Form C-141
Page 3

State of New Mexico
Oil Conservation Division

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

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	230 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☒ Yes ☐ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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Page 4

State of New Mexico
Oil Conservation Division

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

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.

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

Signature: Date: 11/25/19

email: rob.kirk@solarismidstream.com Telephone: 432-203-9020

OCD Only

Received by: Date:

Form C-141
Page 5

State of New Mexico
Oil Conservation Division

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

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

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

Signature: Date: 11/25/2019

email: rob.kirk@solarismidstream.com Telephone: 432-203-9020

OCD Only

Received by: Date:

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date:

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

November 20, 2019
Terracon Project No. AR197283

Prepared for:
Solaris Water Midstream LLC
Midland, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

November 20, 2019

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: **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 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 recommends the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Release Investigation and RAP 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 7,600 cubic yards (cy) of chloride impacted material will be required to be excavated and disposed of at a permitted disposal facility under manifest.
- Following excavation to restrictive layer depths, vertical and horizontal delineation samples will be collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD remediation action level (RAL).
- Based on the anticipated depth to groundwater and pending the confirmed vertical delineation, it is anticipated that a remedial at depths greater than 4 ft. bgs, will be required. Terracon will further delineate 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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Release Investigation and Remedial Action Plan
Marathon Madera Line
Unit L1, Section 18, T26S, R35E
Lea County, New Mexico
Terracon Project No. AR197283
November 20, 2019

1.0 SITE DESCRIPTION

The site is comprised of an approximate 1 – acre 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 Diagram 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 4 in Appendix A. A map illustrating the site's location in reference to NMOCD Karst mapping database is presented as Figure 5 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is 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 RAP 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.

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
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Rob Kirk (Solaris) on September 9, 2019.	

Required Information	Site and Release information	
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 create a scope of work for the remediation of impacts above NMOCD regulatory limits.

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 prodimently 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), 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
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
	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
	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
	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
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 sample 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 from within the release margins.

8.1 Release Margins Data Evaluation

8.1.1 Reclamation Assessment Data Evaluation

Benzene was not detected above applicable laboratory SDLs in the soil samples analyzed within the release margins. The detected benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 1.

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 1.

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 1.

Total TPH was detected above applicable laboratory SDLs in six of the 23 soil samples analyzed within the release margins. The Total 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 Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1.

8.1.2 Remediation Assessment Data Evaluation

At each of the soil boring locations, a 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

Benzene, Total BTEX, and TPH were not detected above applicable laboratory SDLs in the soil samples analyzed within the background samples. The detected benzene concentrations did not exceed the applicable NMOCD RAL's for benzene, Total BTEX, and TPH, as summarized in Table 1.

Chloride was detected above applicable laboratory SDLs in each of the six soil samples analyzed within the background samples. The chloride concentrations ranged from 8.52 mg/kg in soil sample HA-7 (1.5 to 2.0 ft bgs) to 8.85 mg/kg in soil sample HA-8 (0.5 to 1.0 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 1.

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 compotent rock, further analytical evaluation of deeper horizons appears unwarranted at this time.

9.0 SOIL RECLAMATION AND REMEDIATION

Soil exhibiting concentrations above applicable NMOCD regulations will be 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 7,600 cy of chloride impacted

material will be required to be 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 will be 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 recommends 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. Terracon will additionally include photo logs of the hydro-vacing activities with the closure report.

Based on the anticipated depth to groundwater, it is anticipated that a remedial response will not be warranted within the soils at depths greater than 4 ft. bgs.

9.3 Soil Management

The selected method of soil management is removal and disposal at a NMOCD-approved facility. Excavated soils will be transported by truck (20 cubic yard capacity) and disposed of at either the R360 Disposal Facility located in Halfway, New Mexico or the Lea Land Disposal Facility located in Lea County, New Mexico, based on landfill approvals.

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 will be terminated when the confirmation samples indicate that the above objectives have been completed within the reclamation and remedial depth designations. The intent of the reclamation and remedial approaches are 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.

