Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	nRM2019860925
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☑ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Rob Kirk Title: VP & GM, HSE & Compliance

Signature: RP Kirk Date: September 8, 2021

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

OCD Only

Received by: Chad Hensley Date: 10/05/2021

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

Closure Approved by: Chad Hensley Date: 10/05/2021

Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Amended Closure Report

General Site Information:
Cabo Wabo Line Release
NMOCD Reference No. nRM2019860925

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

Depth to Ground Water
60 feet below grade surface

Distance to Nearest Surface Water
Pecos River (South-eastern Eddy County, NM), approximately 2.25 miles to the Northwest

Driving Directions
From Hwy 285, and Pipeline Road go east 4.26 mi, northeast on Pipeline Road #1 1.84 mi., turn north and go 3 mi., then 0.02 mi east to Pipe location.

Legal Description
Unit D, Section 22, T25S, R29E, Eddy County, New Mexico

September 8, 2021
Terracon Project No. AR207115

Prepared for:
Solaris Water Midstream LLC
Midland, Texas

Prepared by:
Terracon Consultants, Inc.
Lubbock, Texas

September 8, 2021

Terracon

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: **Amended Closure Report**
Cabo Wabo Line Release
Unit D, Section 22, Township 25 South, Range 29 East
Eddy County, New Mexico
NMOCD Reference No. nRM2019860925
Terracon Project No. AR207115

Dear Mr. Kirk,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Amended Closure Report for the site referenced above. The Release Investigation and Closure Report 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. The Closure Report presents a description of the release incident and OCD notification, site characteristics, potential receptors, and remedial actions required for the site. Additionally, Terracon included the results of the supplemental perimeter sampling that was requested by the NMOCD following the submission of the original closure report. Terracon developed this Amended Closure Report in general accordance with our Master Services Agreement dated July 3, 2019.

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
Staff Scientist
Lubbock

Erin Loyd, P.G. (TX)
Principal
Office Manager – Lubbock

Terracon

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Unit D, Section 22, T25S, R29E
Eddy County, New Mexico
NMOCD Reference No. nRM2019860925
Terracon Project No. AR207115
September 8, 2021

1.0 SITE DESCRIPTION

The site is comprised of approximately 0.25 acres of native pastureland and pipeline right of way impacted by a produced water release, with the majority of the release residing within the pipeline right-of-way, with a portion extending into the pastureland. The site is within the Unit Letter D, Section 22, Township 25 South, Range 29 East, Eddy County, New Mexico. The Cabo Wabo Line Release consists of rights-of-way for pipelines, and native pasture land, with the origin of the release being a 16-inch pipe that was struck during excavation. A Topographic Map illustrating the site location is included in 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 about the New Mexico Oil Conservation Division (NMOCD) Karst mapping database is presented in Figure 5 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is to investigate and remediate the magnitude and extent of the documented release, remediation, and restoration and develop a Closure Report in accordance with the NMOCD requirements that detail site closure activities to be completed. This Closure Report addresses the June 26, 2020 release of approximately 23 barrels (bbls) of produced water originating from a pipeline struck during excavation.

3.0 INTRODUCTION AND NOTIFICATION

The following table provides detailed information regarding June 26, 2020, produced water release at the Cabo Wabo line release Site in Eddy County, New Mexico:

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

Required Information	Site and Release information	
NMOCD Notification	Notice of the release was provided to the NMOCD via email by Rob Kirk (Solaris) on June 23, 2020	
Facility description	The Cabo Wabo line release is in Eddy County, New Mexico. It is an approximate 0.25-acre area located within Unit D, Section 22, Township 25 South, Range 29 East, approximately 8.8 miles southeast of Malaga, New Mexico. The site was developed as a pipeline right-of-way.	
Time of incident	June 23, 2020, discovered at 11:00 a.m.	
Discharge event	A contractor was installing a connection to an active in-use line at the Cabo Wabo pipeline construction project. They report using a Hydro-Vac to expose the line. An operator then chose to use a track loader to expose a section of the line down the pipeline and struck the active 16-inch pipe causing the release. The release stayed in the working area, approx. 8 feet wide by 20 feet long. Site illustrated in Figure 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the pipeline and affected the surface and to depth within the open excavation.	
Quantity of spilled material	Total Fluids: 23 bbls	Produced Water: 23 bbls
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the northeast.	
Immediate corrective actions	The pipeline was shut in immediately, and the line was 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 and repairing the pipeline that was struck. 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 (C-02371) was identified at 0.56 miles of the site with a stated depth of 60 ft. below-grade surface (bgs). NMOSE registered wells within 3 miles of the site have a minimum depth to groundwater of 30 feet bgs, with a maximum reported depth of 60 feet bgs. Based on the review of NMOSE available documentation, the depth to groundwater at the site is anticipated to be deeper than 50 feet bgs.

5.2 Distance to Nearest Potable Water Well

Based on a 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 Pecos River (South-eastern Eddy County, NM), approximately 2.25 miles to the northwest of the site.

5.4 Soil / Waste Characteristics

Soils at the site are mapped as Tonuco loamy sand, 0 to 3 percent slopes, eroded, 0 to 5 inches loamy sand, 5 to 15 inches loamy fine sand, 15 to 19 inches indurated. This soil has a surface layer of loamy sand. Restrictive features are present at 6 to 20 inches bgs resulting in the formation being categorized with a very 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 moderate level Karst risk area. Based on on-site observations within the extent of the release margins, the potential for Karst formations in this specific area is of low potential. A layer of solid competent rock was encountered from 12 to 20 inches bgs within the release margins. The full extent of release quantities and excavation activities did extend greater than 48 inches bgs.

5.6 Groundwater Quality

Groundwater quality at the site is predominantly used for livestock production and the nearest well (C-02371) is being utilized for livestock 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 the applicability of these guidance documents to the site-specific characteristics associated with the Cabo Wabo Line release.

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:

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	10,000 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 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's July 13, 2020, and July 22, 2020 release investigation activities, a total of 24 soil samples were collected from the site, within the inferred release margins, and analyzed for BTEX, chloride, and/or TPH.

7.1 Release Margins Data Evaluation

7.1.1 Reclamation Assessment Data Evaluation

During Terracon's July 13, 2020, and July 22, 2020 release investigation activities, a total of 21 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. This evaluation accounts for all soil samples at depths from surface to 4 ft bgs.

Benzene was detected above applicable laboratory SDLs in one of the 21 soil samples analyzed within the release margins. The benzene concentration was 0.00216 mg/kg in soil sample HAW-2 (3.5 to 4.0 ft bgs). The detected benzene concentration did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in two of the 21 soil samples analyzed within the release margins. The Total BTEX concentration ranged from 0.00213 mg/kg in soil sample SP-2 (Stockpile #2) to 0.0169 mg/kg in soil sample HAW-2 (3.5 to 4.0 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 21 soil samples analyzed within the release margins. The chloride concentrations ranged from 53.2 mg/kg in soil sample SP-2 (Stockpile #2) to 33,800 mg/kg in soil sample HAW-2 (3.5 to 4.0 ft bgs). Seventeen of the 21 soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in the 21 soil samples analyzed within the release margins. 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 2.

7.1.2 Remediation Assessment Data Evaluation

During the July 13, 2020 sampling event soil samples were collected from the open excavation and allowed for samples at depths greater than 4 ft bgs. In contrast during the July 22, 2020 sampling event the excavation had been backfilled and, soil samples were not obtained at depths beyond 4 ft bgs, due to encountering a restrictive formation at depth.

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

Total BTEX was not detected above applicable laboratory SDLs in the three soil samples analyzed within the release margins. Total BTEX did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the soil samples analyzed within the release margins. The chloride concentrations ranged from 333 mg/kg in soil sample HA-3 (4.5 to 5.0 ft bgs) to 11,200 mg/kg in soil sample HA-2 (5.5 to 6.0 ft bgs). One of the three soil samples analyzed within the release margins did exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 10,000 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in the three soil samples analyzed within the release margins. 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 2.

7.2 Background Data Summary

Background samples were not collected during the initial site investigations and will be collected during remediation activities. So currently, chloride, benzene, Total BTEX, and TPH are unknown for the non-affected soils at the site.

7.3 Release Investigation Data Summary

Based on the review of the above release investigation analytical results, the areas within the release margins exhibit concentrations of chloride in multiple locations. Based on these

exceedances above NMOCD RALs, Sections 9.0 and subsequent detail recommended remedial response actions to be implemented at the site.

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

7.4 Confirmation Margins Data Evaluation

During Terracon's confirmation sampling on April 14, 2020, and May 03, 2021, composite soil samples were taken around the base of the open excavation, and additional composite soil samples were taken from the walls of the excavation, in conjunction with and post reclamation activities. Additional confirmation samples were taken from the drainage area to confirm the natural attenuation of the drainage area. Resulting in 20 total soil samples being collected from the site and analyzed for BTEX, chloride, and TPH.

7.4.1 Confirmation Assessment Data Evaluation

Benzene was detected above applicable laboratory SDLs in one of the 18 soil samples analyzed within the release margins. The Benzene concentration was 0.00751 mg/kg in soil sample HA-6.1 (surface to 1 ft. bgs). The samples collected within the release margins did not exhibit Benzene concentrations above NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was detected above applicable laboratory SDLs in one of the 18 soil samples analyzed within the release margins. Total BTEX concentration was 0.0252 mg/kg in soil sample HA-6.1 (surface to 1 ft. bgs). The samples collected within the release margins did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in any of the 18 soil samples analyzed within the release margins. Total TPH concentrations did not exceed the applicable NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in each of the 18 soil samples analyzed within the release margins. The Chloride concentrations ranged from 9.84 mg/kg in soil sample HA-2.1 (surface to 1 ft bgs) to 1,590 mg/kg in soil sample CS-1 (2.5 to 3 ft bgs). The samples analyzed within the release margins did exhibit chloride concentrations above the applicable NMOCD RAL for chloride concentrations of 600 mg/kg (soils from the Surface to 4 ft. Below Grade Surface) and chloride concentrations of 10,000 mg/kg (soils 4 ft. Below Grade Surface) in one of the 20 soil samples, as summarized in Table 2. During the second confirmation sampling event,

the one soil sample CS-1 that was previously above the NMOCD RAL was confirmed below the NMOCD RAL, as summarized in Table 2.

7.4.2 Confirmation Data Summary

Based on the review of the above confirmation analytical results, the areas within and surrounding the remediation do not exhibit concentrations above the NMOCD RAL for benzene, Total BTEX, or Total TPH. Chloride concentrations no longer exhibit levels above the NMOCD RAL. Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail recommended closure of response actions to be implemented at the site. Terracon recommends closing the incident associated with the above-mentioned site.

7.5 Supplemental Margins Data Evaluation

During Terracon's confirmation sampling on August 18, 2021, and August 30, 2021, composite soil samples were taken around the perimeter of an unconfirmed flow path northeast of the excavation site. These additional confirmation samples were taken from the perimeter of the drainage area to confirm the natural attenuation of the drainage area, and no residual impacts remined outside of the assumed flow path. The 15 total soil samples collected from the site were analyzed for BTEX, chloride, and TPH.

7.5.1 Supplemental Assessment Data Evaluation

Benzene was not detected above applicable laboratory SDLs in any of the 15 soil samples analyzed from the perimeter of the release margins. The samples collected outside the release margins did not exhibit Benzene concentrations above NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 2.

Total BTEX was not detected above applicable laboratory SDLs in any of the 15 soil samples analyzed from the perimeter of the release margins. The samples collected outside the release margins did not exceed the applicable NMOCD RAL for Total BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in any of the 15 soil samples analyzed from the perimeter of the release margins. Total TPH concentrations did not exceed the applicable NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 2.

Chloride was detected above applicable laboratory SDLs in eleven of the 15 soil samples analyzed within the release margins. The Chloride concentrations ranged from 11.6 mg/kg in soil sample WB-3 (surface to 0.5 ft bgs) to 5,850 mg/kg in soil sample WB-2 (surface to 0.5 ft bgs). The samples analyzed from the perimeter of the release margins did exhibit chloride concentrations above the applicable NMOCD RAL for chloride concentrations of 600 mg/kg (soils

from the Surface to 4 ft. Below Grade Surface), as summarized in Table 2. During a second confirmation sampling event to confirm the exceedances, the two soil sample locations of EB-3 and WB-2 that were previously above the NMOCD RAL were confirmed below the NMOCD RAL, as summarized in Table 2.

7.5.2 Supplemental Data Summary

Based on the review of the above supplemental analytical results, the areas surrounding the drainage area northeast of the remediation do not exhibit concentrations above the NMOCD RAL for benzene, Total BTEX, and Total TPH. Chloride concentrations no longer exhibit concentrations above the NMOCD RAL. Based on these results below NMOCD RALs, Sections 9.0 and subsequent detail recommended closure of response actions to be implemented at the site. Terracon recommends beginning the restoration of the above-mentioned site and disposing of the stockpiled material.

8.0 FDEMI SUPPLEMENTAL INVESTIGATION

Geophysical exploration surveys were conducted on September 30, 2020, October 8, 2020, and November 10, 2020, at the Solaris Water Midstream LLC Cabo Wabo Release site. Frequency Domain Electromagnetic Induction (FDEMI) was utilized to evaluate shallow soil conditions for the presence of elevated soil conductivity that may be related to the produced water release incident that occurred on June 23, 2020. A full report on the FDEMI Supplemental Investigation is included in the Geophysical Survey in Appendix C.

8.1 Findings and Conclusions

The interpolated EM results were categorized on Exhibit 2 using a color scale based upon the readings – lower values are shown with green shading and higher values are shown with red shading. The orange to red areas is interpreted to correspond with soils that may have been affected by brine. At these areas white granular residue, suspected to be dried brine, was visible in some locations. The areas with the greatest conductivity were detected at the west portion of the surveyed area that coincides with the release point, and southeast portions of the survey area correlate with a brine water holding pond off of the Solaris opperated property. The conductivity readings ranged from 1 to 204 mS/m. A full report on the FDEMI Supplemental Investigation is included in the Geophysical Survey in Appendix C.

9.0 SOIL RECLAMATION AND REMEDIATION

Soil exhibiting concentrations above applicable NMOCD regulations were remediated, reclaimed, and managed according to the criteria described below which is intended to protect freshwaters, 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 800 cy of chloride impacted material were excavated and disposed of at a permitted disposal facility under manifest. Additionally, if competent rock had been encountered a hydro-vac truck would have utilized to remove all remaining contaminants from the rock's surface.

9.2 Remediation Response Objectives

Following excavation to recommended Reclamation depths, horizontal delineation samples were collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD RALs. Additional samples were collected from the naturally occurring drainage area to confirm the natural attenuation of the previously chloride impacted area.

9.3 Soil Management

The selected method of soil management was removal and disposal at an NMOCD-approved facility. Excavated soils were transported by truck (20 cubic yard capacity) and disposed of at either the R360 Disposal Facility located in Halfway, 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 had been terminated when the confirmation samples indicated that the above objectives have been completed within the reclamation and remedial depth designations. The reclamation and remedial approaches intend 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 freshwater, public health, and the environment.

10.2 Final Closure

Upon termination of remedial actions (Sections 6 and 9), the area of the release was 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 has been provided to NMOCD for approval.

APPENDIX A – FIGURES AND TABLES

Figure 1 – Topographic Map

Figure 2 – Site Map

Figure 3 – Contamination Concentration Map

Figure 4 – Confirmation Concentration Map

Figure 4.1 – Supplemental Confirmation Map

Figure 5 – NMOSE POD Location Map

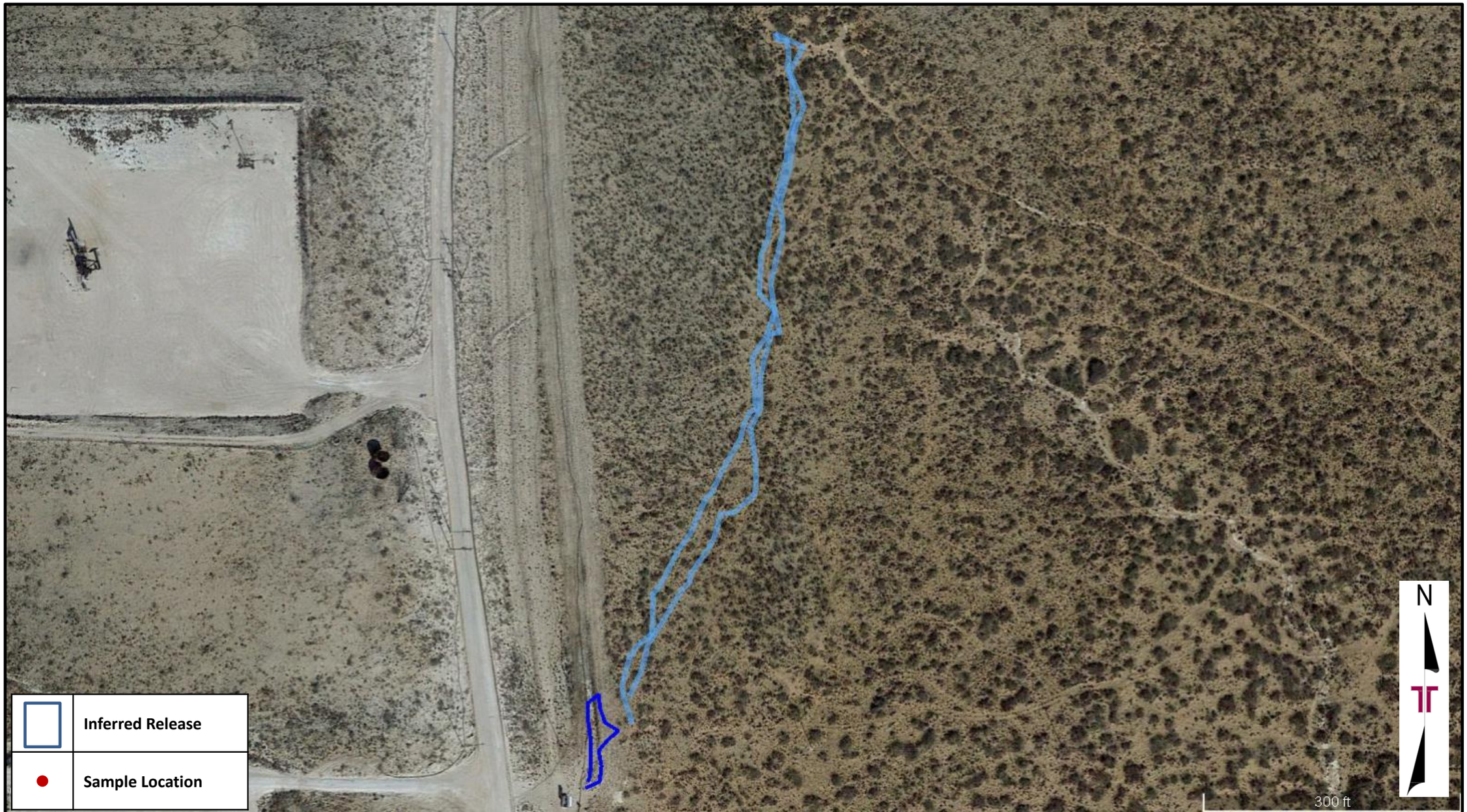
Figure 6 – Cave Karst Public UCP

Project No.	AR207115
Scale:	As Shown
Source:	USGS
Date:	2014

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 1 – Topographic Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico

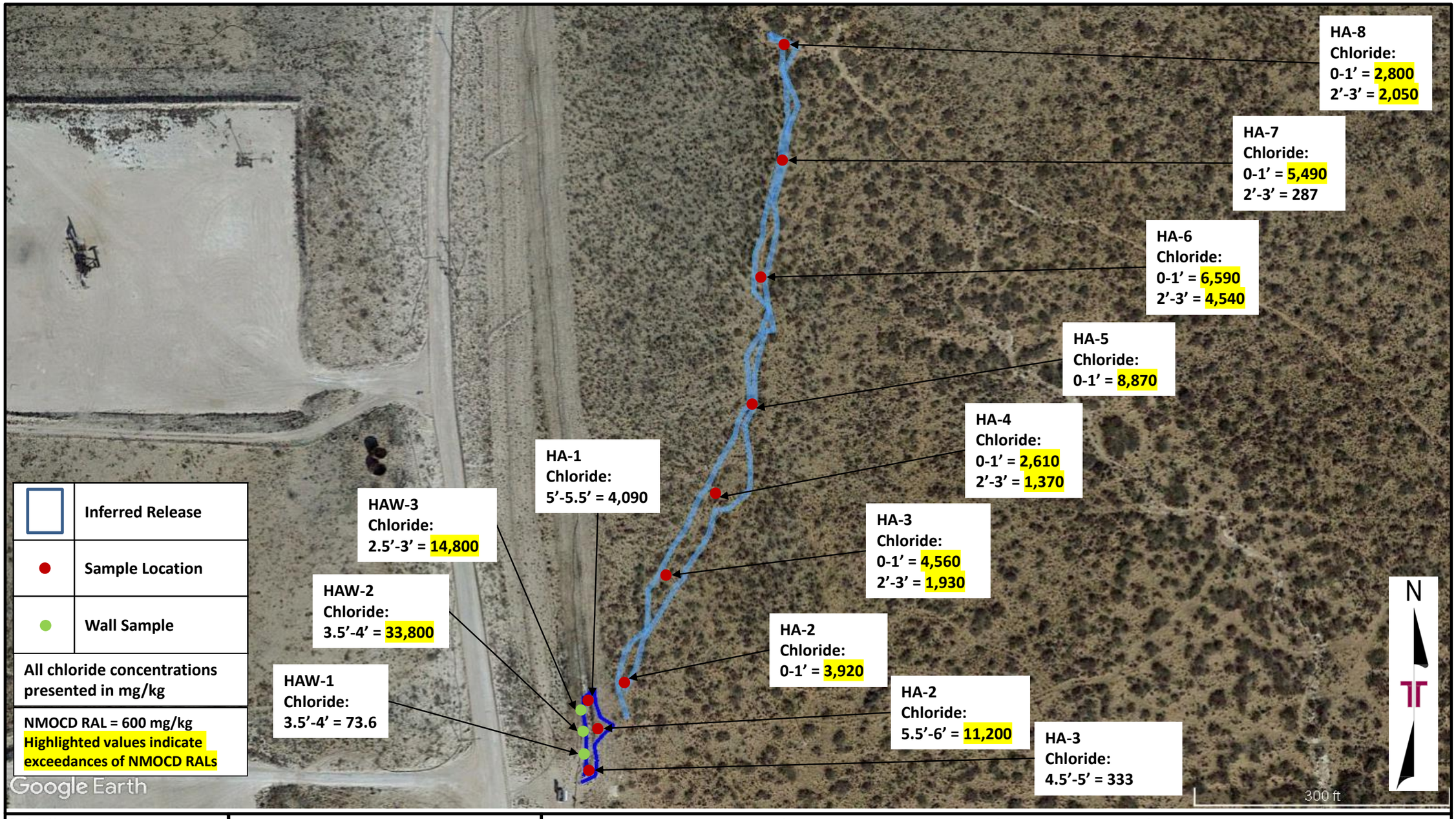


Project No.	AR207115
Scale:	As Shown
Source:	Google Earth
Date:	2018

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 2 – Site Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico

