	
Ethylbenzene	<0.00616	2.00	1.89	95	1.93	97	77-120	2	20	mg/kg	04.10.2020 18:25	
m,p-Xylenes	<0.00682	4.00	3.79	95	3.88	97	78-120	2	20	mg/kg	04.10.2020 18:25	
o-Xylene	<0.00682	2.00	1.91	96	1.95	98	78-120	2	20	mg/kg	04.10.2020 18:25	
MTBE	<0.0100	2.00	1.97	99	2.04	102	70-120	3	20	mg/kg	04.10.2020 18:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		92		92		68-120	%	04.10.2020 18:25
a,a,a-Trifluorotoluene	99		90		89		71-121	%	04.10.2020 18:25

Analytical Method: BTEX-MTBE by EPA 8021B — Prep Method: SW5030B
Seq Number: 3122769 — Matrix: Soil — Date Prep: 04.10.2020
Parent Sample Id: 658556-001 — MS Sample Id: 658556-001 S — MSD Sample Id: 658556-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00853	1.89	1.77	94	1.87	97	54-120	5	25	mg/kg	04.10.2020 20:51	
Toluene	0.0134	1.89	1.78	93	1.88	97	57-120	5	25	mg/kg	04.10.2020 20:51	
Ethylbenzene	<0.00581	1.89	1.70	90	1.83	95	58-131	7	25	mg/kg	04.10.2020 20:51	
m,p-Xylenes	<0.00643	3.77	3.42	91	3.69	96	62-124	8	25	mg/kg	04.10.2020 20:51	
o-Xylene	<0.00643	1.89	1.70	90	1.82	95	62-124	7	25	mg/kg	04.10.2020 20:51	
MTBE	<0.00943	1.89	1.11	59	1.20	63	21-130	8	25	mg/kg	04.10.2020 20:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	94		98		68-120	%	04.10.2020 20:51
a,a,a-Trifluorotoluene	99		100		71-121	%	04.10.2020 20:51

Analytical Method: TPH GRO by EPA 8015 Mod. — Prep Method: SW5030B
Seq Number: 3123086 — Matrix: Solid — Date Prep: 04.14.2020
MB Sample Id: 7701318-1-BLK — LCS Sample Id: 7701318-1-BKS — LCSD Sample Id: 7701318-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.271	20.0	23.2	116	21.8	109	35-129	6	20	mg/kg	04.15.2020 00:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		140	**	145	**	76-123	%	04.15.2020 00:44
a,a,a-Trifluorotoluene	94		95		104		69-120	%	04.15.2020 00:44

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 658556

Terracon-Lubbock

Marathon Madera

Analytical Method: **TPH GRO by EPA 8015 Mod.** Prep Method: SW5030B

Seq Number: 3123086 Matrix: Soil Date Prep: 04.14.2020

Parent Sample Id: 658556-006 MS Sample Id: 658556-006 S MSD Sample Id: 658556-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.239	17.6	20.5	116	22.5	119	35-129	9	20	mg/kg	04.15.2020 05:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	146	**	155	**	76-123	%	04.15.2020 05:11
a,a,a-Trifluorotoluene	95		103		69-120	%	04.15.2020 05:11

MS/MSD Percent Recovery [D] = 100*(C-A) / B

Relative Percent Difference RPD = 200* | (C-E) / (C+E) |

LCS/LCSD Recovery [D] = 100 * (C) / [B]

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample

A = Parent Result

C = MS/LCS Result

E = MSD/LCSD Result

MS = Matrix Spike

B = Spike Added

D = MSD/LCSD % Rec

658556

CHAIN OF CUSTODY RECORD

658556

Terracon

Laboratory: Xenco Laboratories
Address: 6701 Aberdeen Avenue, Suite 9
Lubbock, TX 79424
Phone: (806) 794-1296
Contact:
PO/SO #:

Office Location Lubbock

Project Manager: Joseph Guesnier

Sampler's Name: Aaron Adams

Sampler's Signature

Project Number: AR197283

Project Name: Marathon Madera

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 1.1

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	TPH (EPA Method 8015 Extended)	Chlorides (EPA Method 300)	BTEX (EPA Method 8021B)	Lab Sample ID
S	04/09/20	1250	X		CS1 1.5'-2'	1.5'	2'	X	1	1	1	1
S	04/09/20	1255	X		CS1 3.5'-4'	3.5'	4'	X	1	1	1	2
S	04/09/20	1300	X		CS1 4.5'-5'	4.5'	5'	X	1	1	1	3
S	04/09/20	1315	X		CS2 1.5'-2'	1.5'	2'	X	1	1	1	4
S	04/09/20	1320	X		CS2 3.5'-4'	3.5'	4'	X	1	1	1	5
S	04/09/20	1325	X		CS2 4.5'-5'	4.5'	5'	X	1	1	1	6