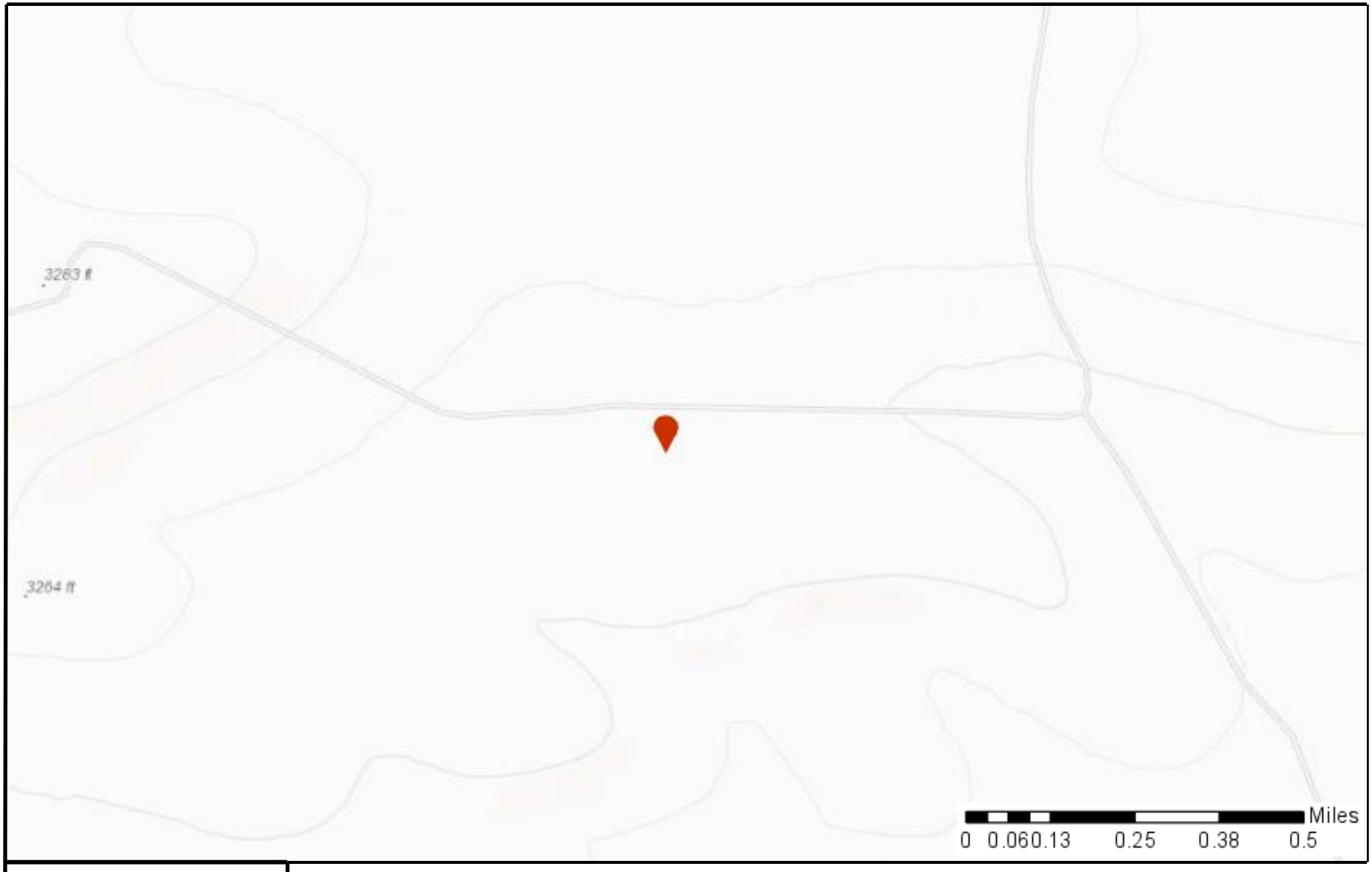
10.2 Final Closure

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

Upon completion of remedial activities, a final report summarizing actions taken to mitigate environmental damage related to the release will be 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