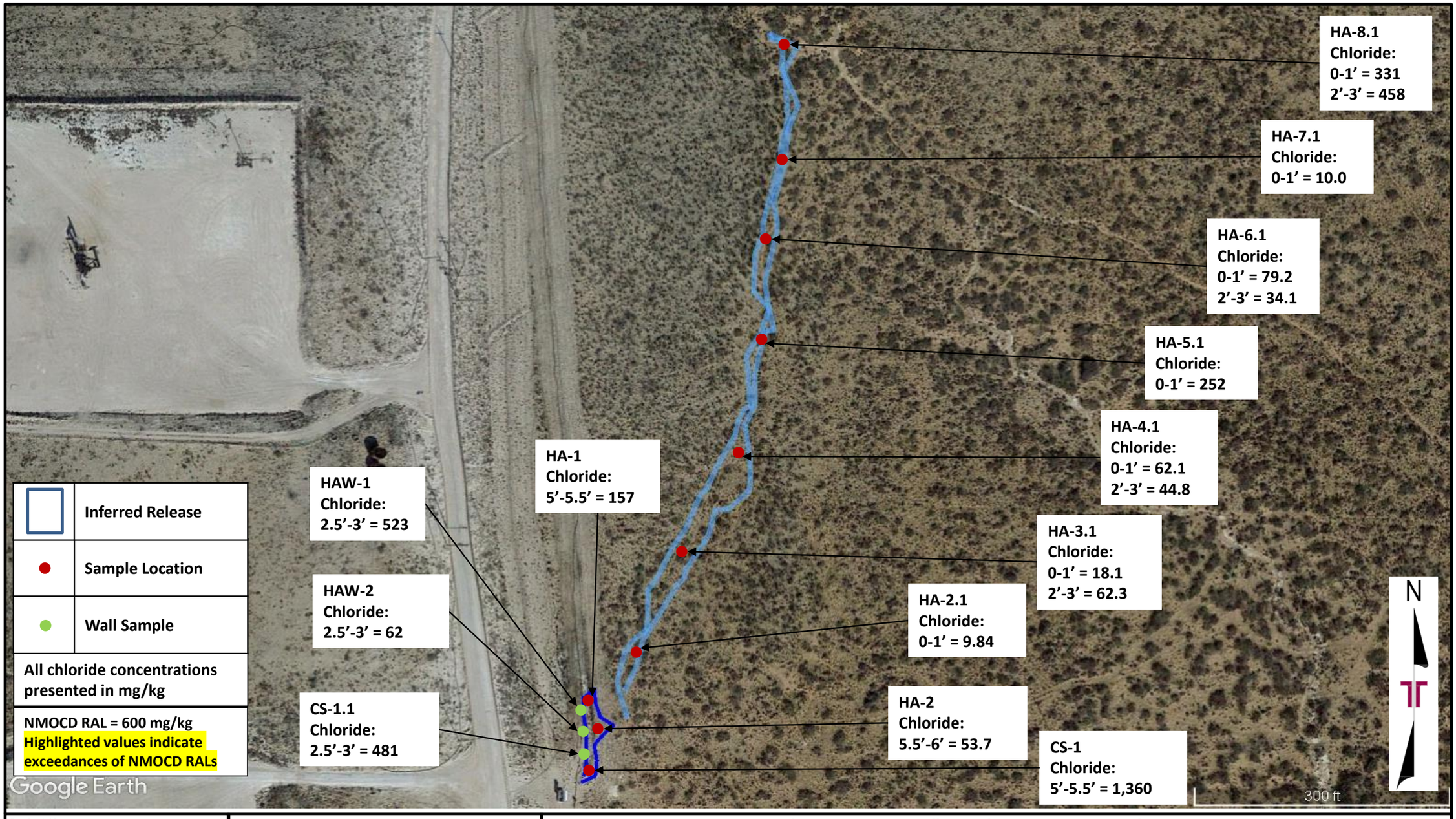


Project No.	AR207115
Scale:	As Shown
Source:	Google Earth
Date:	2018

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 3 – Contamination Concentration Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico



Project No.	AR207115
Scale:	As Shown
Source:	Google Earth
Date:	2018

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
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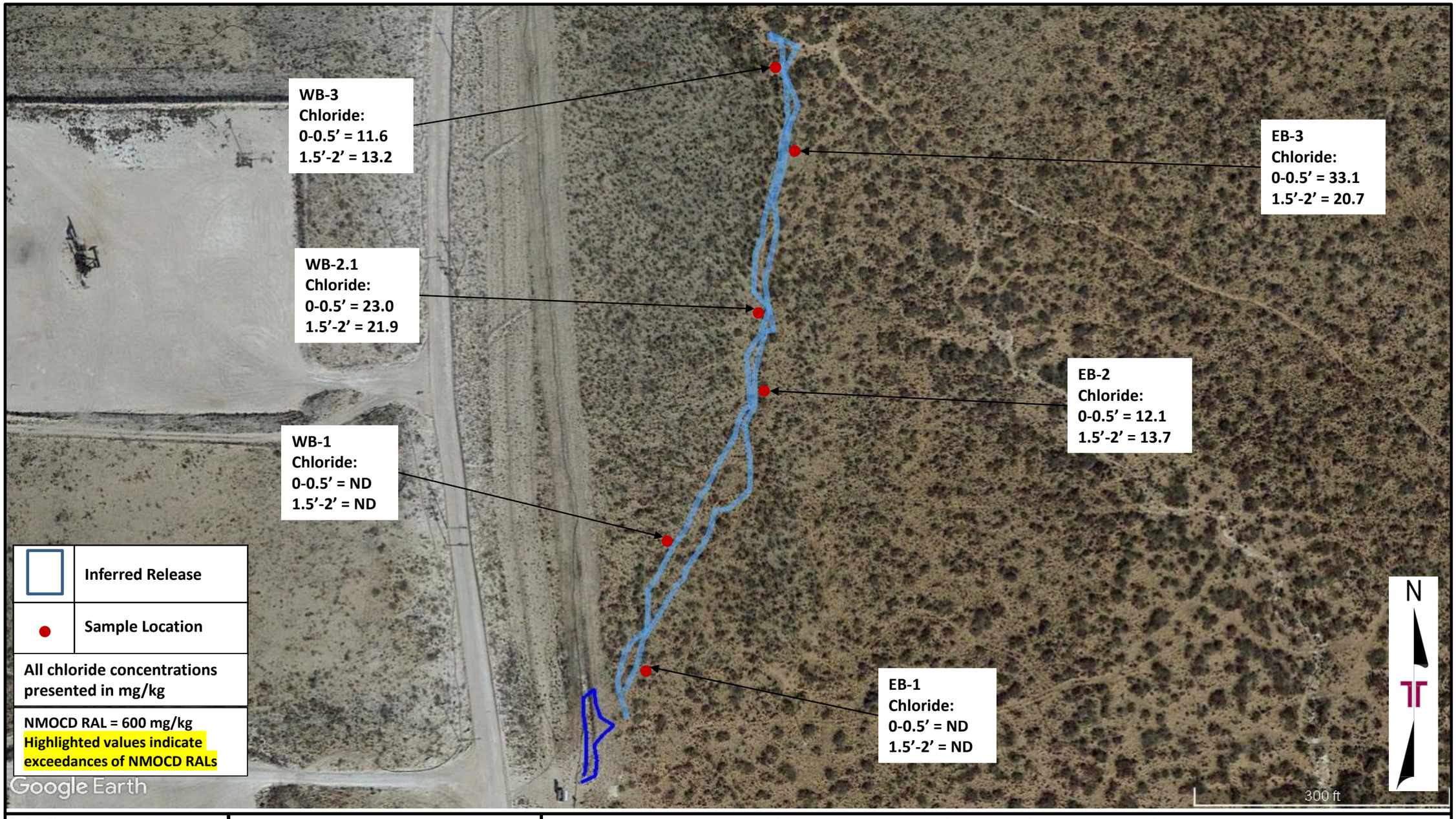
Figure 4 – Confirmation Concentration Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico



Project No.	AR207115
Scale:	As Shown
Source:	Google Earth
Date:	2018

Terracon
Consulting Engineers & Scientists
5847 50th St. Lubbock, Texas 79424
PH. (806) 300-0104 FAX. (806) 797 0947

Figure 4.1 – Supplemental Concentration Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico

Figure 5 - NMOSE POD Location Map

11/13/2020 11:56:06 AM

GIS WATERS PODs

- Active
- Pending
- OSE District Boundary
- SiteBoundaries

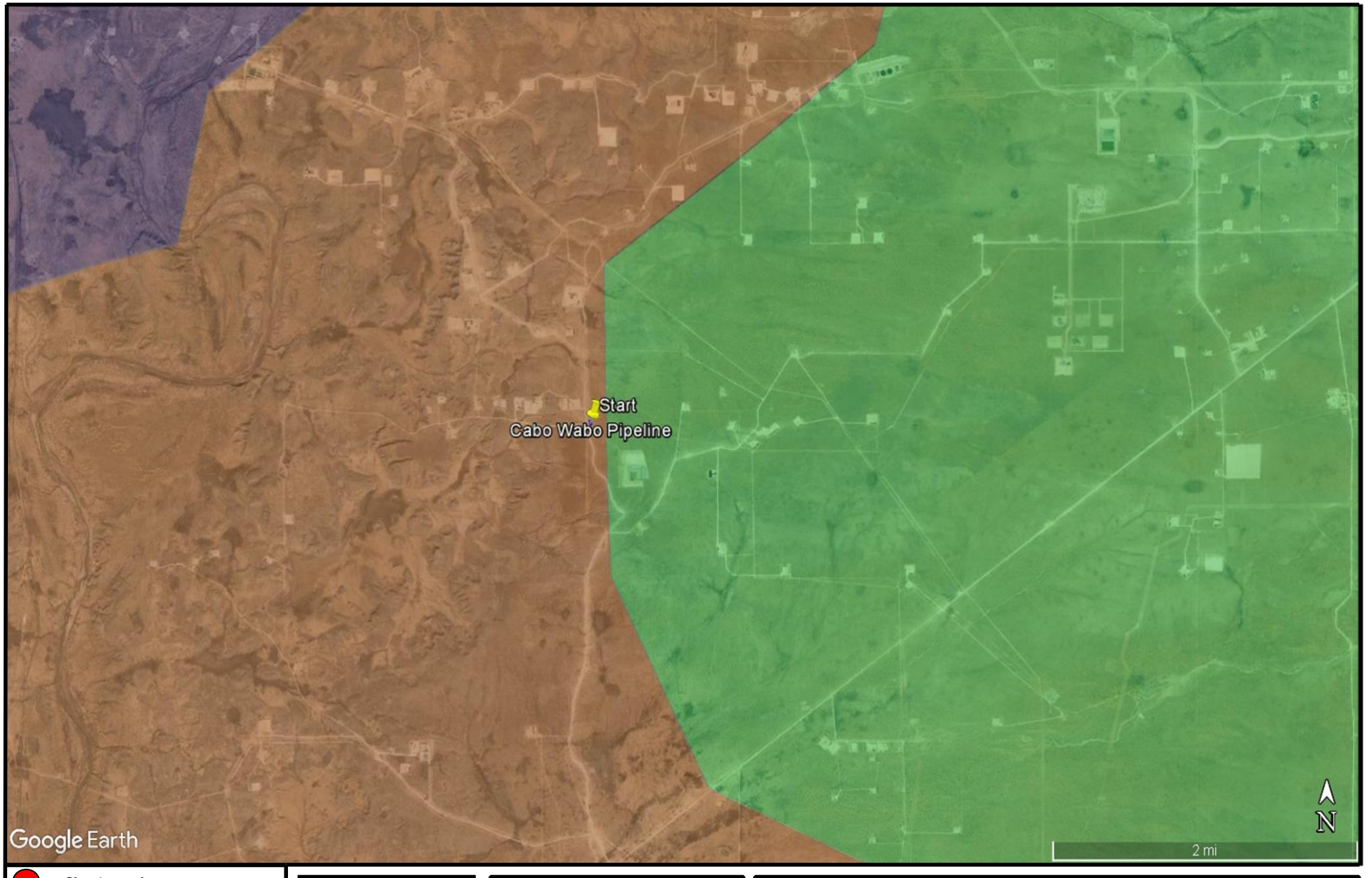
1:18,056

0 0.17 0.35 0.7 mi

0 0.3 0.6 1.2 km

USDA FSA, GeoEye, Maxar, Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC

OSE POD Locations



Site Location

Low Karst

Medium Karst

High Karst

N

Project No.	AR207115
Scale:	1" : 2 mi
Source:	Google Earth
Date:	5/19/20211

Terracon
Consulting Engineers & Scientists
5847 50th Street Lubbock, Texas 79424
PH. (806) 300 -0140 FAX. (806) 797 -0947

Figure 6 – Karst Location Map

Cabo Wabo Line Release
32.121924°, -103.980318°
Eddy County, New Mexico

APPENDIX B – TABLES AND PROCEDURES

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*

SOIL SAMPLING PROCEDURES

Soil sampling procedures are detailed as follows:

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 a 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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Cabo Wabo Line Release
Terracon Project No. AR207115

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	5 - 5.5	Grab	07/13/20	Benzene - <0.00198 Toluene - <0.00198 Ethylbenzene - <0.00198 Total Xylenes - <0.00198 Total BTEX - <0.00198	4,090	<50.0	<50.0	<50.0	<50.0
HAW-1	3.5 - 4	Grab	07/13/20	Benzene - <0.00198 Toluene - <0.00198 Ethylbenzene - <0.00198 Total Xylenes - <0.00198 Total BTEX - <0.00198	73.6	<50.0	<50.0	<50.0	<50.0
HA-2	5.5 - 6	Grab	07/13/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**11,200**	<49.9	<49.9	<49.9	<49.9
HAW-2	3.5 - 4	Grab	07/13/20	Benzene - 0.00216 Toluene - 0.0103 Ethylbenzene - <0.00199 Total Xylenes - 0.00441 Total BTEX - 0.0169	**33,800**	<49.8	<49.8	<49.8	<49.8
HA-3	4.5 - 5	Grab	07/13/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	333	<50.0	<50.0	<50.0	<50.0
HAW-3	2.5 - 3	Grab	07/13/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**14,800**	<50.0	<50.0	<50.0	<50.0
SP-1	N/A	Composite	07/13/20	Benzene - <0.00198 Toluene - <0.00198 Ethylbenzene - <0.00198 Total Xylenes - <0.00198 Total BTEX - <0.00198	**7,260**	<49.9	<49.9	<49.9	<49.9
SP-2	N/A	Composite	07/13/20	Benzene - <0.00198 Toluene - 0.00213 Ethylbenzene - <0.00198 Total Xylenes - <0.00198 Total BTEX - 0.00213	53.2	<50.0	<50.0	<50.0	<50.0
SP-3	N/A	Composite	07/13/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**5,420**	<50.0	<50.0	<50.0	<50.0
SP-4	N/A	Composite	07/13/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	76.5	<49.9	<49.9	<49.9	<49.9
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

ND = Not Detected

N/A = Not Applicable

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Cabo Wabo Line Release
Terracon Project No. AR207115

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 - 1	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	**7,390**	<50.2	<50.2	<50.2	<50.2
HA-1	2 - 3	Grab	07/22/20	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00202 Total BTEX - <0.00202	**936**	<50.2	<50.2	<50.2	<50.2
HA-2	0 - 1	Grab	07/22/20	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00202 Total BTEX - <0.00202	**3,920**	<50.0	<50.0	<50.0	<50.0
HA-3	0 - 1	Grab	07/22/20	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00202 Total BTEX - <0.00202	**4,560**	<50.2	<50.2	<50.2	<50.2
HA-3	2 - 3	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	**1,930**	<50.0	<50.0	<50.0	<50.0
HA-4	0 - 1	Grab	07/22/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**2,610**	<50.0	<50.0	<50.0	<50.0
HA-4	2 - 3	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	**1,370**	<50.1	<50.1	<50.1	<50.1
HA-5	0 - 1	Grab	07/22/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**8,870**	<50.2	<50.2	<50.2	<50.2
HA-6	0 - 1	Grab	07/22/20	Benzene - <0.00201 Toluene - <0.00201 Ethylbenzene - <0.00201 Total Xylenes - <0.00201 Total BTEX - <0.00201	**6,590**	<50.2	<50.2	<50.2	<50.2
HA-6	2 - 3	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	**4,540**	<50.1	<50.1	<50.1	<50.1
HA-7	0 - 1	Grab	07/22/20	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00202 Total BTEX - <0.00202	**5,490**	<50.2	<50.2	<50.2	<50.2
HA-7	2 - 3	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	287	<50.3	<50.3	<50.3	<50.3
HA-8	0 - 1	Grab	07/22/20	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00200 Total BTEX - <0.00200	**2,800**	<50.2	<50.2	<50.2	<50.2
HA-8	2 - 3	Grab	07/22/20	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00199 Total BTEX - <0.00199	**2,050**	<50.3	<50.3	<50.3	<50.3
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

ND = Not Detected

N/A = Not Applicable

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Cabo Wabo Line Release
Terracon Project No. AR207115

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
Confirmation Samples (Off Pad)									
HA-2.1	0 - 1'	Grab	04/14/21	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00403 Total BTEX - <0.00403	9.84	<50.0	<50.0	<50.0	<50.0
HA-3.1	0 - 1'	Grab	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	18.1	<49.9	<49.9	<49.9	<49.9
HA-3.1	2-3'	Grab	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00401 Total BTEX - <0.00401	62.3	<49.9	<49.9	<49.9	<49.9
HA-4.1	0 - 1'	Grab	04/14/21	Benzene - <0.00202 Toluene - <0.00202 Ethylbenzene - <0.00202 Total Xylenes - <0.00404 Total BTEX - <0.00404	62.1	<50.0	<50.0	<50.0	<50.0
HA-4.1	2 - 3'	Grab	04/14/21	Benzene - <0.00201 Toluene - <0.00201 Ethylbenzene - <0.00201 Total Xylenes - <0.00402 Total BTEX - <0.00402	44.8	<49.9	<49.9	<49.9	<49.9
HA-5.1	0 - 1'	Grab	04/14/21	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	252	<49.8	<49.8	<49.8	<49.8
HA-6.1	0-1'	Grab	04/14/21	Benzene - 0.00751 Toluene - <0.00200 Ethylbenzene - 0.0144 Total Xylenes - <0.00399 Total BTEX - 0.0252	79.2	<50.0	<50.0	<50.0	<50.0
HA-6.1	2-3'	Grab	04/14/21	Benzene - <0.00201 Toluene - <0.00201 Ethylbenzene - <0.00201 Total Xylenes - <0.00402 Total BTEX - <0.00402	34.1	<50.0	<50.0	<50.0	<50.0
HA-7.1	0 - 1'	Grab	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	10.0	50.0	50.0	50.0	50.0
HA-8.1	0 - 1'	Grab	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00400 Total BTEX - <0.00400	331	<49.9	<49.9	<49.9	<49.9
HA-8.1	2-3'	Grab	04/14/21	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	458	<50.0	<50.0	<50.0	<50.0
Confirmation Samples In Excavation									
CS-1	2.5-3'	Confirmation	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	**1590**	<49.9	<49.9	<49.9	<49.9
CS-1.1	2.5-3'	Confirmation	05/10/21	Benzene - <0.00198 Toluene - <0.00198 Ethylbenzene - <0.00198 Total Xylenes - <0.00397 Total BTEX - <0.00397	481	<49.9	<49.9	<49.9	<49.9
CS-1	5-5.5'	Confirmation	04/14/21	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	1360	<49.9	<49.9	<49.9	<49.9
CS-2	2.5-3'	Confirmation	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	62	<49.9	<49.9	<49.9	<49.9
CS-2	5.5-6'	Confirmation	04/14/21	Benzene - <0.00200 Toluene - <0.00200 Ethylbenzene - <0.00200 Total Xylenes - <0.00399 Total BTEX - <0.00399	53.7	<49.8	<49.8	<49.8	<49.8
CS-3	2.5-3'	Confirmation	04/14/21	Benzene - <0.00199 Toluene - <0.00199 Ethylbenzene - <0.00199 Total Xylenes - <0.00398 Total BTEX - <0.00398	523	<50.0	<50.0	<50.0	<50.0
CS-3	5-5.5	Confirmation	04/14/21	Benzene - <0.00198 Toluene - <0.00198 Ethylbenzene - <0.00198 Total Xylenes - <0.00397 Total BTEX - <0.00397	157	<50.0	<50.0	<50.0	<50.0
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

5. New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

ND = Not Detected

N/A = Not Applicable

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

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS - BTEX[1], Chloride[2], and TPH[3]
Cabo Wabo Line Release
Terracon Project No. AR207115

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
Supplemental Perimeter Samples									
EB-1	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
EB-1	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
EB-2	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	12.1	ND	ND	ND	ND
EB-2	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	13.7	ND	ND	ND	ND
EB-3	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	33.1	ND	ND	ND	ND
EB-3	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**2,050**	ND	ND	ND	ND
WB-1	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
WB-1	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	ND	ND	ND	ND	ND
WB-2	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**5,850**	ND	ND	ND	ND
WB-2	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	**3,820**	ND	ND	ND	ND
WB-3	0 - 0.5'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	11.6	ND	ND	ND	ND
WB-3	1.5' - 2'	Confirmation	08/18/21	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	13.2	ND	ND	ND	ND
EB-3.1	1.5 - 2'	Confirmation	08/30/21	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	20.7	NA	NA	NA	NA
WB-2.1	0 - 0.5	Confirmation	08/30/21	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	23.0	NA	NA	NA	NA
WB-2.1	1.5 - 2'	Confirmation	08/30/21	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	21.9	NA	NA	NA	NA
NMOCD Reclamation Standards[4] (Applicable for Soils from the Surface to 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**600**	**N/A**			**100**
NMOCD Remediation and Delineation Standards[5] (Applicable for Soils at Depths Greater than 4 ft. Below Grade Surface)				**Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50**	**10,000**	**1,000**		**N/A**	**2,500**

1. BTEX = Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8021B

2. Chloride = Chloride analyzed by EPA Method 300.

3. TPH = Total petroleum hydrocarbons analyzed by EPA Method 8015M (GRO/DRO/MRO)

4. New Mexico Administration Code (NMAC) Restoration, Reclamation, and Re-vegetation (19.15.29.13) New Mexico Administration Code (NMAC) – D (Reclamation of areas no longer in use) for soils extending to 4 ft. bgs

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< = Constituent not detected above the indicated laboratory SDL

ND = Not Detected

N/A = Not Applicable

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

APPENDIX C – GEOPHYSICAL SURVEY

November 18, 2020

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

Attention: Mr. Rob Kirk
Telephone: (469) 978-5620
Email: rob.kirk@solarismidstream.com

Reference: Geophysical Survey
Cabo Wabo 16-Inch Line Release
Eddy County, New Mexico
NMOCD Reference No. 2RP-5463
Terracon Project No. AR297115

Dear Mr. Kirk:

On September 30, 2020, October 8, 2020 and November 10, 2020 geophysical surveys were conducted by Terracon Consultants, Inc. (Terracon) at two locations southwest of the above referenced site. The project was conducted in accordance with the scope of work provided in Terracon's Proposal No. PAR207115.