TURNAROUND TIME ☑ Normal ☐ 48-Hour Rush ☐ 24-Hour Rush

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
	4-10-2020	11:14am		4/10/2020	11:14
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES:

E-MAIL RESULTS TO:
1. JOSEPH.GUESNIER@TERRACON.COM
2. BRYANT.MCBRAYER@TERRACON.COM

Matrix: WW-Wastewater W - Water S - Soil L - Liquid A - Air Bag C - Charcoal tube SL - Sludge
Container: VOA - 40 ml vial A/G - Amber Glass 1L 250 ml = Glass wide mouth P/O - Plastic or other _____

Inter-Office Shipment

IOS Number : 61952

Date/Time:	04.10.2020	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	770218362308	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
658556-001	S	CS1 (1.5-2')	04.09.2020 12:50	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	
658556-002	S	CS1 (3.5-4')	04.09.2020 12:55	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	
658556-003	S	CS1 (4.5-5')	04.09.2020 13:00	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	
658556-004	S	CS2 (1.5-2')	04.09.2020 13:20	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	
658556-005	S	CS2 (3.5-4')	04.09.2020 13:25	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	
658556-006	S	CS2 (4.5-5')	04.09.2020 13:25	E300_CL	Chloride by EPA 300	04.16.2020	05.07.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 04.10.2020

Received By:

Monica Benavides

Date Received: 04.11.2020

Cooler Temperature: 4.8

Inter-Office Shipment

IOS Number : 62127

Date/Time:	04.15.2020	Created by:	Brenda Ward	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Houston**	Air Bill No.:	770248303390	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
658556-001	S	CS1 (1.5-2')	04.09.2020 12:50	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	
658556-002	S	CS1 (3.5-4')	04.09.2020 12:55	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	
658556-003	S	CS1 (4.5-5')	04.09.2020 13:00	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	
658556-004	S	CS2 (1.5-2')	04.09.2020 13:20	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	
658556-005	S	CS2 (3.5-4')	04.09.2020 13:25	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	
658556-006	S	CS2 (4.5-5')	04.09.2020 13:25	SW8015DRO-ORO	TPH DRO-ORO by SW-846 8015	**04.16.2020**	04.23.2020	JKR	PHCD	

Inter Office Shipment or Sample Comments:

Relinquished By: Brenda Ward

Brenda Ward

Date Relinquished: 04.15.2020

Received By: Jhyrom Edralin

Jhyrom Edralin

Date Received: 04.16.2020

Cooler Temperature: 5.2

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 61952

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Brenda Ward **Date Sent:** 04.10.2020 01.54 PM

Received By: Lesia Minor **Date Received:** 04.11.2020 09.30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 04.11.2020

Monica Benavides

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 62127

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Brenda Ward **Date Sent:** 04.15.2020 04.05 PM

Received By: Jhyrom Edralin **Date Received:** 04.16.2020 09.30 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: _____ Date: 04.16.2020

Jhyrom Edralin

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 04.10.2020 11.14.00 AM

Work Order #: 658556

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Chlorides sent to Stafford
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brenda Ward Date: 04.10.2020
Brenda Ward

Checklist reviewed by: Jessica Kramer Date: 04.13.2020
Jessica Kramer

APPENDIX D – TERRACON STANDARD OF CARE, LIMITATION, AND RELIANCE

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Solaris Water Midstream, as reflected in our proposal (PA4197040).

Additional Scope Limitations

Development of this RAP is based upon information provided by the Client and Terracon's remediation and construction services line. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those by information provided by the Client. The data, interpretations, findings, and our recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Solaris Water Midstream, 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 Solaris Water Midstream and Terracon. Any unauthorized distribution or reuse is at Solaris Water Midstream sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Solaris Water Midstream and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Solaris Water Midstream and all relying parties unless otherwise agreed in writing.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 11196

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
SOLARIS WATER MIDSTREAM, LLC	907 Tradewinds Blvd, Suite B	Midland, TX79706	371643	11196	C-141

OCD Reviewer	Condition
ceads	In the future, if confirmation sampling deviates from 19.15.12 D.(1) NMAC, an alternative sampling plan request must be submitted to the division for review prior to the confirmation sampling event.