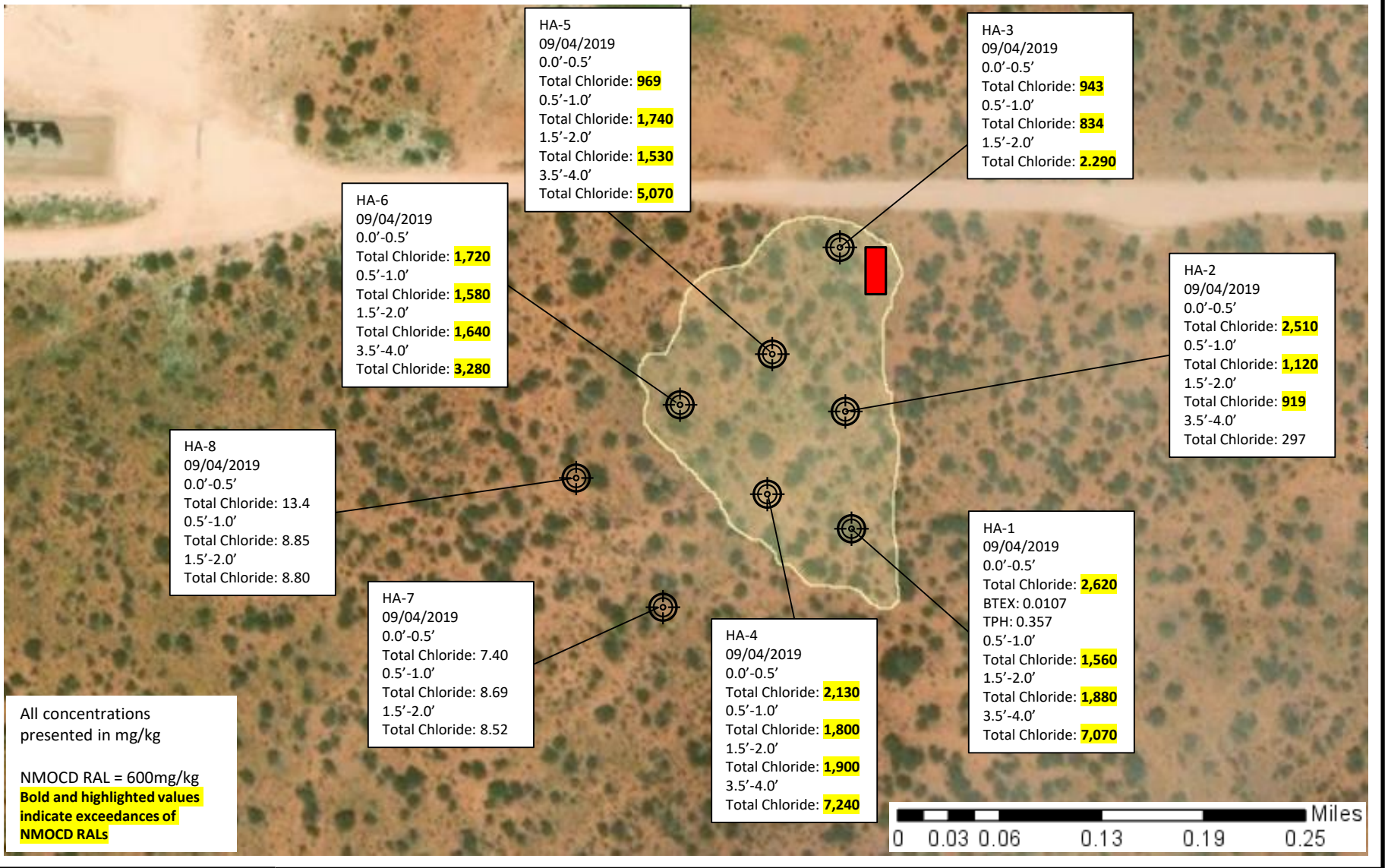
Terracon
Consulting Engineers & Scientists
5827 50th Street, Suite 1 Lubbock, Texas 79424
PH. (806) 300 - 0140 FAX. (806) 797 - 0947