PROJECT DESCRIPTION

The surveys included two areas down gradient of a produced water pond extending approximately 1,260 feet to the northwest. The site vicinity is shown on Exhibit 1 and the survey area is shown on Exhibit 2. The purpose of the geophysical survey was to evaluate differences in conductivity of shallow soil in order to ascertain the source of a produced water spill.

The majority of the site was covered with thorny brush and cactus. The drainage pathway of the spill was suspected to be related to possibly dried brine residue at the ground surface which trended down gradient to the northwest. Survey transects were conducted to cross over the suspected drainage pathways approximately perpendicular at spacing of 20 to 25 feet. Some survey transects were also conducted parallel to the suspected drainage pathways.

Review of the Google Earth version of the SoilWeb interface to USDA-NCSS SSURGO and STATSGO Soil Survey indicates that the site is situated on Tonuco loamy sands, 0 to 3 percent slopes. The dominant condition of this composition is described as excessively drained. According to the Geologic Atlas of New Mexico by the USGS, the formation is described as Eolian and Piedmont deposits characterized as interlayered eolian sands and piedmont slope deposits along the eastern flank of the Pecos River valley, primarily between Roswell and Carlsbad, which are

typically capped by thin eolian deposits. The geologic and soil conditions present at the site would not be expected to limit the instrument readings.

EXPLORATION METHODS

The Electro-Magnetic (EM) survey data acquisition was conducted by Ryan Hastings and Bryant McBrayer, Terracon Geoscientists. Jim Major, P.G., supervised the project and provided technical review of the survey report. The methods and procedures utilized for data acquisition, data processing and interpretation for the survey are described in the following sections.

The EM survey method utilizes a secondary magnetic field induced in the earth by a time-varying primary magnetic field generated by the instrument to explore the subsurface. An alternating current is generated in a transmitter coil producing an alternating primary electromagnetic field, which induces an alternating current in any nearby conductive material. The induced currents in the earth material produce a secondary electromagnetic field, which is sensed by a nearby receiver coil on the instrument. The effective depth of the investigation is related to the frequency of the alternating current, the distance between transmitter and receiver coils (inter-coil spacing) and coil orientation. The instrument measures the amplitude and phase of the induced field at various frequencies. EM measurements are dependent on the electrical properties and orientation of the subsurface soil and rock or buried man-made objects.

The EM instruments can measure two components of the secondary magnetic field – a component in-phase with the primary field and a component 90 degrees out-of-phase with the primary field. The 90 degree out-of-phase component is referred to as the quadrature component. The quadrature-phase component is useful for measuring soil conductivity and the units of measure are expressed in milli Siemens per meter (mS/m). The in-phase component is useful for detecting metal objects and the unit of measure is expressed as a ratio of the secondary to primary magnetic fields in parts per thousand (ppt). For this survey, the quadrature-phase component (i.e., soil conductivity) was of primary interest.

The EM survey was conducted using Geonics EM31 SH instrument with an integrated global positioning system (GPS) and data logger. The instrument was utilized in the vertical dipole mode and both quadrature and in-phase data were logged at intervals of 10 measurements per second. The effective survey depth with the Geonics EM31 SH instrument is approximately 10 feet. The EM data was acquired using several transects oriented perpendicular to the drainage swales and approximately parallel to each other along with some supplemental transects along and parallel to the drainage swales where possible. The transects spacing varied from 20 to 25-foot. The readings from the EM31 SH instrument data were processed using the interpolation (inverse distance weighted) capabilities of ArcGIS Pro software to create a diagram depicting the relative conductivity of the survey areas.

RELIANCE

These services were conducted in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services conducted under this scope of work; such information is subject to change over time. Subsurface conditions may vary from those encountered at specific survey areas or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

The survey work and this report has been prepared for the exclusive use of the Client named in this report. Any authorization for use or reliance by any other party is prohibited without the express written authorization of the client and Terracon. Any unauthorized distribution or reuse is at the user's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, report, and Terracon's Terms and Conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the Client and all relying parties unless otherwise agreed in writing.

LIMITATIONS

As with any geophysical survey method, the process relies on instrument signals to indicate physical conditions in the medium being investigated. Signal information can be affected by on-site conditions beyond the control of the operator such as, but not limited to: soil types, soil moisture, the presence of cultural noise (i.e. electrical currents, fences, foundations). Interpretation of those signals is based on a combination of known factors combined with the experience of the operator and/or the geoscientist evaluating the results. In addition, all surface geophysical methods are inherently limited by decreasing resolution with depth.

A fundamental limitation of all geophysical methods lies in the fact that a given set of data cannot always be associated with a unique set of subsurface conditions. In most situations, surface geophysical measurements alone cannot resolve all ambiguities, and some additional information is required. Because of this inherent limitation in the geophysical methods, a geophysical survey alone cannot be considered a complete assessment of subsurface conditions. Properly integrated with other sources of knowledge or investigation methods, EM surveys can be cost-effective methods of obtaining subsurface information. Utilizing conventional observation, sampling and testing ("truthing") of select areas is highly recommended to confirm the results from the survey. As with all geophysical methods, the geophysical survey results provide an improved level of confidence but should not be considered precise or absolute and should not be used for construction purposes. We cannot be responsible for the misinterpretation of unverified geophysical survey results by others.

CONCLUSIONS

The interpolated EM results were categorized on Exhibit 2 using a color scale based upon the readings – lower values are shown with green shading and higher values are shown with red shading. The orange to red areas are interpreted to correspond with soils that may have been affected by brine. At these areas white granular residue, suspected to be dried brine, were visible in some locations. The areas with the greatest conductivity were detected at the west and southeast portions of the survey area. The conductivity readings ranged from 1 to 204 mS/m.

We appreciate the opportunity to have worked for you on this project. If you have any questions regarding our findings, please contact us.

Sincerely,
Terracon Consultants, Inc.

Jim Major, P.G.
Geophysical Services Manager

Ryan Hastings
Field Geologist

0 5,000 10,000 20,000 US Feet

Project Mngr:	jrg
Drawn By:	jrm
Checked By:	jrg
Approved By:	el

Project No.	AR207115
Scale:	
TBPE Firm No.	F-3272
Date:	10-8-20

Terracon
Consulting Engineers & Scientists
6911 Blanco Road San Antonio, TX 78216
PH (210) 641-2112 Fax (210) 641-2124

Site Vicinity Map

Cabo Wabo Spill Assessment
North of Pipeline Road No. 1
Malaga, New Mexico

Exhibit

1

Conductivity(mS/m)

- ≤ 4
- ≤ 20
- ≤ 40
- ≤ 204

Feet

0 135 270 540

DATA SOURCES:
ESRI WMS - World Aerial Imagery, OpenStreetMap

Project No.:	AR207115
Date:	Nov 2020
Drawn By:	RDH
Reviewed By:	JRM

Terracon

6911 Blanco Road San Antonio, Texas 78216

PH. (210) 641-2112 terracon.com

Electromagnetic Survey

Cabo Wabo Spill Assessment
North of Pipeline Road No.1
Malaga, New Mexico

Exhibit

2

APPENDIX D – PHOTOGRAPHIC LOG

PHOTO 1: View of release point, facing North. 7/6/2020

PHOTO 2: View of release point, facing North. 7/6/2020

PHOTO 3: View of pipe junction installation, facing East. 7/6/2020

PHOTO 4: View of pipe that was struck and removed, facing Northwest. 7/6/2020

PHOTO 5: View of northern excavation, facing Southeast. 7/6/2020

PHOTO 6: View of excavation east of release, facing Southeast. 7/6/2020

PHOTO 7: View of HA-1, facing North. 7/6/2020

PHOTO 8: View of HA-1, facing South. 7/6/2020

PHOTO 9: View of HA-2, facing East. 7/06/2020

Photo 10: View of excavated release area, facing North. 3/25/2021

PHOTO 11: View of excavated release area, facing Southeast. 3/25/2021

Photo 12: View of excavated release area, facing East. 3/25/2021

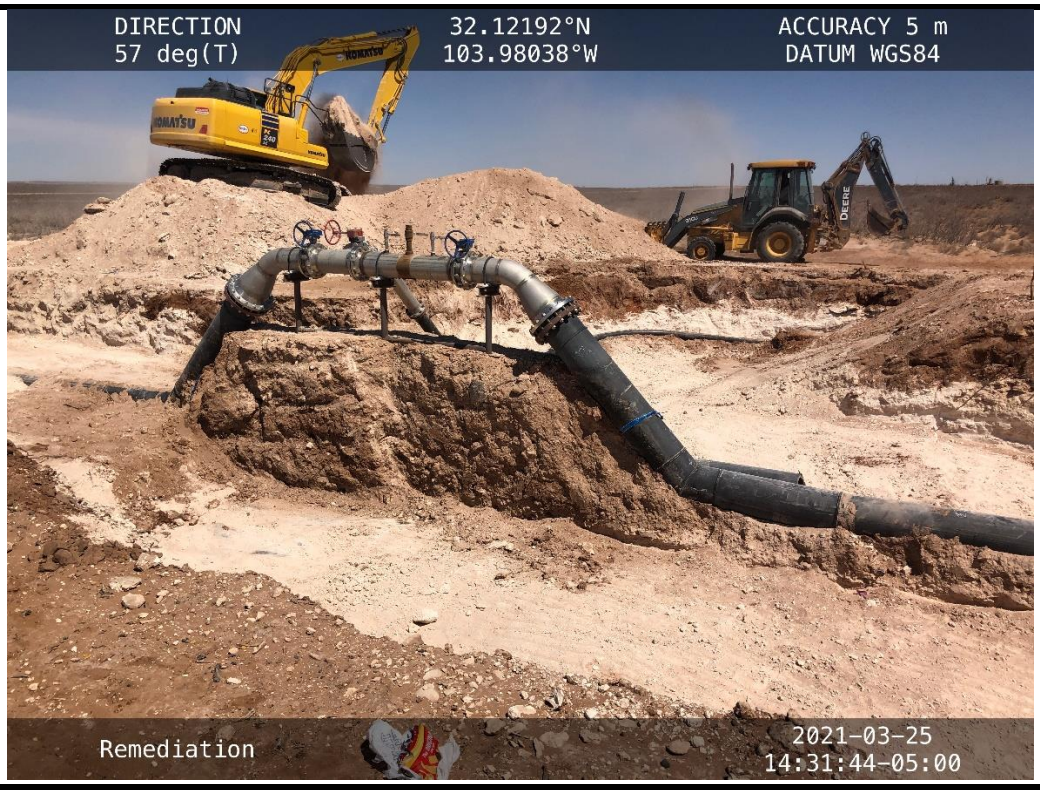

PHOTO 13: View of excavated release area, facing Northeast. 3/25/2021

Photo 14: View of excavated release area, facing Southwest. 3/25/2021

APPENDIX E – ANALYTICAL REPORT AND CHAIN OF CUSTODY

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Certificate of Analysis Summary 667218

Terracon-Lubbock, Lubbock, TX

Project Name: 16" line release

Project Id: AR207115
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 07.15.2020 09:00
Report Date: 07.24.2020 15:32
Project Manager: Jessica Kramer

Analysis Requested		667218-001		667218-003		667218-005		667218-007		667218-008		667218-010	
	Field Id:	HA-1 (5-5.5)		HAW-1 (3.5-4)		HA-2 (5.5-6)		HAW-2 (3.5-4)		HA-3 (4.5-5)		HAW-3 (2.5-3)	
	Depth:	5-5.5		3.5-4		5.5-6		3.5-4		4.5-5		2.5-3	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.13.2020 14:00		07.13.2020 14:10		07.13.2020 14:20		07.13.2020 14:30		07.13.2020 14:35		07.13.2020 14:45	
BTEX by EPA 8021B SUB: T104704400-20-20	*Extracted:*	07.23.2020 15:30		07.20.2020 08:00		07.20.2020 08:00		07.20.2020 08:00		07.20.2020 08:00		07.20.2020 08:00	
	Analyzed:	07.23.2020 21:30		07.20.2020 10:28		07.20.2020 10:48		07.20.2020 11:08		07.20.2020 11:31		07.20.2020 16:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	0.00216	0.00199	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	0.0103	0.00199	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00397	0.00397	<0.00398	0.00398	0.00441	0.00398	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Xylenes, Total		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	0.00441	0.00199	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	0.0169	0.00199	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300 SUB: T104704400-20-20	*Extracted:*	07.20.2020 08:30		07.20.2020 08:50		07.20.2020 08:50		07.20.2020 08:50		07.20.2020 08:50		07.20.2020 08:50	
	Analyzed:	07.20.2020 12:39		07.20.2020 13:34		07.20.2020 13:40		07.20.2020 13:46		07.20.2020 13:16		07.20.2020 13:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4090	25.0	73.6	50.2	11200	99.4	33800	249	333	5.03	14800	99.4
TPH by SW8015 Mod SUB: T104704400-20-20	*Extracted:*	07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00	
	Analyzed:	07.16.2020 16:36		07.16.2020 17:20		07.16.2020 17:42		07.16.2020 18:04		07.16.2020 18:25		07.16.2020 18:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 667218

Terracon-Lubbock, Lubbock, TX

Project Name: 16" line release

Project Id: AR207115
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Wed 07.15.2020 09:00
Report Date: 07.24.2020 15:32
Project Manager: Jessica Kramer

Analysis Requested		667218-011		667218-012		667218-013		667218-014			
	Field Id:	SP-1		SP-2		SP-3		SP-4			
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	07.13.2020 14:50		07.13.2020 14:55		07.13.2020 15:00		07.13.2020 15:05			
BTEX by EPA 8021B SUB: T104704400-20-20	*Extracted:*	07.20.2020 08:00		07.20.2020 08:00		07.20.2020 08:00		07.20.2020 08:00			
	Analyzed:	07.20.2020 16:52		07.20.2020 17:14		07.20.2020 17:36		07.20.2020 17:57			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200		
Toluene		<0.00198	0.00198	0.00213	0.00198	<0.00199	0.00199	<0.00200	0.00200		
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200		
m,p-Xylenes		<0.00397	0.00397	<0.00396	0.00396	<0.00398	0.00398	<0.00399	0.00399		
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200		
Xylenes, Total		<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200		
Total BTEX		<0.00198	0.00198	0.00213	0.00198	<0.00199	0.00199	<0.00200	0.00200		
Chloride by EPA 300 SUB: T104704400-20-20	*Extracted:*	07.20.2020 08:50		07.20.2020 08:50		07.20.2020 08:50		07.20.2020 08:50			
	Analyzed:	07.20.2020 14:11		07.20.2020 14:17		07.20.2020 14:23		07.20.2020 14:29			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		7260	50.0	53.2	5.01	5420	50.2	76.5	4.99		
TPH by SW8015 Mod SUB: T104704400-20-20	*Extracted:*	07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00		07.16.2020 12:00			
	Analyzed:	07.16.2020 19:08		07.16.2020 19:30		07.16.2020 19:51		07.16.2020 20:13			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9		
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9		
Total TPH		<49.9	49.9	<50.0	50.0	<50.0	50.0	<49.9	49.9		

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

Analytical Report 667218

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

16" line release

AR207115

07.24.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

eurofins | Environment Testing Xenco

07.24.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **667218**
16" line release
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 667218. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 667218 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

eurofins | Environment Testing Xenco

Sample Cross Reference 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (5-5.5)	S	07.13.2020 14:00	5 - 5.5	667218-001
HAW-1 (3.5-4)	S	07.13.2020 14:10	3.5 - 4	667218-003
HA-2 (5.5-6)	S	07.13.2020 14:20	5.5 - 6	667218-005
HAW-2 (3.5-4)	S	07.13.2020 14:30	3.5 - 4	667218-007
HA-3 (4.5-5)	S	07.13.2020 14:35	4.5 - 5	667218-008
HAW-3 (2.5-3)	S	07.13.2020 14:45	2.5 - 3	667218-010
SP-1	S	07.13.2020 14:50		667218-011
SP-2	S	07.13.2020 14:55		667218-012
SP-3	S	07.13.2020 15:00		667218-013
SP-4	S	07.13.2020 15:05		667218-014
HA-1 (5.5-6)	S	07.13.2020 14:05	5.5 - 6	Not Analyzed
HA-2 (4.5-5)	S	07.13.2020 14:15	1.5 - 2	Not Analyzed
HA-2 (6.5-7)	S	07.13.2020 14:25	6.5 - 7	Not Analyzed
HA-3 (5-5.5)	S	07.13.2020 14:40	5 - 5.5	Not Analyzed

CASE NARRATIVE

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Client Name: Terracon-Lubbock

Project Name: 16" line release

Project ID: *AR207115*
Work Order Number(s): *667218*

Report Date: *07.24.2020*
Date Received: *07.15.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3132132 BTEX by EPA 8021B

m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 667218-003, -005, -007, -008

Lab Sample ID 667218-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike. m,p-Xylenes 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: 667218-003, -005, -007, -008.
The Laboratory Control Sample for Toluene, m,p-Xylenes is within laboratory Control Limits, therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Samples affected are: 7707709-1-BKS,7707709-1-BLK,7707709-1-BSD,667218-008 S,667218-008 SD,667218-008,667218-003,667218-005,667218-007.

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **HA-1 (5-5.5)** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-001 Date Collected: 07.13.2020 14:00 Sample Depth: 5 - 5.5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:30 Basis: Wet Weight

Seq Number: 3132151 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4090**	25.0	mg/kg	07.20.2020 12:39		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 16:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 16:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 16:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 16:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	07.16.2020 16:36	
o-Terphenyl	84-15-1	96	%	70-130	07.16.2020 16:36	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HA-1 (5-5.5)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-001	Date Collected:	07.13.2020 14:00	Sample Depth:	5 - 5.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	07.23.2020 15:30	Basis:	Wet Weight
Seq Number:	3132552			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.23.2020 21:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.23.2020 21:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.23.2020 21:30	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.23.2020 21:30	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **HAW-1 (3.5-4)** Matrix: Soil Date Received:07.15.2020 09:00
Lab Sample Id: 667218-003 Date Collected: 07.13.2020 14:10 Sample Depth: 3.5 - 4

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight
Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.6**	50.2	mg/kg	07.20.2020 13:34		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight
Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 17:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 17:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 17:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 17:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	07.16.2020 17:20	
o-Terphenyl	84-15-1	85	%	70-130	07.16.2020 17:20	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HAW-1 (3.5-4)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-003	Date Collected:	07.13.2020 14:10	Sample Depth:	3.5 - 4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.20.2020 10:28	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.20.2020 10:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	171	%	70-130	07.20.2020 10:28	**
1,4-Difluorobenzene	540-36-3	74	%	70-130	07.20.2020 10:28	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HA-2 (5.5-6)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-005	Date Collected:	07.13.2020 14:20	Sample Depth:	5.5 - 6

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.20.2020 08:50	Basis:	Wet Weight
Seq Number:	3132153			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11200**	99.4	mg/kg	07.20.2020 13:40		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3131957			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.16.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.16.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.16.2020 17:42	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.16.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	07.16.2020 17:42	
o-Terphenyl	84-15-1	95	%	70-130	07.16.2020 17:42	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HA-2 (5.5-6)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-005	Date Collected:	07.13.2020 14:20	Sample Depth:	5.5 - 6
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.20.2020 10:48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.20.2020 10:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	170	%	70-130	07.20.2020 10:48	**
1,4-Difluorobenzene	540-36-3	75	%	70-130	07.20.2020 10:48	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HAW-2 (3.5-4)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-007	Date Collected:	07.13.2020 14:30	Sample Depth:	3.5 - 4

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.20.2020 08:50	Basis:	Wet Weight
Seq Number:	3132153			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33800**	249	mg/kg	07.20.2020 13:46		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3131957			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.16.2020 18:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.16.2020 18:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.16.2020 18:04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.16.2020 18:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	07.16.2020 18:04	
o-Terphenyl	84-15-1	98	%	70-130	07.16.2020 18:04	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HAW-2 (3.5-4)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-007	Date Collected:	07.13.2020 14:30	Sample Depth:	3.5 - 4
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00216**	0.00199	mg/kg	07.20.2020 11:08		1
Toluene	108-88-3	**0.0103**	0.00199	mg/kg	07.20.2020 11:08		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.20.2020 11:08	U	1
m,p-Xylenes	179601-23-1	**0.00441**	0.00398	mg/kg	07.20.2020 11:08		1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.20.2020 11:08	U	1
Xylenes, Total	1330-20-7	**0.00441**	0.00199	mg/kg	07.20.2020 11:08		1
Total BTEX		**0.0169**	0.00199	mg/kg	07.20.2020 11:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	166	%	70-130	07.20.2020 11:08	**
1,4-Difluorobenzene	540-36-3	74	%	70-130	07.20.2020 11:08	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **HA-3 (4.5-5)** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-008 Date Collected: 07.13.2020 14:35 Sample Depth: 4.5 - 5

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**333**	5.03	mg/kg	07.20.2020 13:16		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 18:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 18:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 18:25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 18:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	07.16.2020 18:25	
o-Terphenyl	84-15-1	98	%	70-130	07.16.2020 18:25	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**HA-3 (4.5-5)**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-008	Date Collected:	07.13.2020 14:35	Sample Depth:	4.5 - 5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.20.2020 11:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.20.2020 11:31	UX	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.20.2020 11:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.20.2020 11:31	UXF	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.20.2020 11:31	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.20.2020 11:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.20.2020 11:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	74	%	70-130	07.20.2020 11:31	
4-Bromofluorobenzene	460-00-4	172	%	70-130	07.20.2020 11:31	**

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **HAW-3 (2.5-3)** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-010 Date Collected: 07.13.2020 14:45 Sample Depth: 2.5 - 3

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14800**	99.4	mg/kg	07.20.2020 13:53		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 18:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 18:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 18:47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 18:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	07.16.2020 18:47	
o-Terphenyl	84-15-1	96	%	70-130	07.16.2020 18:47	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **HAW-3 (2.5-3)**
Lab Sample Id: 667218-010

Matrix: Soil
Date Collected: 07.13.2020 14:45

Date Received:07.15.2020 09:00
Sample Depth: 2.5 - 3

Analytical Method: BTEX by EPA 8021B
Tech: AMF
Analyst: AMF
Seq Number: 3132132

Date Prep: 07.20.2020 08:00

Prep Method: SW5035A
% Moisture:
Basis: Wet Weight
SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.20.2020 16:29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.20.2020 16:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	75	%	70-130	07.20.2020 16:29	
4-Bromofluorobenzene	460-00-4	170	%	70-130	07.20.2020 16:29	**

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **SP-1** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-011 Date Collected: 07.13.2020 14:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7260**	50.0	mg/kg	07.20.2020 14:11		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.16.2020 19:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.16.2020 19:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.16.2020 19:08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.16.2020 19:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	07.16.2020 19:08	
o-Terphenyl	84-15-1	95	%	70-130	07.16.2020 19:08	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**SP-1**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-011	Date Collected:	07.13.2020 14:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.20.2020 16:52	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.20.2020 16:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	74	%	70-130	07.20.2020 16:52	
4-Bromofluorobenzene	460-00-4	189	%	70-130	07.20.2020 16:52	**

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **SP-2** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-012 Date Collected: 07.13.2020 14:55

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.2**	5.01	mg/kg	07.20.2020 14:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 19:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 19:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 19:30	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 19:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-130	07.16.2020 19:30	
o-Terphenyl	84-15-1	89	%	70-130	07.16.2020 19:30	

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Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**SP-2**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-012	Date Collected:	07.13.2020 14:55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.20.2020 17:14	U	1
Toluene	108-88-3	**0.00213**	0.00198	mg/kg	07.20.2020 17:14		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.20.2020 17:14	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.20.2020 17:14	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.20.2020 17:14	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.20.2020 17:14	U	1
Total BTEX		**0.00213**	0.00198	mg/kg	07.20.2020 17:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	73	%	70-130	07.20.2020 17:14	
4-Bromofluorobenzene	460-00-4	192	%	70-130	07.20.2020 17:14	**

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **SP-3** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-013 Date Collected: 07.13.2020 15:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5420**	50.2	mg/kg	07.20.2020 14:23		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.16.2020 19:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.16.2020 19:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.16.2020 19:51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.16.2020 19:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	07.16.2020 19:51	
o-Terphenyl	84-15-1	92	%	70-130	07.16.2020 19:51	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**SP-3**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-013	Date Collected:	07.13.2020 15:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.20.2020 17:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.20.2020 17:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	194	%	70-130	07.20.2020 17:36	**
1,4-Difluorobenzene	540-36-3	73	%	70-130	07.20.2020 17:36	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id: **SP-4** Matrix: Soil Date Received:07.15.2020 09:00

Lab Sample Id: 667218-014 Date Collected: 07.13.2020 15:05

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 07.20.2020 08:50 Basis: Wet Weight

Seq Number: 3132153 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**76.5**	4.99	mg/kg	07.20.2020 14:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 07.16.2020 12:00 Basis: Wet Weight

Seq Number: 3131957 SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.16.2020 20:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.16.2020 20:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.16.2020 20:13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.16.2020 20:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	07.16.2020 20:13	
o-Terphenyl	84-15-1	90	%	70-130	07.16.2020 20:13	

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Certificate of Analytical Results 667218

Terracon-Lubbock, Lubbock, TX

16" line release

Sample Id:	**SP-4**	Matrix:	Soil	Date Received:	07.15.2020 09:00
Lab Sample Id:	667218-014	Date Collected:	07.13.2020 15:05		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.20.2020 08:00	Basis:	Wet Weight
Seq Number:	3132132			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.20.2020 17:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.20.2020 17:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	208	%	70-130	07.20.2020 17:57	**
1,4-Difluorobenzene	540-36-3	78	%	70-130	07.20.2020 17:57	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 667218

Terracon-Lubbock

16" line release

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132151 — Matrix: Solid — Date Prep: 07.20.2020
MB Sample Id: 7707634-1-BLK — LCS Sample Id: 7707634-1-BKS — LCSD Sample Id: 7707634-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	245	98	246	98	90-110	0	20	mg/kg	07.20.2020 09:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132153 — Matrix: Solid — Date Prep: 07.20.2020
MB Sample Id: 7707635-1-BLK — LCS Sample Id: 7707635-1-BKS — LCSD Sample Id: 7707635-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	250	100	90-110	0	20	mg/kg	07.20.2020 13:03	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132151 — Matrix: Soil — Date Prep: 07.20.2020
Parent Sample Id: 667178-028 — MS Sample Id: 667178-028 S — MSD Sample Id: 667178-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	539	252	767	90	773	93	90-110	1	20	mg/kg	07.20.2020 09:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132151 — Matrix: Soil — Date Prep: 07.20.2020
Parent Sample Id: 667249-001 — MS Sample Id: 667249-001 S — MSD Sample Id: 667249-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	383	249	617	94	617	94	90-110	0	20	mg/kg	07.20.2020 11:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132153 — Matrix: Soil — Date Prep: 07.20.2020
Parent Sample Id: 667218-008 — MS Sample Id: 667218-008 S — MSD Sample Id: 667218-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	333	252	585	100	584	100	90-110	0	20	mg/kg	07.20.2020 13:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132153 — Matrix: Soil — Date Prep: 07.20.2020
Parent Sample Id: 667225-002 — MS Sample Id: 667225-002 S — MSD Sample Id: 667225-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	269	108	266	106	90-110	1	20	mg/kg	07.20.2020 14:48	

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 667218

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Terracon-Lubbock

16" line release

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3131957 — Matrix: Solid — Date Prep: 07.16.2020
MB Sample Id: 7707521-1-BLK — LCS Sample Id: 7707521-1-BKS — LCSD Sample Id: 7707521-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	893	89	889	89	70-130	0	20	mg/kg	07.16.2020 11:54	
Diesel Range Organics (DRO)	<50.0	1000	906	91	903	90	70-130	0	20	mg/kg	07.16.2020 11:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		106		96		70-130	%	07.16.2020 11:54
o-Terphenyl	102		92		96		70-130	%	07.16.2020 11:54

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3131957 — Matrix: Solid — Date Prep: 07.16.2020
MB Sample Id: 7707521-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.16.2020 11:33	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3131957 — Matrix: Soil — Date Prep: 07.16.2020
Parent Sample Id: 667201-001 — MS Sample Id: 667201-001 S — MSD Sample Id: 667201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1020	102	1020	102	70-130	0	20	mg/kg	07.16.2020 13:00	
Diesel Range Organics (DRO)	<49.9	997	1090	109	1100	110	70-130	1	20	mg/kg	07.16.2020 13:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		111		70-130	%	07.16.2020 13:00
o-Terphenyl	101		102		70-130	%	07.16.2020 13:00

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3132132 — Matrix: Solid — Date Prep: 07.20.2020
MB Sample Id: 7707709-1-BLK — LCS Sample Id: 7707709-1-BKS — LCSD Sample Id: 7707709-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0811	81	0.0859	86	70-130	6	35	mg/kg	07.20.2020 08:06	
Toluene	<0.00200	0.100	0.0812	81	0.0858	86	70-130	6	35	mg/kg	07.20.2020 08:06	
Ethylbenzene	<0.00200	0.100	0.0942	94	0.101	101	70-130	7	35	mg/kg	07.20.2020 08:06	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.208	104	70-130	7	35	mg/kg	07.20.2020 08:06	
o-Xylene	<0.00200	0.100	0.0989	99	0.105	105	70-130	6	35	mg/kg	07.20.2020 08:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	70		76		77		70-130	%	07.20.2020 08:06
4-Bromofluorobenzene	145	**	164	**	166	**	70-130	%	07.20.2020 08:06

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 667218

Terracon-Lubbock

16" line release

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3132552 Matrix: Solid Date Prep: 07.23.2020
MB Sample Id: 7707987-1-BLK LCS Sample Id: 7707987-1-BKS LCSD Sample Id: 7707987-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.115	115	70-130	2	35	mg/kg	07.24.2020 09:32	
Toluene	<0.00200	0.100	0.109	109	0.108	108	70-130	1	35	mg/kg	07.24.2020 09:32	
Ethylbenzene	<0.00200	0.100	0.108	108	0.107	107	70-130	1	35	mg/kg	07.24.2020 09:32	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.207	104	70-130	1	35	mg/kg	07.24.2020 09:32	
o-Xylene	<0.00200	0.100	0.0992	99	0.0986	99	70-130	1	35	mg/kg	07.24.2020 09:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		93		99		70-130	%	07.24.2020 09:32
4-Bromofluorobenzene	102		94		101		70-130	%	07.24.2020 09:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3132132 Matrix: Soil Date Prep: 07.20.2020
Parent Sample Id: 667218-008 MS Sample Id: 667218-008 S MSD Sample Id: 667218-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0758	76	0.0808	81	70-130	6	35	mg/kg	07.20.2020 08:47	
Toluene	<0.00200	0.0998	0.0652	65	0.0703	71	70-130	8	35	mg/kg	07.20.2020 08:47	X
Ethylbenzene	<0.00200	0.0998	0.0754	76	0.0794	80	70-130	5	35	mg/kg	07.20.2020 08:47	
m,p-Xylenes	<0.00399	0.200	0.0603	30	0.0978	49	70-130	47	35	mg/kg	07.20.2020 08:47	XF
o-Xylene	<0.00200	0.0998	0.0882	88	0.0925	93	70-130	5	35	mg/kg	07.20.2020 08:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	77		77		70-130	%	07.20.2020 08:47
4-Bromofluorobenzene	168	**	171	**	70-130	%	07.20.2020 08:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3132552 Matrix: Soil Date Prep: 07.23.2020
Parent Sample Id: 667249-001 MS Sample Id: 667249-001 S MSD Sample Id: 667249-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.0835	84	0.0822	83	70-130	2	35	mg/kg	07.23.2020 18:04	
Toluene	<0.00198	0.0990	0.0696	70	0.0685	69	70-130	2	35	mg/kg	07.23.2020 18:04	X
Ethylbenzene	<0.00198	0.0990	0.0601	61	0.0580	58	70-130	4	35	mg/kg	07.23.2020 18:04	X
m,p-Xylenes	<0.00396	0.198	0.115	58	0.111	56	70-130	4	35	mg/kg	07.23.2020 18:04	X
o-Xylene	<0.00198	0.0990	0.0584	59	0.0567	57	70-130	3	35	mg/kg	07.23.2020 18:04	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	07.23.2020 18:04
4-Bromofluorobenzene	99		102		70-130	%	07.23.2020 18:04

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Terracon

CHAIN OF CUSTODY RECORD 667218

Laboratory: Xenco
Address: 6701 Aberdeen, Lubbock, Texas 79424
Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

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

Project Number: AR207115
Project Name: 16" line release

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C)
Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold				Lab Sample ID
S	7/13/2020	14:00		X	HA-1 (5-5.5)	5	5.5	X				X	X	X					667218-001
S	7/13/2020	14:05		X	HA-1 (5.5-6))	5.5	6	X							X				-002
S	7/13/2020	14:10		X	HAW-1 (3.5-4)	3.5	4	X				X	X	X					-003
S	7/13/2020	14:15		X	HA-2 (4.5-5)	1.5	2	X							X				-004
S	7/13/2020	14:20		X	HA-2 (5.5-6)	5.5	6	X				X	X	X					-005
S	7/13/2020	14:25		X	HA-2 (6.5-7)	6.5	7	X							X				-006
S	7/13/2020	14:30		X	HAW-2 (3.5-4)	3.5	4	X				X	X	X					-007
S	7/13/2020	14:35		X	HA-3 (4.5-5)	4.5	5	X				X	X	X					-008
S	7/13/2020	14:40		X	HA-3 (5-5.5)	5	5.5	X							X				-009
S	7/13/2020	14:45		X	HAW-3 (2.5-3)	2.5	3	X				X	X	X					-010
S	7/13/2020	14:50	X		SP-1	-	-	X				X	X	X					-011
S	7/13/2020	14:55	X		SP-2	-	-	X				X	X	X					-012
S	7/13/2020	15:00	X		SP-3	-	-	X				X	X	X					-013
S	7/13/2020	15:05	X		SP-4	-	-	X				X	X	X					-014

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date: 7-15-20	Time: 8:58	Received by (Signature)	Date: 7/15/2020	Time: 9:00
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Solaris Midstream

e-mail results to: 10.3/10.17

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

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

Inter-Office Shipment

IOS Number : 67130

Date/Time: 07.15.2020
Lab# From: **Lubbock**
Lab# To: **Midland**

Created by: Michael J Turner
Delivery Priority:
Air Bill No.: 770966887317

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
667218-001	S	HA-1 (5-5.5)	07.13.2020 14:00	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-001	S	HA-1 (5-5.5)	07.13.2020 14:00	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-001	S	HA-1 (5-5.5)	07.13.2020 14:00	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-002	S	HA-1 (5.5-6)	07.13.2020 14:05	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-002	S	HA-1 (5.5-6)	07.13.2020 14:05	E300_CL	Chloride by EPA 300	HOLD	08.10.2020	JKR	CL	
667218-002	S	HA-1 (5.5-6)	07.13.2020 14:05	SW8021B	BTEX by EPA 8021B	HOLD	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-003	S	HAW-1 (3.5-4)	07.13.2020 14:10	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-003	S	HAW-1 (3.5-4)	07.13.2020 14:10	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-003	S	HAW-1 (3.5-4)	07.13.2020 14:10	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-004	S	HA-2 (4.5-5)	07.13.2020 14:15	SW8021B	BTEX by EPA 8021B	HOLD	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-004	S	HA-2 (4.5-5)	07.13.2020 14:15	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-004	S	HA-2 (4.5-5)	07.13.2020 14:15	E300_CL	Chloride by EPA 300	HOLD	08.10.2020	JKR	CL	
667218-005	S	HA-2 (5.5-6)	07.13.2020 14:20	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-005	S	HA-2 (5.5-6)	07.13.2020 14:20	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-005	S	HA-2 (5.5-6)	07.13.2020 14:20	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-006	S	HA-2 (6.5-7)	07.13.2020 14:25	SW8021B	BTEX by EPA 8021B	HOLD	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-006	S	HA-2 (6.5-7)	07.13.2020 14:25	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-006	S	HA-2 (6.5-7)	07.13.2020 14:25	E300_CL	Chloride by EPA 300	HOLD	08.10.2020	JKR	CL	
667218-007	S	HAW-2 (3.5-4)	07.13.2020 14:30	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-007	S	HAW-2 (3.5-4)	07.13.2020 14:30	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-007	S	HAW-2 (3.5-4)	07.13.2020 14:30	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-008	S	HA-3 (4.5-5)	07.13.2020 14:35	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-008	S	HA-3 (4.5-5)	07.13.2020 14:35	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-008	S	HA-3 (4.5-5)	07.13.2020 14:35	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-009	S	HA-3 (5-5.5)	07.13.2020 14:40	E300_CL	Chloride by EPA 300	HOLD	08.10.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 67130

Date/Time: 07.15.2020
Lab# From: **Lubbock**
Lab# To: **Midland**

Created by: Michael J Turner
Delivery Priority:
Air Bill No.: 770966887317

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
667218-009	S	HA-3 (5-5.5)	07.13.2020 14:40	SW8021B	BTEX by EPA 8021B	HOLD	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-009	S	HA-3 (5-5.5)	07.13.2020 14:40	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-010	S	HAW-3 (2.5-3)	07.13.2020 14:45	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-010	S	HAW-3 (2.5-3)	07.13.2020 14:45	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-010	S	HAW-3 (2.5-3)	07.13.2020 14:45	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-011	S	SP-1	07.13.2020 14:50	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-011	S	SP-1	07.13.2020 14:50	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-011	S	SP-1	07.13.2020 14:50	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-012	S	SP-2	07.13.2020 14:55	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-012	S	SP-2	07.13.2020 14:55	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-012	S	SP-2	07.13.2020 14:55	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-013	S	SP-3	07.13.2020 15:00	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	
667218-013	S	SP-3	07.13.2020 15:00	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-013	S	SP-3	07.13.2020 15:00	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-014	S	SP-4	07.13.2020 15:05	E300_CL	Chloride by EPA 300	07.21.2020	08.10.2020	JKR	CL	
667218-014	S	SP-4	07.13.2020 15:05	SW8021B	BTEX by EPA 8021B	07.21.2020	07.27.2020	JKR	BR4FBZ BZ BZME EBZ	
667218-014	S	SP-4	07.13.2020 15:05	SW8015MOD_NM	TPH by SW8015 Mod	07.21.2020	07.27.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner
Date Relinquished: 07.15.2020

Received By: Brianna Teel
Date Received: 07.16.2020
Cooler Temperature: 0.9

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 67130

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-8

Sent By: Michael J Turner **Date Sent:** 07.15.2020 10.30 AM

Received By: Brianna Teel **Date Received:** 07.16.2020 10.08 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 07.16.2020

Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.15.2020 09.00.00 AM

Work Order #: 667218

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	10.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 07.15.2020

Checklist reviewed by: Jessica Kramer Date: 07.17.2020

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Certificate of Analysis Summary 668117

Terracon-Lubbock, Lubbock, TX

Project Name: 16" Line Strike

Project Id: AR207115
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu 07.23.2020 17:09
Report Date: 07.30.2020 09:11
Project Manager: Jessica Kramer

Analysis Requested		668117-001		668117-002		668117-003		668117-004		668117-005		668117-006	
	Field Id:	HA-1 (0-1)		HA-1 (2-3)		HA-2 (0-1)		HA-3 (0-1)		HA-3 (2-3)		HA-4 (0-1)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.22.2020 11:50		07.22.2020 11:50		07.22.2020 12:11		07.22.2020 12:32		07.22.2020 12:32		07.22.2020 12:53	
BTEX by EPA 8021B NO_CERT#	*Extracted:*	07.28.2020 15:08		07.28.2020 15:08		07.28.2020 15:08		07.28.2020 15:08		07.28.2020 15:08		07.28.2020 15:08	
	Analyzed:	07.28.2020 19:13		07.28.2020 19:33		07.28.2020 19:54		07.28.2020 20:14		07.28.2020 20:34		07.28.2020 20:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00401	0.00401	<0.00404	0.00404	<0.00404	0.00404	<0.00403	0.00403	<0.00401	0.00401	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Xylenes, Total		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300 NO_CERT#	*Extracted:*	07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56	
	Analyzed:	07.28.2020 14:20		07.28.2020 14:27		07.28.2020 14:34		07.28.2020 14:55		07.28.2020 15:02		07.28.2020 15:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7390	50.4	936	10.0	3920	49.9	4560	50.0	1930	50.1	2610	49.5
TPH by SW8015 Mod NO_CERT#	*Extracted:*	07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15	
	Analyzed:	07.28.2020 13:23		07.28.2020 13:45		07.28.2020 14:05		07.28.2020 14:25		07.28.2020 14:45		07.28.2020 15:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.0	50.0	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.0	50.0	<50.0	50.0
Total TPH		<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.2	50.2	<50.0	50.0	<50.0	50.0