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

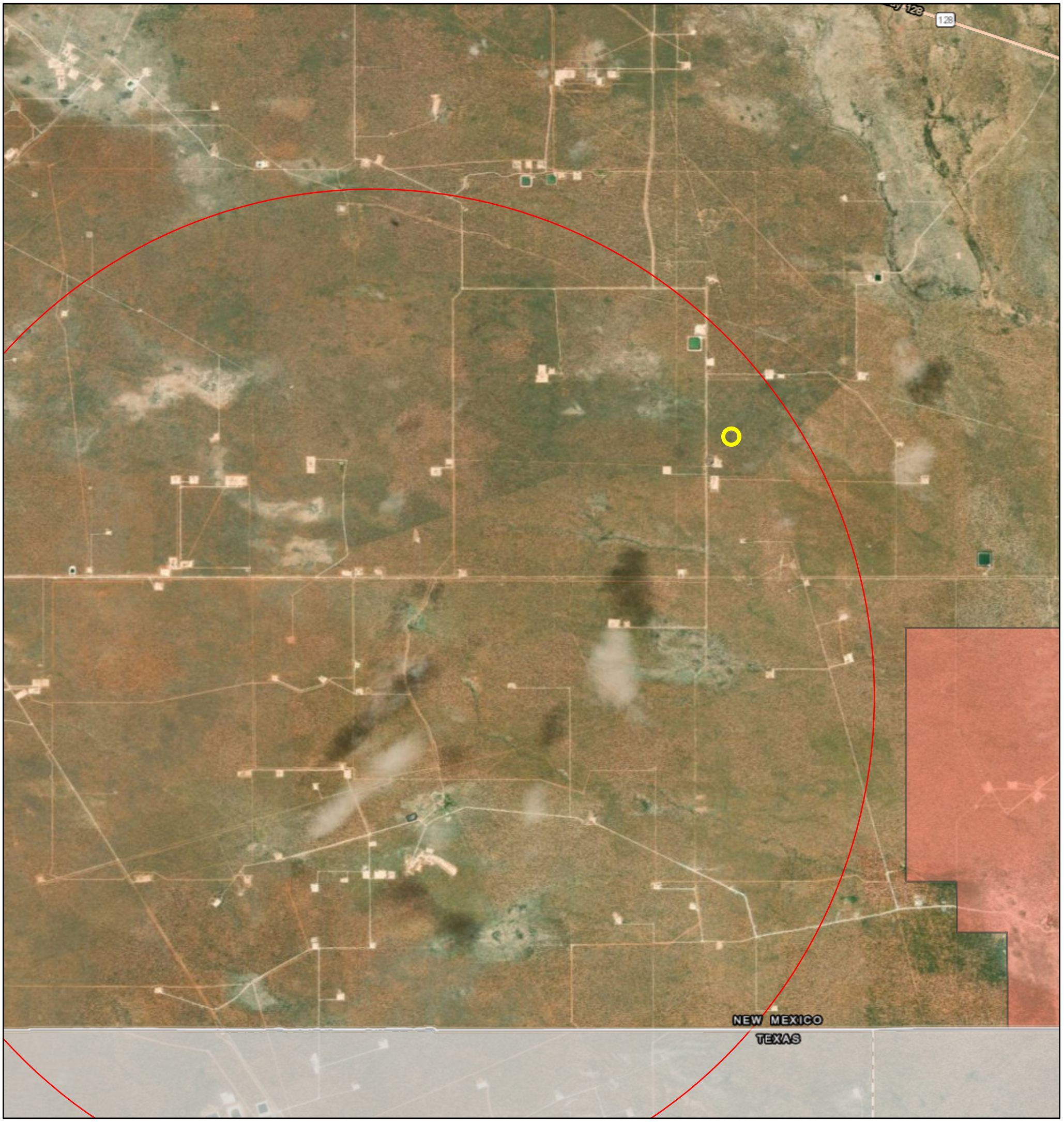
Figure 3 – Contamination Map

Marathon Madera

32.04783408, -103.41205065

Lea County, New Mexico

Figure 4 - NMOSE POD Location Map



11/18/2019 11:39:03 AM

Water Right Regulations

Critical Management Area - Guidelines

OSE District Boundary

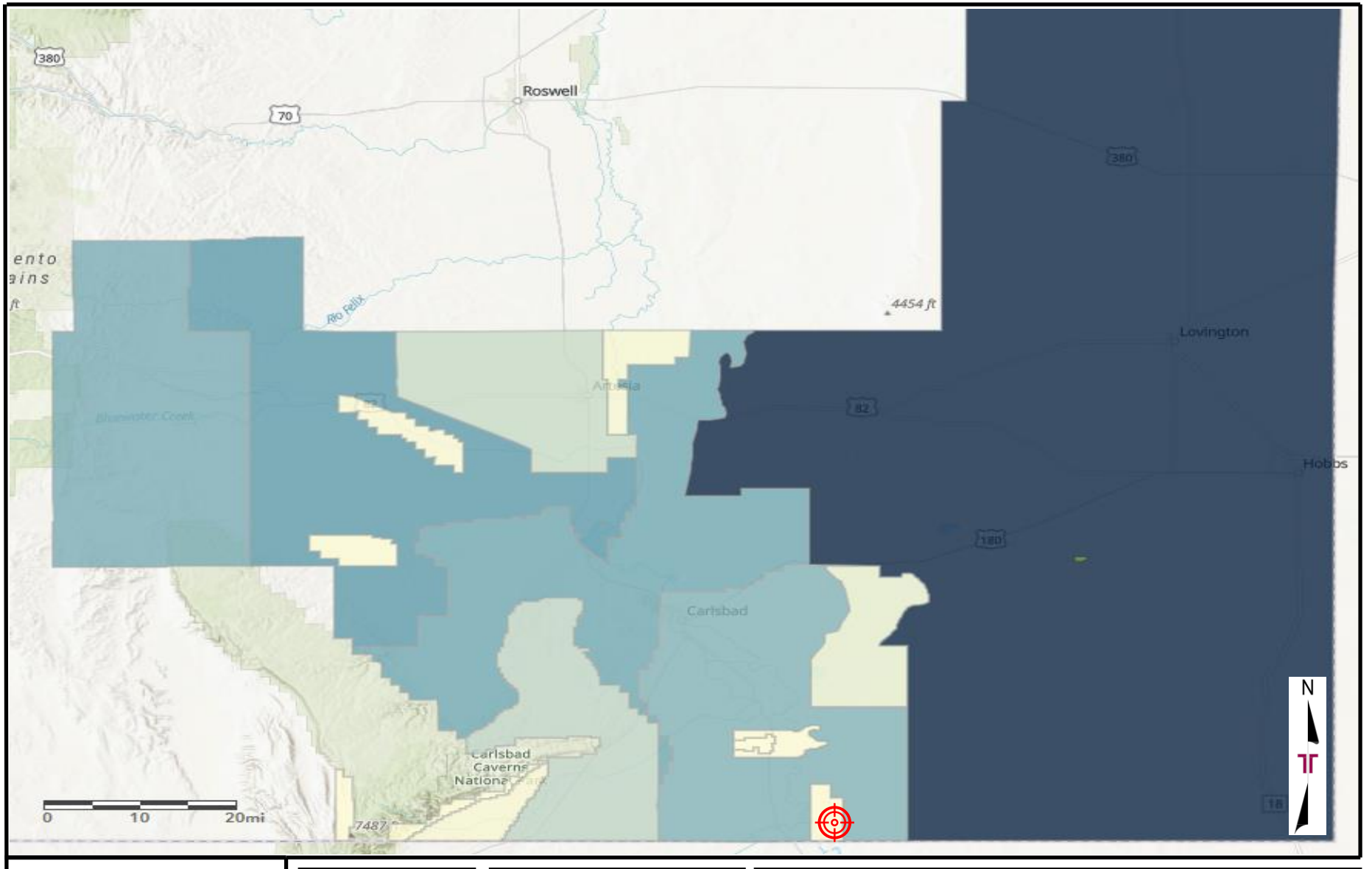
1:72,224

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



Area
> 4,639,520,691
2,329,282,660
< 19,044,631

Marathon Madera Line

Project No.	AR197257
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 5 - Cave Karst Public UCP