BRL - Below Reporting Limit

Jessica Kramer

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

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Certificate of Analysis Summary 668117

Terracon-Lubbock, Lubbock, TX

Project Name: 16" Line Strike

Project Id: AR207115
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu 07.23.2020 17:09
Report Date: 07.30.2020 09:11
Project Manager: Jessica Kramer

Analysis Requested		668117-007		668117-008		668117-009		668117-010		668117-011		668117-012	
	Field Id:	HA-4 (2-3)		HA-5 (0-1)		HA-6 (0-1)		HA-6 (2-3)		HA-7 (0-1)		HA-7 (2-3)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	07.22.2020 12:53		07.22.2020 13:09		07.22.2020 13:30		07.22.2020 13:30		07.22.2020 13:55		07.22.2020 13:55	
BTEX by EPA 8021B NO_CERT#	*Extracted:*	07.28.2020 15:08		07.28.2020 15:08		07.28.2020 15:08		07.28.2020 13:11		07.28.2020 13:11		07.28.2020 13:11	
	Analyzed:	07.28.2020 21:15		07.28.2020 21:36		07.28.2020 21:56		07.28.2020 16:02		07.28.2020 16:25		07.28.2020 16:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00401	0.00401	<0.00404	0.00404	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
Xylenes, Total		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200
Chloride by EPA 300 NO_CERT#	*Extracted:*	07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56		07.28.2020 12:56	
	Analyzed:	07.28.2020 15:16		07.28.2020 15:30		07.28.2020 15:51		07.28.2020 15:58		07.28.2020 16:05		07.28.2020 16:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1370	49.8	8870	99.4	6590	50.4	4540	50.3	5490	50.2	287	9.94
TPH by SW8015 Mod NO_CERT#	*Extracted:*	07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15		07.28.2020 13:15	
	Analyzed:	07.28.2020 15:45		07.28.2020 13:45		07.28.2020 14:05		07.28.2020 14:25		07.28.2020 14:45		07.28.2020 15:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Diesel Range Organics (DRO)		<50.1	50.1	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Total TPH		<50.1	50.1	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3

BRL - Below Reporting Limit

Jessica Kramer

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 668117

Terracon-Lubbock, Lubbock, TX

Project Name: 16" Line Strike

Project Id: AR207115
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Thu 07.23.2020 17:09
Report Date: 07.30.2020 09:11
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	668117-013		668117-014				
	Field Id:	HA-8 (0-1)		HA-8 (2-3)				
	Depth:							
	Matrix:	SOIL		SOIL				
	Sampled:	07.22.2020 14:17		07.22.2020 14:17				
BTEX by EPA 8021B NO_CERT#	***Extracted:***	07.28.2020 13:11		07.28.2020 13:11				
	Analyzed:	07.28.2020 17:10		07.28.2020 17:32				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Benzene		<0.00200	0.00200	<0.00199	0.00199			
Toluene		<0.00200	0.00200	<0.00199	0.00199			
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199			
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398			
o-Xylene		<0.00200	0.00200	<0.00199	0.00199			
Xylenes, Total		<0.00200	0.00200	<0.00199	0.00199			
Total BTEX		<0.00200	0.00200	<0.00199	0.00199			
Chloride by EPA 300 NO_CERT#	***Extracted:***	07.28.2020 12:56		07.28.2020 12:56				
	Analyzed:	07.28.2020 16:33		07.28.2020 16:40				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Chloride		2800	50.1	2050	50.2			
TPH by SW8015 Mod NO_CERT#	***Extracted:***	07.28.2020 13:15		07.28.2020 13:15				
	Analyzed:	07.28.2020 15:45		07.28.2020 16:05				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.3	50.3			
Diesel Range Organics (DRO)		<50.2	50.2	<50.3	50.3			
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.3	50.3			
Total TPH		<50.2	50.2	<50.3	50.3			

BRL - Below Reporting Limit

Jessica Kramer

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Analytical Report 668117

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

16" Line Strike

AR207115

07.30.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.30.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **668117**
16" Line Strike
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 668117. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 668117 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-1)	S	07.22.2020 11:50		668117-001
HA-1 (2-3)	S	07.22.2020 11:50		668117-002
HA-2 (0-1)	S	07.22.2020 12:11		668117-003
HA-3 (0-1)	S	07.22.2020 12:32		668117-004
HA-3 (2-3)	S	07.22.2020 12:32		668117-005
HA-4 (0-1)	S	07.22.2020 12:53		668117-006
HA-4 (2-3)	S	07.22.2020 12:53		668117-007
HA-5 (0-1)	S	07.22.2020 13:09		668117-008
HA-6 (0-1)	S	07.22.2020 13:30		668117-009
HA-6 (2-3)	S	07.22.2020 13:30		668117-010
HA-7 (0-1)	S	07.22.2020 13:55		668117-011
HA-7 (2-3)	S	07.22.2020 13:55		668117-012
HA-8 (0-1)	S	07.22.2020 14:17		668117-013
HA-8 (2-3)	S	07.22.2020 14:17		668117-014

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: 16" Line Strike

Project ID: *AR207115*
Work Order Number(s): *668117*

Report Date: *07.30.2020*
Date Received: *07.23.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-1 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-001	Date Collected:	07.22.2020 11:50		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7390**	50.4	mg/kg	07.28.2020 14:20		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132869			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 13:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 13:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 13:23	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 13:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.28.2020 13:23	
o-Terphenyl	84-15-1	108	%	70-135	07.28.2020 13:23	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-1 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-001	Date Collected:	07.22.2020 11:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.28.2020 19:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 19:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.28.2020 19:13	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.28.2020 19:13	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-1 (2-3)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-002 Date Collected: 07.22.2020 11:50

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**936**	10.0	mg/kg	07.28.2020 14:27		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132869 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.28.2020 13:45	
o-Terphenyl	84-15-1	101	%	70-135	07.28.2020 13:45	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-1 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-002	Date Collected:	07.22.2020 11:50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.28.2020 19:33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.28.2020 19:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.28.2020 19:33	
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.28.2020 19:33	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-2 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-003	Date Collected:	07.22.2020 12:11		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3920**	49.9	mg/kg	07.28.2020 14:34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132869			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.28.2020 14:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 14:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 14:05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 14:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.28.2020 14:05	
o-Terphenyl	84-15-1	102	%	70-135	07.28.2020 14:05	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-2 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-003	Date Collected:	07.22.2020 12:11		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.28.2020 19:54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.28.2020 19:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.28.2020 19:54	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.28.2020 19:54	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-3 (0-1)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-004 Date Collected: 07.22.2020 12:32

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4560**	50.0	mg/kg	07.28.2020 14:55		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132869 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 14:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 14:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 14:25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 14:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.28.2020 14:25	
o-Terphenyl	84-15-1	95	%	70-135	07.28.2020 14:25	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-3 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-004	Date Collected:	07.22.2020 12:32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.28.2020 20:14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.28.2020 20:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.28.2020 20:14	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.28.2020 20:14	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-3 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-005	Date Collected:	07.22.2020 12:32		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1930**	50.1	mg/kg	07.28.2020 15:02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132869			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.28.2020 14:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 14:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 14:45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 14:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.28.2020 14:45	
o-Terphenyl	84-15-1	97	%	70-135	07.28.2020 14:45	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-3 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-005	Date Collected:	07.22.2020 12:32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.28.2020 20:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 20:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.28.2020 20:34	
1,4-Difluorobenzene	540-36-3	97	%	70-130	07.28.2020 20:34	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-4 (0-1)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-006 Date Collected: 07.22.2020 12:53

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2610**	49.5	mg/kg	07.28.2020 15:09		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132869 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.28.2020 15:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 15:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 15:25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 15:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.28.2020 15:25	
o-Terphenyl	84-15-1	95	%	70-135	07.28.2020 15:25	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-4 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-006	Date Collected:	07.22.2020 12:53		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.28.2020 20:55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.28.2020 20:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.28.2020 20:55	
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.28.2020 20:55	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-4 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-007	Date Collected:	07.22.2020 12:53		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1370**	49.8	mg/kg	07.28.2020 15:16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132869			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.28.2020 15:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.28.2020 15:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.28.2020 15:45	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.28.2020 15:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.28.2020 15:45	
o-Terphenyl	84-15-1	96	%	70-135	07.28.2020 15:45	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-4 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-007	Date Collected:	07.22.2020 12:53		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.28.2020 21:15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 21:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.28.2020 21:15	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.28.2020 21:15	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-5 (0-1)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-008 Date Collected: 07.22.2020 13:09

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8870**	99.4	mg/kg	07.28.2020 15:30		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132881 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 13:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.28.2020 13:45	
o-Terphenyl	84-15-1	97	%	70-135	07.28.2020 13:45	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-5 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-008	Date Collected:	07.22.2020 13:09		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.28.2020 21:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.28.2020 21:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.28.2020 21:36	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.28.2020 21:36	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-6 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-009	Date Collected:	07.22.2020 13:30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6590**	50.4	mg/kg	07.28.2020 15:51		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132881			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 14:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 14:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 14:05	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 14:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.28.2020 14:05	
o-Terphenyl	84-15-1	109	%	70-135	07.28.2020 14:05	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-6 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-009	Date Collected:	07.22.2020 13:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 15:08	Basis:	Wet Weight
Seq Number:	3132941			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.28.2020 21:56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.28.2020 21:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.28.2020 21:56	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.28.2020 21:56	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-6 (2-3)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-010 Date Collected: 07.22.2020 13:30

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4540**	50.3	mg/kg	07.28.2020 15:58		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132881 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.28.2020 14:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.28.2020 14:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.28.2020 14:25	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.28.2020 14:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.28.2020 14:25	
o-Terphenyl	84-15-1	97	%	70-135	07.28.2020 14:25	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-6 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-010	Date Collected:	07.22.2020 13:30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 13:11	Basis:	Wet Weight
Seq Number:	3132886			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.28.2020 16:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 16:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	07.28.2020 16:02	
1,4-Difluorobenzene	540-36-3	97	%	70-130	07.28.2020 16:02	

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16" Line Strike

Sample Id:	**HA-7 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-011	Date Collected:	07.22.2020 13:55		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5490**	50.2	mg/kg	07.28.2020 16:05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132881			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 14:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 14:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 14:45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 14:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.28.2020 14:45	
o-Terphenyl	84-15-1	97	%	70-135	07.28.2020 14:45	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-7 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-011	Date Collected:	07.22.2020 13:55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 13:11	Basis:	Wet Weight
Seq Number:	3132886			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.28.2020 16:25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.28.2020 16:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	07.28.2020 16:25	
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.28.2020 16:25	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-7 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-012	Date Collected:	07.22.2020 13:55		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 12:56	Basis:	Wet Weight
Seq Number:	3132880			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**287**	9.94	mg/kg	07.28.2020 16:26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	07.28.2020 13:15	Basis:	Wet Weight
Seq Number:	3132881			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.28.2020 15:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.28.2020 15:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.28.2020 15:25	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.28.2020 15:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.28.2020 15:25	
o-Terphenyl	84-15-1	99	%	70-135	07.28.2020 15:25	

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16" Line Strike

Sample Id:	**HA-7 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-012	Date Collected:	07.22.2020 13:55		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 13:11	Basis:	Wet Weight
Seq Number:	3132886			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.28.2020 16:47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 16:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.28.2020 16:47	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.28.2020 16:47	

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Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-8 (0-1)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-013 Date Collected: 07.22.2020 14:17

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2800**	50.1	mg/kg	07.28.2020 16:33		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132881 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.28.2020 15:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.28.2020 15:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.28.2020 15:45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.28.2020 15:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.28.2020 15:45	
o-Terphenyl	84-15-1	96	%	70-135	07.28.2020 15:45	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-8 (0-1)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-013	Date Collected:	07.22.2020 14:17		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 13:11	Basis:	Wet Weight
Seq Number:	3132886			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.28.2020 17:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 17:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.28.2020 17:10	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.28.2020 17:10	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id: **HA-8 (2-3)** Matrix: Soil Date Received:07.23.2020 17:09

Lab Sample Id: 668117-014 Date Collected: 07.22.2020 14:17

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 07.28.2020 12:56 Basis: Wet Weight

Seq Number: 3132880 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2050**	50.2	mg/kg	07.28.2020 16:40		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 07.28.2020 13:15 Basis: Wet Weight

Seq Number: 3132881 NO_CERT#

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.28.2020 16:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.28.2020 16:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.28.2020 16:05	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.28.2020 16:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.28.2020 16:05	
o-Terphenyl	84-15-1	98	%	70-135	07.28.2020 16:05	

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Certificate of Analytical Results 668117

Terracon-Lubbock, Lubbock, TX

16" Line Strike

Sample Id:	**HA-8 (2-3)**	Matrix:	Soil	Date Received:	07.23.2020 17:09
Lab Sample Id:	668117-014	Date Collected:	07.22.2020 14:17		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	07.28.2020 13:11	Basis:	Wet Weight
Seq Number:	3132886			NO_CERT#	

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.28.2020 17:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.28.2020 17:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.28.2020 17:32	
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.28.2020 17:32	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

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QC Summary 668117

Terracon-Lubbock

16" Line Strike

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132880 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708215-1-BLK — LCS Sample Id: 7708215-1-BKS — LCSD Sample Id: 7708215-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	269	108	265	106	90-110	1	20	mg/kg	07.28.2020 13:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132880 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668117-008 — MS Sample Id: 668117-008 S — MSD Sample Id: 668117-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8870	202	9070	99	9090	109	90-110	0	20	mg/kg	07.28.2020 15:37	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132880 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668345-009 — MS Sample Id: 668345-009 S — MSD Sample Id: 668345-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1090	200	1280	95	1290	100	90-110	1	20	mg/kg	07.28.2020 13:52	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132869 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708266-1-BLK — LCS Sample Id: 7708266-1-BKS — LCSD Sample Id: 7708266-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	926	93	917	92	70-135	1	35	mg/kg	07.28.2020 10:01	
Diesel Range Organics (DRO)	<50.0	1000	1000	100	1010	101	70-135	1	35	mg/kg	07.28.2020 10:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		112		110		70-135	%	07.28.2020 10:01
o-Terphenyl	96		103		106		70-135	%	07.28.2020 10:01

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132881 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708272-1-BLK — LCS Sample Id: 7708272-1-BKS — LCSD Sample Id: 7708272-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	1060	106	70-135	3	35	mg/kg	07.28.2020 10:01	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1120	112	70-135	5	35	mg/kg	07.28.2020 10:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		122		119		70-135	%	07.28.2020 10:01
o-Terphenyl	103		109		113		70-135	%	07.28.2020 10:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

QC Summary 668117

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Terracon-Lubbock

16" Line Strike

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132869 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708266-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.28.2020 09:40	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132881 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708272-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.28.2020 09:40	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132869 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668311-001 — MS Sample Id: 668311-001 S — MSD Sample Id: 668311-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	890	89	882	88	70-135	1	35	mg/kg	07.28.2020 11:01	
Diesel Range Organics (DRO)	1240	1000	2090	85	2030	79	70-135	3	35	mg/kg	07.28.2020 11:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		106		70-135	%	07.28.2020 11:01
o-Terphenyl	107		102		70-135	%	07.28.2020 11:01

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132881 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668311-002 — MS Sample Id: 668311-002 S — MSD Sample Id: 668311-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	1140	114	1050	104	70-135	8	35	mg/kg	07.28.2020 11:01	
Diesel Range Organics (DRO)	1830	1000	2870	104	2580	74	70-135	11	35	mg/kg	07.28.2020 11:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		116		70-135	%	07.28.2020 11:01
o-Terphenyl	111		102		70-135	%	07.28.2020 11:01

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

Final 1.000

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QC Summary 668117

Terracon-Lubbock

16" Line Strike

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3132941 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708218-1-BLK — LCS Sample Id: 7708218-1-BKS — LCSD Sample Id: 7708218-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.101	101	70-130	0	35	mg/kg	07.28.2020 11:40	
Toluene	<0.00200	0.100	0.0962	96	0.0940	94	70-130	2	35	mg/kg	07.28.2020 11:40	
Ethylbenzene	<0.00200	0.100	0.0991	99	0.0998	100	71-129	1	35	mg/kg	07.28.2020 11:40	
m,p-Xylenes	<0.00400	0.200	0.204	102	0.201	101	70-135	1	35	mg/kg	07.28.2020 11:40	
o-Xylene	<0.00200	0.100	0.102	102	0.101	101	71-133	1	35	mg/kg	07.28.2020 11:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		101		97		70-130	%	07.28.2020 11:40
4-Bromofluorobenzene	97		100		97		70-130	%	07.28.2020 11:40

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3132886 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708219-1-BLK — LCS Sample Id: 7708219-1-BKS — LCSD Sample Id: 7708219-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.116	116	70-130	4	35	mg/kg	07.28.2020 13:59	
Toluene	<0.00200	0.100	0.107	107	0.110	110	70-130	3	35	mg/kg	07.28.2020 13:59	
Ethylbenzene	<0.00200	0.100	0.100	100	0.104	104	71-129	4	35	mg/kg	07.28.2020 13:59	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.212	106	70-135	3	35	mg/kg	07.28.2020 13:59	
o-Xylene	<0.00200	0.100	0.0996	100	0.103	103	71-133	3	35	mg/kg	07.28.2020 13:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	07.28.2020 13:59
4-Bromofluorobenzene	98		102		101		70-130	%	07.28.2020 13:59

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3132886 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668117-010 — MS Sample Id: 668117-010 S — MSD Sample Id: 668117-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.128	128	0.127	127	70-130	1	35	mg/kg	07.28.2020 14:44	
Toluene	<0.00201	0.100	0.122	122	0.121	121	70-130	1	35	mg/kg	07.28.2020 14:44	
Ethylbenzene	<0.00201	0.100	0.115	115	0.114	114	71-129	1	35	mg/kg	07.28.2020 14:44	
m,p-Xylenes	<0.00402	0.201	0.234	116	0.232	116	70-135	1	35	mg/kg	07.28.2020 14:44	
o-Xylene	<0.00201	0.100	0.114	114	0.113	113	71-133	1	35	mg/kg	07.28.2020 14:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	07.28.2020 14:44
4-Bromofluorobenzene	104		104		70-130	%	07.28.2020 14:44

MS/MSD Percent Recovery — [D] = 100*(C-A) / B
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery — [D] = 100 * (C) / [B]
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 668117

Terracon-Lubbock

16" Line Strike

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A

Seq Number: 3132941 Matrix: Soil Date Prep: 07.28.2020

Parent Sample Id: 668311-001 MS Sample Id: 668311-001 S MSD Sample Id: 668311-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00894	0.101	0.102	92	0.106	97	70-130	4	35	mg/kg	07.28.2020 13:01	
Toluene	0.00265	0.101	0.0976	94	0.0957	93	70-130	2	35	mg/kg	07.28.2020 13:01	
Ethylbenzene	0.0101	0.101	0.103	92	0.0906	81	71-129	13	35	mg/kg	07.28.2020 13:01	
m,p-Xylenes	0.00501	0.202	0.213	103	0.197	96	70-135	8	35	mg/kg	07.28.2020 13:01	
o-Xylene	0.00796	0.101	0.107	98	0.0992	91	71-133	8	35	mg/kg	07.28.2020 13:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		100		70-130	%	07.28.2020 13:01
4-Bromofluorobenzene	101		101		70-130	%	07.28.2020 13:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

CHAIN OF CUSTODY RECORD 668117

Terracon

Laboratory: Xenco
Address:

Office Location: Lubbock
Phone:
Contact: (806) 794-1296
Project Manager: Joseph Guesnier
SRS #:
Sampler's Name: Paige Gaona
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C) 5.3/5.17 IR 4

Project Number: AR207115
Project Name: 16" Line Strike

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)	Lab Sample ID
S	7/22/2020	11:50		x	HA-1 (0-1)			1	x	x	x	668117-001
S	7/22/2020	11:50		x	HA-1 (2-3)			1	x	x	x	-002
S	7/22/2020	12:11		x	HA-2 (0-1)			1	x	x	x	-003
S	7/22/2020	12:32		x	HA-3 (0-1)			1	x	x	x	-004
S	7/22/2020	12:32		x	HA-3 (2-3)			1	x	x	x	-005
S	7/22/2020	12:53		x	HA-4 (0-1)			1	x	x	x	-006
S	7/22/2020	12:53		x	HA-4 (2-3)			1	x	x	x	-007
S	7/22/2020	13:09		x	HA-5 (0-1)			1	x	x	x	-008
S	7/22/2020	13:30		x	HA-6 (0-1)			1	x	x	x	-009
S	7/22/2020	13:30		x	HA-6 (2-3)			1	x	x	x	-010
S	7/22/2020	13:55		x	HA-7 (0-1)			1	x	x	x	-011
S	7/22/2020	13:55		x	HA-7 (2-3)			1	x	x	x	-012

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	7/23	1220	Received by (Signature)	7/23/20	12:30
Relinquished by (Signature)	7/23	5:09	Received by (Signature)	7/23/2020	1709
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:

e-mail results to:
joseph.guesnier@terracon.com
erin.loyd@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 _____

~~15.8/15.67~~ 5.3/5.17
TRL 7/23/2020

668117

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address:

Office Location: Lubbock
Phone:
Contact: (806) 794-1296
SRS #:

Project Manager: Joseph Guesnier
Sampler's Name: Paige Gaona
Sampler's Signature

Project Number: AR207115
Project Name: 16" Line Strike

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): 5.3/5.2 IR

Page 2 of 2 TKL

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass				BTEX (EPA Method 8021B)	TPH Extended 8015	Chloride (EPA Method 300)					Lab Sample ID
S	7/22/2020	14:17		x	HA-8 (0-1)			1				x	x	x					668117-013
S	7/22/2020	14:17		x	HA-8 (2-3)			1				x	x	x					668117-014

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

	Date	Time		Date	Time
Relinquished by (Signature)	7/23/20	1220	Received by (Signature)	7/23/20	12:30
Relinquished by (Signature)	7/23/20	5:09	Received by (Signature)	7/23/20	1709
Relinquished by (Signature)			Received by (Signature)		
Relinquished by (Signature)			Received by (Signature)		

NOTES:

e-mail results to:
joseph.guesnier@terracon.com
erin.loyd@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 _____

~~15.8/15.7~~
TKL 7/23/2020

Inter-Office Shipment

IOS Number : 67720

Date/Time: 07.27.2020
Lab# From: **Lubbock**
Lab# To: **Carlsbad**

Created by: Michael J Turner
Delivery Priority:
Air Bill No.:

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
668117-001	S	HA-1 (0-1)	07.22.2020 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-001	S	HA-1 (0-1)	07.22.2020 11:50	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-001	S	HA-1 (0-1)	07.22.2020 11:50	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-002	S	HA-1 (2-3)	07.22.2020 11:50	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-002	S	HA-1 (2-3)	07.22.2020 11:50	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-002	S	HA-1 (2-3)	07.22.2020 11:50	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-003	S	HA-2 (0-1)	07.22.2020 12:11	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-003	S	HA-2 (0-1)	07.22.2020 12:11	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-003	S	HA-2 (0-1)	07.22.2020 12:11	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-004	S	HA-3 (0-1)	07.22.2020 12:32	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-004	S	HA-3 (0-1)	07.22.2020 12:32	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-004	S	HA-3 (0-1)	07.22.2020 12:32	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-005	S	HA-3 (2-3)	07.22.2020 12:32	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-005	S	HA-3 (2-3)	07.22.2020 12:32	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-005	S	HA-3 (2-3)	07.22.2020 12:32	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-006	S	HA-4 (0-1)	07.22.2020 12:53	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-006	S	HA-4 (0-1)	07.22.2020 12:53	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-006	S	HA-4 (0-1)	07.22.2020 12:53	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-007	S	HA-4 (2-3)	07.22.2020 12:53	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-007	S	HA-4 (2-3)	07.22.2020 12:53	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-007	S	HA-4 (2-3)	07.22.2020 12:53	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-008	S	HA-5 (0-1)	07.22.2020 13:09	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-008	S	HA-5 (0-1)	07.22.2020 13:09	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-008	S	HA-5 (0-1)	07.22.2020 13:09	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-009	S	HA-6 (0-1)	07.22.2020 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	

Inter-Office Shipment

IOS Number : 67720

Date/Time: 07.27.2020
Lab# From: **Lubbock**
Lab# To: **Carlsbad**

Created by: Michael J Turner
Delivery Priority:
Air Bill No.:

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
668117-009	S	HA-6 (0-1)	07.22.2020 13:30	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-009	S	HA-6 (0-1)	07.22.2020 13:30	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-010	S	HA-6 (2-3)	07.22.2020 13:30	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-010	S	HA-6 (2-3)	07.22.2020 13:30	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-010	S	HA-6 (2-3)	07.22.2020 13:30	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-011	S	HA-7 (0-1)	07.22.2020 13:55	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-011	S	HA-7 (0-1)	07.22.2020 13:55	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-011	S	HA-7 (0-1)	07.22.2020 13:55	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-012	S	HA-7 (2-3)	07.22.2020 13:55	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-012	S	HA-7 (2-3)	07.22.2020 13:55	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-012	S	HA-7 (2-3)	07.22.2020 13:55	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-013	S	HA-8 (0-1)	07.22.2020 14:17	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	
668117-013	S	HA-8 (0-1)	07.22.2020 14:17	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-013	S	HA-8 (0-1)	07.22.2020 14:17	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-014	S	HA-8 (2-3)	07.22.2020 14:17	SW8021B	BTEX by EPA 8021B	07.29.2020	08.05.2020	JKR	BR4FBZ BZ BZME EBZ	
668117-014	S	HA-8 (2-3)	07.22.2020 14:17	E300_CL	Chloride by EPA 300	07.29.2020	08.19.2020	JKR	CL	
668117-014	S	HA-8 (2-3)	07.22.2020 14:17	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.05.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 07.27.2020

Received By: Elizabeth McClellan

Date Received: 07.28.2020

Cooler Temperature: 1.2

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Carlsbad

IOS #: 67720

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : T-NM-007

Sent By: Michael J Turner **Date Sent:** 07.27.2020 08.46 AM

Received By: Elizabeth McClellan **Date Received:** 07.28.2020 11.01 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	1.2
#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?	**Yes**	
#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: 07.28.2020

Elizabeth McClellan

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.23.2020 05.09.00 PM

Work Order #: 668117

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	5.2	
#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**	Placed in freezer upon arrival.
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Carlsbad
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 07.24.2020

Checklist reviewed by: Jessica Kramer Date: 07.27.2020

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Certificate of Analysis Summary 668301

Terracon-Lubbock, Lubbock, TX

Project Name: Morris Boyd

Project Id: AR197312
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Mon 07.27.2020 16:36
Report Date: 07.29.2020 15:55
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	668301-001					
	Field Id:	EW-1.1					
	Depth:	2-2.5					
	Matrix:	SOIL					
	Sampled:	07.24.2020 11:00					
BTEX by EPA 8021B SUB: T104704400-20-20	***Extracted:***	07.27.2020 16:45					
	Analyzed:	07.28.2020 20:25					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00399 0.00399					
o-Xylene		<0.00200 0.00200					
Xylenes, Total		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300 SUB: T104704400-20-20	***Extracted:***	07.28.2020 14:20					
	Analyzed:	07.29.2020 00:42					
	Units/RL:	mg/kg RL					
Chloride		232 25.0					
TPH by SW8015 Mod SUB: T104704400-20-20	***Extracted:***	07.28.2020 16:00					
	Analyzed:	07.28.2020 22:22					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0					
Diesel Range Organics (DRO)		<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					
Total TPH		<50.0 50.0					

BRL - Below Reporting Limit

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

Jessica Kramer

eurofins | Environment Testing Xenco

Analytical Report 668301

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Morris Boyd

AR197312

07.29.2020

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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07.29.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **668301**
Morris Boyd
Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 668301. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 668301 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 668301

Terracon-Lubbock, Lubbock, TX

Morris Boyd

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
EW-1.1	S	07.24.2020 11:00	2 - 2.5	668301-001

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CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Morris Boyd

Project ID: *AR197312*
Work Order Number(s): *668301*

Report Date: *07.29.2020*
Date Received: *07.27.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 668301

Terracon-Lubbock, Lubbock, TX

Morris Boyd

Sample Id:	**EW-1.1**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668301-001	Date Collected:	07.24.2020 11:00	Sample Depth:	2 - 2.5

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.28.2020 14:20	Basis:	Wet Weight
Seq Number:	3132874			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**232**	25.0	mg/kg	07.29.2020 00:42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.28.2020 16:00	Basis:	Wet Weight
Seq Number:	3132917			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.28.2020 22:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 22:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 22:22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 22:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	07.28.2020 22:22	
o-Terphenyl	84-15-1	112	%	70-130	07.28.2020 22:22	

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Certificate of Analytical Results 668301

Terracon-Lubbock, Lubbock, TX

Morris Boyd

Sample Id:	**EW-1.1**	Matrix:	Soil	Date Received:	07.27.2020 16:36
Lab Sample Id:	668301-001	Date Collected:	07.24.2020 11:00	Sample Depth:	2 - 2.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	AMF			% Moisture:	
Analyst:	AMF	Date Prep:	07.27.2020 16:45	Basis:	Wet Weight
Seq Number:	3132827			SUB:	T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.28.2020 20:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.28.2020 20:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.28.2020 20:25	
4-Bromofluorobenzene	460-00-4	126	%	70-130	07.28.2020 20:25	

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Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 668301

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Terracon-Lubbock

Morris Boyd

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132874 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708211-1-BLK — LCS Sample Id: 7708211-1-BKS — LCSD Sample Id: 7708211-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	241	96	241	96	90-110	0	20	mg/kg	07.29.2020 00:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132874 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668296-006 — MS Sample Id: 668296-006 S — MSD Sample Id: 668296-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.18	250	256	100	255	100	90-110	0	20	mg/kg	07.29.2020 00:23	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3132874 — Matrix: Soil — Date Prep: 07.28.2020
Parent Sample Id: 668305-012 — MS Sample Id: 668305-012 S — MSD Sample Id: 668305-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.9	248	269	99	269	99	90-110	0	20	mg/kg	07.29.2020 01:52	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132917 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708255-1-BLK — LCS Sample Id: 7708255-1-BKS — LCSD Sample Id: 7708255-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	1110	111	70-130	6	20	mg/kg	07.28.2020 21:44	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1080	108	70-130	2	20	mg/kg	07.28.2020 21:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		116		124		70-130	%	07.28.2020 21:44
o-Terphenyl	126		111		81		70-130	%	07.28.2020 21:44

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3132917 — Matrix: Solid — Date Prep: 07.28.2020
MB Sample Id: 7708255-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.28.2020 21:26	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Final 1.000

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QC Summary 668301

Terracon-Lubbock

Morris Boyd

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3132917 Matrix: Soil Date Prep: 07.28.2020
Parent Sample Id: 668301-001 MS Sample Id: 668301-001 S MSD Sample Id: 668301-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1010	101	969	97	70-130	4	20	mg/kg	07.28.2020 22:41	
Diesel Range Organics (DRO)	<49.9	997	977	98	936	94	70-130	4	20	mg/kg	07.28.2020 22:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		130		70-130	%	07.28.2020 22:41
o-Terphenyl	128		123		70-130	%	07.28.2020 22:41

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3132827 Matrix: Solid Date Prep: 07.27.2020
MB Sample Id: 7708224-1-BLK LCS Sample Id: 7708224-1-BKS LCSD Sample Id: 7708224-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.111	111	0.104	104	70-130	7	35	mg/kg	07.28.2020 10:10	
Toluene	<0.00200	0.100	0.0992	99	0.0912	91	70-130	8	35	mg/kg	07.28.2020 10:10	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.0882	88	70-130	7	35	mg/kg	07.28.2020 10:10	
m,p-Xylenes	<0.00400	0.200	0.169	85	0.169	85	70-130	0	35	mg/kg	07.28.2020 10:10	
o-Xylene	<0.00200	0.100	0.0837	84	0.0844	84	70-130	1	35	mg/kg	07.28.2020 10:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		99		100		70-130	%	07.28.2020 10:10
4-Bromofluorobenzene	97		95		94		70-130	%	07.28.2020 10:10

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3132827 Matrix: Soil Date Prep: 07.27.2020
Parent Sample Id: 668271-006 MS Sample Id: 668271-006 S MSD Sample Id: 668271-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.104	104	0.113	113	70-130	8	35	mg/kg	07.28.2020 10:51	
Toluene	<0.00200	0.0998	0.0959	96	0.102	102	70-130	6	35	mg/kg	07.28.2020 10:51	
Ethylbenzene	<0.00200	0.0998	0.0945	95	0.0996	100	70-130	5	35	mg/kg	07.28.2020 10:51	
m,p-Xylenes	<0.00399	0.200	0.180	90	0.193	97	70-130	7	35	mg/kg	07.28.2020 10:51	
o-Xylene	<0.00200	0.0998	0.0877	88	0.0939	94	70-130	7	35	mg/kg	07.28.2020 10:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		103		70-130	%	07.28.2020 10:51
4-Bromofluorobenzene	100		102		70-130	%	07.28.2020 10:51

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

CHAIN OF CUSTODY RECORD 668301

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Phone:
Contact: J. Guesnier 806-544-9276
SRS #:

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

Project Number: AR197312
Project Name: Morris Boyd

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:

TEMP OF COOLER WHEN RECEIVED (°C): -1.0/-1.13

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
S	7/24/2020	11:00		X	EW-1.1	2	2.5	X				X	X	X		668301-001

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
	7-27-20	4:35		7/27/20	16:36
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 Energy Partners

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

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

Inter-Office Shipment

IOS Number : 67754

Date/Time:	07.27.2020	Created by:	Michael J Turner	Please send report to:	Jessica Kramer
Lab# From:	**Lubbock**	Delivery Priority:		Address:	6701 Aberdeen, Suite 9 Lubbock, TX 79424
Lab# To:	**Midland**	Air Bill No.:	771104404257	E-Mail:	jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
668301-001	S	EW-1.1	07.24.2020 11:00	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.07.2020	JKR	PHCC10C28 PHCC28C3	
668301-001	S	EW-1.1	07.24.2020 11:00	SW8021B	BTEX by EPA 8021B	07.29.2020	08.07.2020	JKR	BR4FBZ BZ BZME EBZ	
668301-001	S	EW-1.1	07.24.2020 11:00	E300_CL	Chloride by EPA 300	07.29.2020	08.21.2020	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Michael J Turner

Date Relinquished: 07.27.2020

Received By: Brianna Teel

Date Received: 07.28.2020

Cooler Temperature: 0.4

Eurofins Xenco, LLC

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 67754

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : IR-8

Sent By: Michael J Turner **Date Sent:** 07.27.2020 04.54 PM

Received By: Brianna Teel **Date Received:** 07.28.2020 10.15 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 07.28.2020

Brianna Teel

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.27.2020 04.36.00 PM

Work Order #: 668301

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

Temperature Measuring device used : IR-4

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	-1.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Michael J Turner Date: 07.27.2020

Checklist reviewed by: Jessica Kramer Date: 07.28.2020

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-465-1
Laboratory Sample Delivery Group: -AR207115
Client Project/Site: Cabo Wabo Line Release

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Joseph Guesnier

JKramer

Authorized for release by:
4/21/2021 4:21:08 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

Jessica Kramer
Project Manager
4/21/2021 4:21:08 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Laboratory Job ID: 820-465-1
SDG: -AR207115

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Job ID: 820-465-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-465-1

Receipt
The samples were received on 4/16/2021 4:43 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.9°C

GC VOA
Method 8021B: Surrogate recovery for the following samples were outside control limits: HA-3.1 (2-3) (820-465-9) and HA-6.1 (0-1) (820-465-13). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike duplicate (MSD) recoveries for preparation batch 880-2040 and analytical batch 880-2073 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-1 (5-5.5)

Lab Sample ID: 820-465-1
Matrix: Solid
Date Collected: 04/14/21 12:00
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
m-Xylene & p-Xylene	<0.00398	U F1	0.00398		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
o-Xylene	<0.00199	U F1	0.00199		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		04/20/21 11:00	04/21/21 01:03	1
Total BTEX	<0.00398	U F1	0.00398		mg/Kg		04/20/21 11:00	04/21/21 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:03*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:03*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	49.9		mg/Kg		04/20/21 13:48	04/21/21 01:43	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 01:43	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 01:43	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*04/20/21 13:48*	*04/21/21 01:43*	*1*
o-Terphenyl	*108*		*70 - 130*	*04/20/21 13:48*	*04/21/21 01:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1360**		4.99		mg/Kg			04/20/21 16:59	1

Client Sample ID: CS-1 (2.5-3)

Lab Sample ID: 820-465-2
Matrix: Solid
Date Collected: 04/14/21 12:02
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:24	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:24*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:24*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 02:47	1

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-1 (2.5-3)

Lab Sample ID: 820-465-2
Matrix: Solid
Date Collected: 04/14/21 12:02
Date Received: 04/16/21 16:43

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 02:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 02:47	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 02:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*04/20/21 13:48*	*04/21/21 02:47*	*1*
o-Terphenyl	*98*		*70 - 130*	*04/20/21 13:48*	*04/21/21 02:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1590**		25.2		mg/Kg			04/21/21 10:49	5

Client Sample ID: CS-2 (5.5-6)

Lab Sample ID: 820-465-3
Matrix: Solid
Date Collected: 04/14/21 12:04
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:44	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:44*	*1*
1,4-Difluorobenzene (Surr)	*121*		*70 - 130*	*04/20/21 11:00*	*04/21/21 01:44*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 03:08	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 03:08	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 03:08	1
Total TPH	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 03:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:08*	*1*
o-Terphenyl	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53.7**		5.02		mg/Kg			04/20/21 17:19	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-2 (2.5-3)

Date Collected: 04/14/21 12:06
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 02:05	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 02:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:05*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:05*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 03:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 03:29	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 03:29	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:29*	*1*
o-Terphenyl	*108*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.0**		4.98		mg/Kg			04/20/21 17:25	1

Client Sample ID: CS-3 (5-5.5)

Date Collected: 04/14/21 12:08
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		04/20/21 11:00	04/21/21 02:26	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		04/20/21 11:00	04/21/21 02:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:26*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:26*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 03:50	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-3 (5-5.5)

Lab Sample ID: 820-465-5
Matrix: Solid
Date Collected: 04/14/21 12:08
Date Received: 04/16/21 16:43

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 03:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 03:50	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:50*	*1*
o-Terphenyl	*113*		*70 - 130*	*04/20/21 13:48*	*04/21/21 03:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**157**		4.95		mg/Kg			04/20/21 17:30	1

Client Sample ID: CS-3 (2.5-3)

Lab Sample ID: 820-465-6
Matrix: Solid
Date Collected: 04/14/21 12:10
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 02:46	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:46*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*04/20/21 11:00*	*04/21/21 02:46*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:11	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:11*	*1*
o-Terphenyl	*115*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**523**		5.05		mg/Kg			04/20/21 17:45	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-2.1 (0-1)

Lab Sample ID: 820-465-7
Matrix: Solid
Date Collected: 04/14/21 12:12
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/20/21 11:00	04/21/21 03:07	1
Total BTEX	<0.00403	U	0.00403		mg/Kg		04/20/21 11:00	04/21/21 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:07*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:07*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:32	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:32	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:32*	*1*
o-Terphenyl	*109*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.84**		4.98		mg/Kg			04/20/21 17:50	1

Client Sample ID: HA-3.1 (0-1)

Lab Sample ID: 820-465-8
Matrix: Solid
Date Collected: 04/14/21 12:14
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:28	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:28*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:28*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 04:54	1

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-3.1 (0-1)

Lab Sample ID: 820-465-8
Matrix: Solid
Date Collected: 04/14/21 12:14
Date Received: 04/16/21 16:43

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 04:54	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 04:54	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*117*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:54*	*1*
o-Terphenyl	*113*		*70 - 130*	*04/20/21 13:48*	*04/21/21 04:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**18.1**		4.97		mg/Kg			04/20/21 17:55	1

Client Sample ID: HA-3.1 (2-3)

Lab Sample ID: 820-465-9
Matrix: Solid
Date Collected: 04/14/21 12:16
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:48	1
Total BTEX	<0.00401	U	0.00401		mg/Kg		04/20/21 11:00	04/21/21 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:48*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*04/20/21 11:00*	*04/21/21 03:48*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 05:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 05:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 05:15	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 05:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*04/20/21 13:48*	*04/21/21 05:15*	*1*
o-Terphenyl	*113*		*70 - 130*	*04/20/21 13:48*	*04/21/21 05:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.3**		4.95		mg/Kg			04/20/21 18:00	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-4.1 (0-1)

Lab Sample ID: 820-465-10
Matrix: Solid
Date Collected: 04/14/21 12:18
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		04/20/21 11:00	04/21/21 04:09	1
Total BTEX	<0.00404	U	0.00404		mg/Kg		04/20/21 11:00	04/21/21 04:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*04/20/21 11:00*	*04/21/21 04:09*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*04/20/21 11:00*	*04/21/21 04:09*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 05:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 05:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 05:36	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 05:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*04/20/21 13:48*	*04/21/21 05:36*	*1*
o-Terphenyl	*118*		*70 - 130*	*04/20/21 13:48*	*04/21/21 05:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**62.1**		5.00		mg/Kg			04/20/21 18:05	1

Client Sample ID: HA-4.1 (2-3)

Lab Sample ID: 820-465-11
Matrix: Solid
Date Collected: 04/14/21 12:20
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 05:31	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 05:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*04/20/21 11:00*	*04/21/21 05:31*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*04/20/21 11:00*	*04/21/21 05:31*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 06:18	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-4.1 (2-3)

Date Collected: 04/14/21 12:20
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-11
Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 06:18	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 06:18	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 06:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*04/20/21 13:48*	*04/21/21 06:18*	*1*
o-Terphenyl	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 06:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44.8**	**F1**	4.96		mg/Kg			04/20/21 18:10	1

Client Sample ID: HA-5.1 (0-1)

Date Collected: 04/14/21 12:22
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-12
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 05:51	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 05:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*04/20/21 11:00*	*04/21/21 05:51*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*04/20/21 11:00*	*04/21/21 05:51*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 06:39	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 06:39	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 06:39	1
Total TPH	<49.8	U	49.8		mg/Kg		04/20/21 13:48	04/21/21 06:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*114*		*70 - 130*	*04/20/21 13:48*	*04/21/21 06:39*	*1*
o-Terphenyl	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 06:39*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**252**		5.04		mg/Kg			04/20/21 18:25	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-6.1 (0-1)