Marathon Madera Line

32.0478340°, -103.4120526°

Lea County, New Mexico

TABLE 1
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	MRO	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**				
	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 1
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	MRO	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

< = 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 1
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	MRO	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)
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 1
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	MRO	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
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

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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

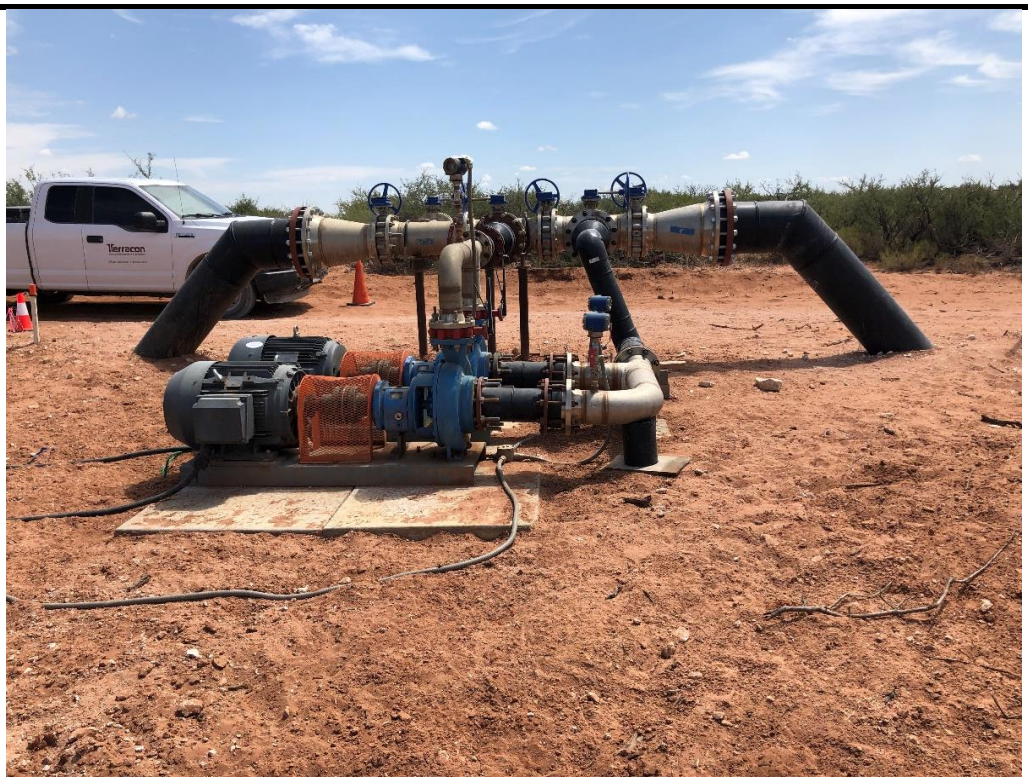

PHOTO 1: View of release point, facing East. 8/22/2019

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

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		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

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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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		636281-013		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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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													
	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											
	Lab Id:	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		

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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.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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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

CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Marathron Madera Line

Project ID:	*AR197283*	Report Date:	*12-SEP-19*
Work Order Number(s):	*636281*	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	

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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

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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

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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	

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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	

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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:	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	

Certificate of Analytical Results 636281

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	

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:	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 — [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

636281

636281

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: Joseph Guesnier
Sampler's Signature:

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~~	JG 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 3C281

2.1/2.7

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: Joseph Guesnier
Sampler's Signature:

Project Number: AR197283
Project Name: Marathon Madera Line

ANALYSIS REQUESTED

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

Page 2 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	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)~~ TG	~~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)~~ TG	~~3.5'~~	~~4'~~		~~X~~			~~X~~				

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		9/6/19	4:55

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
Lab# From: **Lubbock**
Lab# To: **Houston**
Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 776194121479
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
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
Lab# From: **Lubbock**
Lab# To: **Houston**

Created by: Brenda Ward
Delivery Priority:
Air Bill No.: 776194121479

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
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

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: _____ 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

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.