Lab Sample ID: 820-465-13
Matrix: Solid
Date Collected: 04/14/21 12:24
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00751**		0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
Ethylbenzene	**0.0144**		0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
o-Xylene	**0.00326**		0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:12	1
Total BTEX	**0.0252**		0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*158*	*S1+*	*70 - 130*	*04/20/21 11:00*	*04/21/21 06:12*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*04/20/21 11:00*	*04/21/21 06:12*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:00	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*116*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:00*	*1*
o-Terphenyl	*115*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**79.2**		5.03		mg/Kg			04/20/21 18:31	1

Client Sample ID: HA-6.1 (2-3)

Lab Sample ID: 820-465-14
Matrix: Solid
Date Collected: 04/14/21 12:26
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
Toluene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 06:33	1
Total BTEX	<0.00402	U	0.00402		mg/Kg		04/20/21 11:00	04/21/21 06:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*04/20/21 11:00*	*04/21/21 06:33*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/20/21 11:00*	*04/21/21 06:33*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:21	1

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-6.1 (2-3)

Lab Sample ID: 820-465-14
Matrix: Solid
Date Collected: 04/14/21 12:26
Date Received: 04/16/21 16:43

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:21	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:21	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*113*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:21*	*1*
o-Terphenyl	*112*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34.1**		5.05		mg/Kg			04/20/21 18:46	1

Client Sample ID: HA-7.1 (0-1)

Lab Sample ID: 820-465-15
Matrix: Solid
Date Collected: 04/14/21 12:28
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:53	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/20/21 11:00	04/21/21 06:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*04/20/21 11:00*	*04/21/21 06:53*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*04/20/21 11:00*	*04/21/21 06:53*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:43	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:43	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:43	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 07:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*110*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:43*	*1*
o-Terphenyl	*109*		*70 - 130*	*04/20/21 13:48*	*04/21/21 07:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.0**		5.05		mg/Kg			04/20/21 18:51	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-8.1 (0-1)

Lab Sample ID: 820-465-16
Matrix: Solid
Date Collected: 04/14/21 12:30
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 07:14	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 07:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*04/20/21 11:00*	*04/21/21 07:14*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*04/20/21 11:00*	*04/21/21 07:14*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 08:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 08:04	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 08:04	1
Total TPH	<49.9	U	49.9		mg/Kg		04/20/21 13:48	04/21/21 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*04/20/21 13:48*	*04/21/21 08:04*	*1*
o-Terphenyl	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 08:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**331**		5.00		mg/Kg			04/20/21 18:56	1

Client Sample ID: HA-8.1 (2-3)

Lab Sample ID: 820-465-17
Matrix: Solid
Date Collected: 04/14/21 12:32
Date Received: 04/16/21 16:43

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 07:35	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/20/21 11:00	04/21/21 07:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*04/20/21 11:00*	*04/21/21 07:35*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*04/20/21 11:00*	*04/21/21 07:35*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 08:25	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-8.1 (2-3)
Date Collected: 04/14/21 12:32
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-17
Matrix: Solid

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 08:25	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 08:25	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 08:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*04/20/21 13:48*	*04/21/21 08:25*	*1*
o-Terphenyl	*109*		*70 - 130*	*04/20/21 13:48*	*04/21/21 08:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**458**		4.98		mg/Kg			04/20/21 19:01	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
820-465-1	CS-1 (5-5.5)	92	110
820-465-1 MS	CS-1 (5-5.5)	93	104
820-465-1 MSD	CS-1 (5-5.5)	95	107
820-465-2	CS-1 (2.5-3)	97	106
820-465-3	CS-2 (5.5-6)	98	121
820-465-4	CS-2 (2.5-3)	94	108
820-465-5	CS-3 (5-5.5)	97	111
820-465-6	CS-3 (2.5-3)	103	117
820-465-7	HA-2.1 (0-1)	106	112
820-465-8	HA-3.1 (0-1)	96	109
820-465-9	HA-3.1 (2-3)	97	78
820-465-10	HA-4.1 (0-1)	102	109
820-465-11	HA-4.1 (2-3)	96	108
820-465-12	HA-5.1 (0-1)	95	106
820-465-13	HA-6.1 (0-1)	158 S1+	107
820-465-14	HA-6.1 (2-3)	107	103
820-465-15	HA-7.1 (0-1)	97	107
820-465-16	HA-8.1 (0-1)	94	106
820-465-17	HA-8.1 (2-3)	107	110
LCS 880-1988/1-A	Lab Control Sample	95	110
LCSD 880-1988/2-A	Lab Control Sample Dup	90	107
MB 880-1988/5-A	Method Blank	111	103
MB 880-2024/5-A	Method Blank	118	102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
820-465-1	CS-1 (5-5.5)	112	108
820-465-1 MS	CS-1 (5-5.5)	115	97
820-465-1 MSD	CS-1 (5-5.5)	122	99
820-465-2	CS-1 (2.5-3)	101	98
820-465-3	CS-2 (5.5-6)	113	111
820-465-4	CS-2 (2.5-3)	110	108
820-465-5	CS-3 (5-5.5)	120	113
820-465-6	CS-3 (2.5-3)	115	115
820-465-7	HA-2.1 (0-1)	107	109
820-465-8	HA-3.1 (0-1)	117	113
820-465-9	HA-3.1 (2-3)	119	113
820-465-10	HA-4.1 (0-1)	122	118
820-465-11	HA-4.1 (2-3)	114	111
820-465-12	HA-5.1 (0-1)	114	111
820-465-13	HA-6.1 (0-1)	116	115
820-465-14	HA-6.1 (2-3)	113	112

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)								
820-465-15	HA-7.1 (0-1)	110	109								
820-465-16	HA-8.1 (0-1)	119	111								
820-465-17	HA-8.1 (2-3)	112	109								
LCS 880-2048/2-A	Lab Control Sample	123	106								
LCSD 880-2048/3-A	Lab Control Sample Dup	123	108								
MB 880-2048/1-A	Method Blank	111	111								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-1988/5-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 1988

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 00:41	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/20/21 11:00	04/21/21 00:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*04/20/21 11:00*	*04/21/21 00:41*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*04/20/21 11:00*	*04/21/21 00:41*	*1*

Lab Sample ID: LCS 880-1988/1-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 1988

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08816		mg/Kg		88	70 - 130		
Toluene			0.100	0.09490		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09285		mg/Kg		93	70 - 130		
m-Xylene & p-Xylene			0.200	0.1849		mg/Kg		92	70 - 130		
o-Xylene			0.100	0.09345		mg/Kg		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-1988/2-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 1988

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08097		mg/Kg		81	70 - 130	9	35
Toluene			0.100	0.08926		mg/Kg		89	70 - 130	6	35
Ethylbenzene			0.100	0.08495		mg/Kg		85	70 - 130	9	35
m-Xylene & p-Xylene			0.200	0.1699		mg/Kg		85	70 - 130	8	35
o-Xylene			0.100	0.08504		mg/Kg		85	70 - 130	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 820-465-1 MS
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 1988

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1	0.0996	0.06572	F1	mg/Kg		66	70 - 130		

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-465-1 MS
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 1988

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00199	U F1	0.0996	0.07230		mg/Kg		73	70 - 130
Ethylbenzene	<0.00199	U F1	0.0996	0.07145		mg/Kg		72	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1432		mg/Kg		72	70 - 130
o-Xylene	<0.00199	U F1	0.0996	0.06997		mg/Kg		70	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 820-465-1 MSD
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 1988

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.05967	F1	mg/Kg		60	70 - 130	10	35
Toluene	<0.00199	U F1	0.100	0.06741	F1	mg/Kg		67	70 - 130	7	35
Ethylbenzene	<0.00199	U F1	0.100	0.06374	F1	mg/Kg		64	70 - 130	11	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1286	F1	mg/Kg		64	70 - 130	11	35
o-Xylene	<0.00199	U F1	0.100	0.06261	F1	mg/Kg		63	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 880-2024/5-A
Matrix: Solid
Analysis Batch: 2025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/20/21 09:01	04/20/21 12:19	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/20/21 09:01	04/20/21 12:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*04/20/21 09:01*	*04/20/21 12:19*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*04/20/21 09:01*	*04/20/21 12:19*	*1*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-2048/1-A
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2048

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 00:39	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 00:39	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 00:39	1
Total TPH	<50.0	U	50.0		mg/Kg		04/20/21 13:48	04/21/21 00:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 00:39*	*1*
o-Terphenyl	*111*		*70 - 130*	*04/20/21 13:48*	*04/21/21 00:39*	*1*

Lab Sample ID: LCS 880-2048/2-A
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2048

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1253		mg/Kg		125	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1068		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*106*		*70 - 130*

Lab Sample ID: LCSD 880-2048/3-A
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2048

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1235		mg/Kg		124	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1065		mg/Kg		106	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Lab Sample ID: 820-465-1 MS
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 2048

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1224		mg/Kg		123	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1131		mg/Kg		113	70 - 130		

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 820-465-1 MS
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 2048

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 820-465-1 MSD
Matrix: Solid
Analysis Batch: 2044

Client Sample ID: CS-1 (5-5.5)
Prep Type: Total/NA
Prep Batch: 2048

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1	998	1353	F1	mg/Kg		136	70 - 130	10	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1186		mg/Kg		119	70 - 130	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	122		70 - 130
o-Terphenyl	99		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2040/1-A
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/20/21 16:44	1

Lab Sample ID: LCS 880-2040/2-A
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	261.2		mg/Kg		104	90 - 110

Lab Sample ID: LCSD 880-2040/3-A
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	261.7		mg/Kg		105	90 - 110	0	20

Lab Sample ID: 820-465-1 MS
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: CS-1 (5-5.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1360		250	1584	E 4	mg/Kg		89	90 - 110

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 820-465-1 MSD
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: CS-1 (5-5.5)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1360		250	1554	E 4	mg/Kg		76	90 - 110	2	20

Lab Sample ID: 820-465-11 MS
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: HA-4.1 (2-3)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	44.8	F1	248	287.4		mg/Kg		98	90 - 110

Lab Sample ID: 820-465-11 MSD
Matrix: Solid
Analysis Batch: 2073

Client Sample ID: HA-4.1 (2-3)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	44.8	F1	248	257.0	F1	mg/Kg		86	90 - 110	11	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

GC VOA

Prep Batch: 1988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Total/NA	Solid	5035	
820-465-2	CS-1 (2.5-3)	Total/NA	Solid	5035	
820-465-3	CS-2 (5.5-6)	Total/NA	Solid	5035	
820-465-4	CS-2 (2.5-3)	Total/NA	Solid	5035	
820-465-5	CS-3 (5-5.5)	Total/NA	Solid	5035	
820-465-6	CS-3 (2.5-3)	Total/NA	Solid	5035	
820-465-7	HA-2.1 (0-1)	Total/NA	Solid	5035	
820-465-8	HA-3.1 (0-1)	Total/NA	Solid	5035	
820-465-9	HA-3.1 (2-3)	Total/NA	Solid	5035	
820-465-10	HA-4.1 (0-1)	Total/NA	Solid	5035	
820-465-11	HA-4.1 (2-3)	Total/NA	Solid	5035	
820-465-12	HA-5.1 (0-1)	Total/NA	Solid	5035	
820-465-13	HA-6.1 (0-1)	Total/NA	Solid	5035	
820-465-14	HA-6.1 (2-3)	Total/NA	Solid	5035	
820-465-15	HA-7.1 (0-1)	Total/NA	Solid	5035	
820-465-16	HA-8.1 (0-1)	Total/NA	Solid	5035	
820-465-17	HA-8.1 (2-3)	Total/NA	Solid	5035	
MB 880-1988/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-1988/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-1988/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-465-1 MS	CS-1 (5-5.5)	Total/NA	Solid	5035	
820-465-1 MSD	CS-1 (5-5.5)	Total/NA	Solid	5035	

Prep Batch: 2024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2024/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 2025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Total/NA	Solid	8021B	1988
820-465-2	CS-1 (2.5-3)	Total/NA	Solid	8021B	1988
820-465-3	CS-2 (5.5-6)	Total/NA	Solid	8021B	1988
820-465-4	CS-2 (2.5-3)	Total/NA	Solid	8021B	1988
820-465-5	CS-3 (5-5.5)	Total/NA	Solid	8021B	1988
820-465-6	CS-3 (2.5-3)	Total/NA	Solid	8021B	1988
820-465-7	HA-2.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-8	HA-3.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-9	HA-3.1 (2-3)	Total/NA	Solid	8021B	1988
820-465-10	HA-4.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-11	HA-4.1 (2-3)	Total/NA	Solid	8021B	1988
820-465-12	HA-5.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-13	HA-6.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-14	HA-6.1 (2-3)	Total/NA	Solid	8021B	1988
820-465-15	HA-7.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-16	HA-8.1 (0-1)	Total/NA	Solid	8021B	1988
820-465-17	HA-8.1 (2-3)	Total/NA	Solid	8021B	1988
MB 880-1988/5-A	Method Blank	Total/NA	Solid	8021B	1988
MB 880-2024/5-A	Method Blank	Total/NA	Solid	8021B	2024
LCS 880-1988/1-A	Lab Control Sample	Total/NA	Solid	8021B	1988
LCSD 880-1988/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	1988
820-465-1 MS	CS-1 (5-5.5)	Total/NA	Solid	8021B	1988

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

GC VOA (Continued)

Analysis Batch: 2025 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1 MSD	CS-1 (5-5.5)	Total/NA	Solid	8021B	1988

GC Semi VOA

Analysis Batch: 2044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Total/NA	Solid	8015B NM	2048
820-465-2	CS-1 (2.5-3)	Total/NA	Solid	8015B NM	2048
820-465-3	CS-2 (5.5-6)	Total/NA	Solid	8015B NM	2048
820-465-4	CS-2 (2.5-3)	Total/NA	Solid	8015B NM	2048
820-465-5	CS-3 (5-5.5)	Total/NA	Solid	8015B NM	2048
820-465-6	CS-3 (2.5-3)	Total/NA	Solid	8015B NM	2048
820-465-7	HA-2.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-8	HA-3.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-9	HA-3.1 (2-3)	Total/NA	Solid	8015B NM	2048
820-465-10	HA-4.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-11	HA-4.1 (2-3)	Total/NA	Solid	8015B NM	2048
820-465-12	HA-5.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-13	HA-6.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-14	HA-6.1 (2-3)	Total/NA	Solid	8015B NM	2048
820-465-15	HA-7.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-16	HA-8.1 (0-1)	Total/NA	Solid	8015B NM	2048
820-465-17	HA-8.1 (2-3)	Total/NA	Solid	8015B NM	2048
MB 880-2048/1-A	Method Blank	Total/NA	Solid	8015B NM	2048
LCS 880-2048/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2048
LCSD 880-2048/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2048
820-465-1 MS	CS-1 (5-5.5)	Total/NA	Solid	8015B NM	2048
820-465-1 MSD	CS-1 (5-5.5)	Total/NA	Solid	8015B NM	2048

Prep Batch: 2048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Total/NA	Solid	8015NM Prep	
820-465-2	CS-1 (2.5-3)	Total/NA	Solid	8015NM Prep	
820-465-3	CS-2 (5.5-6)	Total/NA	Solid	8015NM Prep	
820-465-4	CS-2 (2.5-3)	Total/NA	Solid	8015NM Prep	
820-465-5	CS-3 (5-5.5)	Total/NA	Solid	8015NM Prep	
820-465-6	CS-3 (2.5-3)	Total/NA	Solid	8015NM Prep	
820-465-7	HA-2.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-8	HA-3.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-9	HA-3.1 (2-3)	Total/NA	Solid	8015NM Prep	
820-465-10	HA-4.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-11	HA-4.1 (2-3)	Total/NA	Solid	8015NM Prep	
820-465-12	HA-5.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-13	HA-6.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-14	HA-6.1 (2-3)	Total/NA	Solid	8015NM Prep	
820-465-15	HA-7.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-16	HA-8.1 (0-1)	Total/NA	Solid	8015NM Prep	
820-465-17	HA-8.1 (2-3)	Total/NA	Solid	8015NM Prep	
MB 880-2048/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2048/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2048/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

GC Semi VOA (Continued)

Prep Batch: 2048 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1 MS	CS-1 (5-5.5)	Total/NA	Solid	8015NM Prep	
820-465-1 MSD	CS-1 (5-5.5)	Total/NA	Solid	8015NM Prep	

HPLC/IC

Leach Batch: 2040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Soluble	Solid	DI Leach	
820-465-2	CS-1 (2.5-3)	Soluble	Solid	DI Leach	
820-465-3	CS-2 (5.5-6)	Soluble	Solid	DI Leach	
820-465-4	CS-2 (2.5-3)	Soluble	Solid	DI Leach	
820-465-5	CS-3 (5-5.5)	Soluble	Solid	DI Leach	
820-465-6	CS-3 (2.5-3)	Soluble	Solid	DI Leach	
820-465-7	HA-2.1 (0-1)	Soluble	Solid	DI Leach	
820-465-8	HA-3.1 (0-1)	Soluble	Solid	DI Leach	
820-465-9	HA-3.1 (2-3)	Soluble	Solid	DI Leach	
820-465-10	HA-4.1 (0-1)	Soluble	Solid	DI Leach	
820-465-11	HA-4.1 (2-3)	Soluble	Solid	DI Leach	
820-465-12	HA-5.1 (0-1)	Soluble	Solid	DI Leach	
820-465-13	HA-6.1 (0-1)	Soluble	Solid	DI Leach	
820-465-14	HA-6.1 (2-3)	Soluble	Solid	DI Leach	
820-465-15	HA-7.1 (0-1)	Soluble	Solid	DI Leach	
820-465-16	HA-8.1 (0-1)	Soluble	Solid	DI Leach	
820-465-17	HA-8.1 (2-3)	Soluble	Solid	DI Leach	
MB 880-2040/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2040/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2040/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
820-465-1 MS	CS-1 (5-5.5)	Soluble	Solid	DI Leach	
820-465-1 MSD	CS-1 (5-5.5)	Soluble	Solid	DI Leach	
820-465-11 MS	HA-4.1 (2-3)	Soluble	Solid	DI Leach	
820-465-11 MSD	HA-4.1 (2-3)	Soluble	Solid	DI Leach	

Analysis Batch: 2073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-465-1	CS-1 (5-5.5)	Soluble	Solid	300.0	2040
820-465-2	CS-1 (2.5-3)	Soluble	Solid	300.0	2040
820-465-3	CS-2 (5.5-6)	Soluble	Solid	300.0	2040
820-465-4	CS-2 (2.5-3)	Soluble	Solid	300.0	2040
820-465-5	CS-3 (5-5.5)	Soluble	Solid	300.0	2040
820-465-6	CS-3 (2.5-3)	Soluble	Solid	300.0	2040
820-465-7	HA-2.1 (0-1)	Soluble	Solid	300.0	2040
820-465-8	HA-3.1 (0-1)	Soluble	Solid	300.0	2040
820-465-9	HA-3.1 (2-3)	Soluble	Solid	300.0	2040
820-465-10	HA-4.1 (0-1)	Soluble	Solid	300.0	2040
820-465-11	HA-4.1 (2-3)	Soluble	Solid	300.0	2040
820-465-12	HA-5.1 (0-1)	Soluble	Solid	300.0	2040
820-465-13	HA-6.1 (0-1)	Soluble	Solid	300.0	2040
820-465-14	HA-6.1 (2-3)	Soluble	Solid	300.0	2040
820-465-15	HA-7.1 (0-1)	Soluble	Solid	300.0	2040
820-465-16	HA-8.1 (0-1)	Soluble	Solid	300.0	2040
820-465-17	HA-8.1 (2-3)	Soluble	Solid	300.0	2040

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

HPLC/IC (Continued)

Analysis Batch: 2073 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2040/1-A	Method Blank	Soluble	Solid	300.0	2040
LCS 880-2040/2-A	Lab Control Sample	Soluble	Solid	300.0	2040
LCSD 880-2040/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2040
820-465-1 MS	CS-1 (5-5.5)	Soluble	Solid	300.0	2040
820-465-1 MSD	CS-1 (5-5.5)	Soluble	Solid	300.0	2040
820-465-11 MS	HA-4.1 (2-3)	Soluble	Solid	300.0	2040
820-465-11 MSD	HA-4.1 (2-3)	Soluble	Solid	300.0	2040

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-1 (5-5.5)

Lab Sample ID: 820-465-1
Matrix: Solid
Date Collected: 04/14/21 12:00
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 01:03	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 01:43	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 16:59	WP	XM

Client Sample ID: CS-1 (2.5-3)

Lab Sample ID: 820-465-2
Matrix: Solid
Date Collected: 04/14/21 12:02
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 01:24	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 02:47	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		5	2073	04/21/21 10:49	WP	XM

Client Sample ID: CS-2 (5.5-6)

Lab Sample ID: 820-465-3
Matrix: Solid
Date Collected: 04/14/21 12:04
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 01:44	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 03:08	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:19	WP	XM

Client Sample ID: CS-2 (2.5-3)

Lab Sample ID: 820-465-4
Matrix: Solid
Date Collected: 04/14/21 12:06
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 02:05	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 03:29	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:25	WP	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: CS-3 (5-5.5)

Lab Sample ID: 820-465-5
Matrix: Solid
Date Collected: 04/14/21 12:08
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 02:26	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 03:50	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:30	WP	XM

Client Sample ID: CS-3 (2.5-3)

Lab Sample ID: 820-465-6
Matrix: Solid
Date Collected: 04/14/21 12:10
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 02:46	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 04:11	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:45	WP	XM

Client Sample ID: HA-2.1 (0-1)

Lab Sample ID: 820-465-7
Matrix: Solid
Date Collected: 04/14/21 12:12
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 03:07	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 04:32	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:50	WP	XM

Client Sample ID: HA-3.1 (0-1)

Lab Sample ID: 820-465-8
Matrix: Solid
Date Collected: 04/14/21 12:14
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 03:28	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 04:54	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 17:55	WP	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-3.1 (2-3)

Lab Sample ID: 820-465-9
Matrix: Solid
Date Collected: 04/14/21 12:16
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 03:48	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 05:15	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:00	WP	XM

Client Sample ID: HA-4.1 (0-1)

Lab Sample ID: 820-465-10
Matrix: Solid
Date Collected: 04/14/21 12:18
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 04:09	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 05:36	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:05	WP	XM

Client Sample ID: HA-4.1 (2-3)

Lab Sample ID: 820-465-11
Matrix: Solid
Date Collected: 04/14/21 12:20
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 05:31	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 06:18	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:10	WP	XM

Client Sample ID: HA-5.1 (0-1)

Lab Sample ID: 820-465-12
Matrix: Solid
Date Collected: 04/14/21 12:22
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 05:51	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 06:39	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:25	WP	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-6.1 (0-1)

Lab Sample ID: 820-465-13
Matrix: Solid
Date Collected: 04/14/21 12:24
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 06:12	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 07:00	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:31	WP	XM

Client Sample ID: HA-6.1 (2-3)

Lab Sample ID: 820-465-14
Matrix: Solid
Date Collected: 04/14/21 12:26
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 06:33	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 07:21	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:46	WP	XM

Client Sample ID: HA-7.1 (0-1)

Lab Sample ID: 820-465-15
Matrix: Solid
Date Collected: 04/14/21 12:28
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 06:53	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 07:43	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:51	WP	XM

Client Sample ID: HA-8.1 (0-1)

Lab Sample ID: 820-465-16
Matrix: Solid
Date Collected: 04/14/21 12:30
Date Received: 04/16/21 16:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 07:14	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 08:04	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 18:56	WP	XM

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Client Sample ID: HA-8.1 (2-3)

Date Collected: 04/14/21 12:32
Date Received: 04/16/21 16:43

Lab Sample ID: 820-465-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			1988	04/20/21 11:00	KL	XM
Total/NA	Analysis	8021B		1	2025	04/21/21 07:35	KL	XM
Total/NA	Prep	8015NM Prep			2048	04/20/21 13:48	DM	XM
Total/NA	Analysis	8015B NM		1	2044	04/21/21 08:25	AJ	XM
Soluble	Leach	DI Leach			2040	04/20/21 12:58	CH	XM
Soluble	Analysis	300.0		1	2073	04/20/21 19:01	WP	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Release

Job ID: 820-465-1
SDG: -AR207115

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
820-465-1	CS-1 (5-5.5)	Solid	04/14/21 12:00	04/16/21 16:43	
820-465-2	CS-1 (2.5-3)	Solid	04/14/21 12:02	04/16/21 16:43	
820-465-3	CS-2 (5.5-6)	Solid	04/14/21 12:04	04/16/21 16:43	
820-465-4	CS-2 (2.5-3)	Solid	04/14/21 12:06	04/16/21 16:43	
820-465-5	CS-3 (5-5.5)	Solid	04/14/21 12:08	04/16/21 16:43	
820-465-6	CS-3 (2.5-3)	Solid	04/14/21 12:10	04/16/21 16:43	
820-465-7	HA-2.1 (0-1)	Solid	04/14/21 12:12	04/16/21 16:43	
820-465-8	HA-3.1 (0-1)	Solid	04/14/21 12:14	04/16/21 16:43	
820-465-9	HA-3.1 (2-3)	Solid	04/14/21 12:16	04/16/21 16:43	
820-465-10	HA-4.1 (0-1)	Solid	04/14/21 12:18	04/16/21 16:43	
820-465-11	HA-4.1 (2-3)	Solid	04/14/21 12:20	04/16/21 16:43	
820-465-12	HA-5.1 (0-1)	Solid	04/14/21 12:22	04/16/21 16:43	
820-465-13	HA-6.1 (0-1)	Solid	04/14/21 12:24	04/16/21 16:43	
820-465-14	HA-6.1 (2-3)	Solid	04/14/21 12:26	04/16/21 16:43	
820-465-15	HA-7.1 (0-1)	Solid	04/14/21 12:28	04/16/21 16:43	
820-465-16	HA-8.1 (0-1)	Solid	04/14/21 12:30	04/16/21 16:43	
820-465-17	HA-8.1 (2-3)	Solid	04/14/21 12:32	04/16/21 16:43	

Loc: 820
465

820-465 Chain of Custody

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact: J. Guesnier 806-544-9276
Project Manager: J. Guesnier
SRS #:
Sampler's Name: J. Guesnier
Sampler's Signature

ANALYSIS REQUEST

TEMP OF COOLER WHEN RECEIVED (°C): 5.9/5.88 IR-4

Project Number: AR207115
Project Name: Cabo Wabo Line Release

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	60 ml VOA	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	4/14/2021	12:00	X		CS-1 (5-5.5)	5'	5.5'	X				X	X	X	820-465-1
S	4/14/2021	12:02	X		CS-1 (2.5-3)	2.5'	3'	X				X	X	X	2
S	4/14/2021	12:04	X		CS-2 (5.5-6)	5.5'	6'	X				X	X	X	3
S	4/14/2021	12:06	X		CS-2 (2.5-3)	2.5'	3'	X				X	X	X	4
S	4/14/2021	12:08	X		CS-3 (5-5.5)	5'	5.5'	X				X	X	X	5
S	4/14/2021	12:10	X		CS-3 (2.5-3)	2.5'	3'	X				X	X	X	6
S	4/14/2021	12:12		X	HA-2.1 (0-1)	0	1'	X				X	X	X	7
S	4/14/2021	12:14		X	HA-3.1 (0-1)	0	1'	X				X	X	X	8
S	4/14/2021	12:16		X	HA-3.1 (2-3)	2'	3'	X				X	X	X	9
S	4/14/2021	12:18		X	HA-4.1 (0-1)	0	1'	X				X	X	X	10
S	4/14/2021	12:20		X	HA-4.1 (2-3)	2'	3'	X				X	X	X	11
S	4/14/2021	12:22		X	HA-5.1 (0-1)	0	1'	X				X	X	X	12
S	4/14/2021	12:24		X	HA-6.1 (0-1)	0	1'	X				X	X	X	13
S	4/14/2021	12:26		X	HA-6.1 (2-3)	2'	3'	X				X	X	X	14
S	4/14/2021	12:28		X	HA-7.1 (0-1)	0	1'	X				X	X	X	15
S	4/14/2021	12:30		X	HA-8.1 (0-1)	0	1'	X				X	X	X	16
S	4/14/2021	12:32		X	HA-8.1 (2-3)	2'	3'	X				X	X	X	17

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

TRRP Laboratory Review Checklist ☐ Yes ☐ No

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
	4/16/21	1:43		4/16/21	1643

NOTES: Client: Solaris Water Midstream

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

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 820-587 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-465-1
Address: 1211 W Florida Ave,	Due Date Requested: 4/21/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: Cabo Wabo Line Release-AR207115--Terracon	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

A HCL, B NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F MeOH, G - Amchlor, H Ascorbic Acid, I Ice, J DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O AsNaO2, P - Na2O4S, Q Na2SO3, R - Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V - MCAA, W pH 4-5, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
CS-1 (5-5 5) (820-465-1)	4/14/21	12.00 Mountain		Solid			X	X	X	1	
CS-1 (2.5-3) (820-465-2)	4/14/21	12 02 Mountain		Solid			X	X	X	1	
CS-2 (5 5-6) (820-465-3)	4/14/21	12 04 Mountain		Solid			X	X	X	1	
CS-2 (2.5-3) (820-465-4)	4/14/21	12 06 Mountain		Solid			X	X	X	1	
CS-3 (5-5 5) (820-465-5)	4/14/21	12 08 Mountain		Solid			X	X	X	1	
CS-3 (2.5-3) (820-465-6)	4/14/21	12 10 Mountain		Solid			X	X	X	1	
HA-2 1 (0-1) (820-465-7)	4/14/21	12 12 Mountain		Solid			X	X	X	1	
HA-3 1 (0-1) (820-465-8)	4/14/21	12:14 Mountain		Solid			X	X	X	1	
HA-3 1 (2-3) (820-465-9)	4/14/21	12:16 Mountain		Solid			X	X	X	1	

Note Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	Return To Client / Disposal By Lab / Archive For ____ Months
Deliverable Requested I II, III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	4/19/21 9:53		[signature] Kramer	4/20/21	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 1245	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-465-1
SDG Number: -AR207115

Login Number: 465
List Number: 1
Creator: Turner, Michael

List Source: Eurofins Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-465-1
SDG Number: -AR207115

Login Number: 465
List Number: 2
Creator: Kramer, Jessica

List Source: Eurofins Midland
List Creation: 04/20/21 12:17 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-674-1
Laboratory Sample Delivery Group: AR207115
Client Project/Site: Cabo Wabo
Revision: 1

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Joseph Guesnier

JKramer

Authorized for release by:
5/14/2021 10:28:39 AM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

JKramer

Jessica Kramer
Project Manager
5/14/2021 10:28:39 AM

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Laboratory Job ID: 820-674-1
SDG: AR207115

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Job ID: 820-674-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-674-1

REVISION

The report being provided is a revision of the original report sent on 5/13/2021. The report (revision 1) is being revised due to Per client email, requesting re run on TPH 8015.

Report revision history

Receipt
The sample was received on 5/11/2021 2:45 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.1°C

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Client Sample ID: CS-1.1 (2.5-3

Date Collected: 05/10/21 14:55
Date Received: 05/11/21 14:45

Lab Sample ID: 820-674-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
Toluene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		05/12/21 13:07	05/12/21 16:51	1
Total BTEX	<0.00397	U	0.00397		mg/Kg		05/12/21 13:07	05/12/21 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:51*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:51*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 19:42	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 19:42	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 19:42	1
Total TPH	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 19:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*99*		*70 - 130*	*05/11/21 15:50*	*05/12/21 18:53*	*1*
o-Terphenyl	*114*		*70 - 130*	*05/11/21 15:50*	*05/12/21 18:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**481**		4.95		mg/Kg			05/12/21 20:08	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-674-1	CS-1.1 (2.5-3	103	95
820-674-1 MS	CS-1.1 (2.5-3	113	107
820-674-1 MSD	CS-1.1 (2.5-3	113	104
LCS 880-3028/1-A	Lab Control Sample	106	107
LCSD 880-3028/2-A	Lab Control Sample Dup	107	105
MB 880-3028/5-A	Method Blank	91	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
820-674-1	CS-1.1 (2.5-3	99	114
LCS 880-2989/2-A	Lab Control Sample	105	107
LCS 880-3065/2-A	Lab Control Sample	50 S1-	57 S1-
LCSD 880-2989/3-A	Lab Control Sample Dup	108	113
LCSD 880-3065/3-A	Lab Control Sample Dup	99	108
MB 880-2989/1-A	Method Blank	106	126
MB 880-3065/1-A	Method Blank	109	132 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3028/5-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		05/12/21 13:07	05/12/21 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:30*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*05/12/21 13:07*	*05/12/21 16:30*	*1*

Lab Sample ID: LCS 880-3028/1-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09171		mg/Kg		92	70 - 130
Toluene	0.100	0.08739		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.09124		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1943		mg/Kg		97	70 - 130
o-Xylene	0.100	0.1021		mg/Kg		102	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-3028/2-A
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3028

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1011		mg/Kg		101	70 - 130	10	35
Toluene	0.100	0.09671		mg/Kg		97	70 - 130	10	35
Ethylbenzene	0.100	0.1028		mg/Kg		103	70 - 130	12	35
m-Xylene & p-Xylene	0.200	0.2190		mg/Kg		109	70 - 130	12	35
o-Xylene	0.100	0.1134		mg/Kg		113	70 - 130	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: 820-674-1 MS
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: CS-1.1 (2.5-3
Prep Type: Total/NA
Prep Batch: 3028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U	0.100	0.08625		mg/Kg		86	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 820-674-1 MS
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: CS-1.1 (2.5-3
Prep Type: Total/NA
Prep Batch: 3028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	<0.00198	U	0.100	0.08130		mg/Kg		81	70 - 130
Ethylbenzene	<0.00198	U	0.100	0.08176		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00397	U	0.200	0.1788		mg/Kg		89	70 - 130
o-Xylene	<0.00198	U	0.100	0.09158		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 820-674-1 MSD
Matrix: Solid
Analysis Batch: 3029

Client Sample ID: CS-1.1 (2.5-3
Prep Type: Total/NA
Prep Batch: 3028

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U	0.0994	0.07911		mg/Kg		80	70 - 130	9	35
Toluene	<0.00198	U	0.0994	0.07707		mg/Kg		78	70 - 130	5	35
Ethylbenzene	<0.00198	U	0.0994	0.07740		mg/Kg		78	70 - 130	5	35
m-Xylene & p-Xylene	<0.00397	U	0.199	0.1686		mg/Kg		85	70 - 130	6	35
o-Xylene	<0.00198	U	0.0994	0.08659		mg/Kg		87	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-2989/1-A
Matrix: Solid
Analysis Batch: 3000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 2989

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/11/21 15:50	05/12/21 11:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/11/21 15:50	05/12/21 11:45	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/11/21 15:50	05/12/21 11:45	1
Total TPH	<50.0	U	50.0		mg/Kg		05/11/21 15:50	05/12/21 11:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*106*		*70 - 130*	*05/11/21 15:50*	*05/12/21 11:45*	*1*
o-Terphenyl	*126*		*70 - 130*	*05/11/21 15:50*	*05/12/21 11:45*	*1*

Lab Sample ID: LCS 880-2989/2-A
Matrix: Solid
Analysis Batch: 3000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2989

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	878.4		mg/Kg		88	70 - 130

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-2989/2-A
Matrix: Solid
Analysis Batch: 3000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 2989

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (Over C10-C28)			1000	1140		mg/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*107*		*70 - 130*

Lab Sample ID: LCSD 880-2989/3-A
Matrix: Solid
Analysis Batch: 3000

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 2989

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	843.5		mg/Kg		84	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1203		mg/Kg		120	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*108*		*70 - 130*
o-Terphenyl	*113*		*70 - 130*

Lab Sample ID: MB 880-3065/1-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3065

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 11:47	1
Total TPH	<50.0	U	50.0		mg/Kg		05/13/21 11:33	05/13/21 11:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*109*		*70 - 130*	*05/13/21 11:33*	*05/13/21 11:47*	*1*
o-Terphenyl	*132*	*S1+*	*70 - 130*	*05/13/21 11:33*	*05/13/21 11:47*	*1*

Lab Sample ID: LCS 880-3065/2-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3065

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	846.2		mg/Kg		85	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1085		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*50*	*S1-*	*70 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-3065/2-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3065

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*57*	*S1-*	*70 - 130*

Lab Sample ID: LCSD 880-3065/3-A
Matrix: Solid
Analysis Batch: 3067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3065

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	841.4		mg/Kg		84	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1039		mg/Kg		104	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*99*		*70 - 130*
o-Terphenyl	*108*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3018/1-A
Matrix: Solid
Analysis Batch: 3048

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/12/21 19:21	1

Lab Sample ID: LCS 880-3018/2-A
Matrix: Solid
Analysis Batch: 3048

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	247.5		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-3018/3-A
Matrix: Solid
Analysis Batch: 3048

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	244.0		mg/Kg		98	90 - 110	1	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

GC VOA

Prep Batch: 3028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	5035	
MB 880-3028/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3028/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3028/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
820-674-1 MS	CS-1.1 (2.5-3	Total/NA	Solid	5035	
820-674-1 MSD	CS-1.1 (2.5-3	Total/NA	Solid	5035	

Analysis Batch: 3029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	8021B	3028
MB 880-3028/5-A	Method Blank	Total/NA	Solid	8021B	3028
LCS 880-3028/1-A	Lab Control Sample	Total/NA	Solid	8021B	3028
LCSD 880-3028/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3028
820-674-1 MS	CS-1.1 (2.5-3	Total/NA	Solid	8021B	3028
820-674-1 MSD	CS-1.1 (2.5-3	Total/NA	Solid	8021B	3028

GC Semi VOA

Prep Batch: 2989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	8015NM Prep	
MB 880-2989/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2989/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2989/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	8015B NM	2989
MB 880-2989/1-A	Method Blank	Total/NA	Solid	8015B NM	2989
LCS 880-2989/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2989
LCSD 880-2989/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2989

Prep Batch: 3065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	8015NM Prep	
MB 880-3065/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3065/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3065/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 3067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Total/NA	Solid	8015B NM	3065
MB 880-3065/1-A	Method Blank	Total/NA	Solid	8015B NM	3065
LCS 880-3065/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3065
LCSD 880-3065/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3065

HPLC/IC

Leach Batch: 3018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Soluble	Solid	DI Leach	
MB 880-3018/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

HPLC/IC (Continued)

Leach Batch: 3018 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-3018/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3018/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 3048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-674-1	CS-1.1 (2.5-3	Soluble	Solid	300.0	3018
MB 880-3018/1-A	Method Blank	Soluble	Solid	300.0	3018
LCS 880-3018/2-A	Lab Control Sample	Soluble	Solid	300.0	3018
LCSD 880-3018/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3018

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Client Sample ID: CS-1.1 (2.5-3

Date Collected: 05/10/21 14:55
Date Received: 05/11/21 14:45

Lab Sample ID: 820-674-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3028	05/12/21 13:07	KL	XM
Total/NA	Analysis	8021B		1	3029	05/12/21 16:51	KL	XM
Total/NA	Prep	8015NM Prep			2989	05/11/21 15:50	AM	XM
Total/NA	Analysis	8015B NM		1	3000	05/12/21 18:53	AJ	XM
Total/NA	Prep	8015NM Prep			3065	05/13/21 11:33	DM	XM
Total/NA	Analysis	8015B NM		1	3067	05/13/21 19:42	AJ	XM
Soluble	Leach	DI Leach			3018	05/12/21 09:43	SC	XM
Soluble	Analysis	300.0		1	3048	05/12/21 20:08	CH	XM

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Laboratory: Eurofins Xenco, Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Total TPH
8021B	5035	Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DI Leach	Deionized Water Leaching Procedure	ASTM	XM

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XM = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo

Job ID: 820-674-1
SDG: AR207115

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
820-674-1	CS-1.1 (2.5-3	Solid	05/10/21 14:55	05/11/21 14:45	

CHAIN OF CUSTODY RECORD

Terracon

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

Office Location: Lubbock
Project Manager: J. Guesnier
Sampler's Name: J. Guesnier

Project Number: AR207115
Project Name: Cabo Wabo

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 2.1/2.08

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	BTEX (EPA Method 8021B)	TPH Extended 8015	Lab Sample ID
S	5/10/2021	14:55	x		CS-1.1 (2.5-3)	2.5'	3'	X				X	X	X	820-674-1

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:
	5-11-21	14:45		5/11/21	14:45
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

NOTES: Client: Solaris Water Midstream

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

820-674 Chain of Custody

Log: 820
674

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-911 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-674-1
Address: 1211 W Florida Ave	Due Date Requested: 5/13/2021			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Cabo Wabo--AR207115--Terracon	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H Ascorbic Acid, I - Ice, J DI Water, K - EDTA, L - EDA, M Hexane, N None, O - AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U - Acetone, V MCAA, W pH 4-5, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
CS-1 1 (2 5-3 (820-674-1)	5/10/21	14 55 Mountain		Solid			X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Xenco LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II, III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time.	Method of Shipment:

Relinquished by:	Date/Time: 5/11/21 16:08	Company	Received by:	Date/Time: 5-12-21 11:30 AM	Company
Relinquished by:	Date/Time.	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 11/01/2020

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-674-1
SDG Number: AR207115

Login Number: 674
List Number: 1
Creator: Turner, Michael

List Source: Eurofins Lubbock

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-674-1
SDG Number: AR207115

Login Number: 674
List Number: 2
Creator: Copeland, Tatiana

List Source: Eurofins Midland
List Creation: 05/12/21 11:36 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-1677-1
Client Project/Site: Cabo Wabo Line Strike

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Erin Lloyd

JKramer

Authorized for release by:
8/25/2021 2:08:15 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

JKramer

Jessica Kramer
Project Manager
8/25/2021 2:08:15 PM

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Laboratory Job ID: 820-1677-1

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists Job ID: 820-1677-1
Project/Site: Cabo Wabo Line Strike

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Job ID: 820-1677-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-1677-1

Receipt
The samples were received on 8/20/2021 4:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -8.6°C

GC/MS VOA
Method 8260C: The following samples were diluted due to the nature of the sample matrix: (820-1660-A-9-E) and (820-1660-A-9-E MS). Elevated reporting limits (RLs) are provided. Sample was analyzed at 1x twice, but failed ISTD recovery both times; thus, sample was re-analyzed at 25x.

Method 8260C: The following samples were diluted due to it being sand: EB-1 (0-0.5) (820-1677-1) and (820-1677-A-1-D MS). Elevated reporting limits (RL) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-1 (0-0.5)

Lab Sample ID: 820-1677-1
Matrix: Solid
Date Collected: 08/18/21 13:30
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00101	U	0.00101		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
Toluene	<0.00503	U	0.00503		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
Ethylbenzene	<0.00101	U	0.00101		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
m,p-Xylenes	<0.00201	U	0.00201		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
o-Xylene	<0.00101	U	0.00101		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
Xylenes, Total	<0.00201	U	0.00201		mg/Kg		08/24/21 13:04	08/25/21 00:28	1
Total BTEX	<0.00503	U	0.00503		mg/Kg		08/24/21 13:04	08/25/21 00:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*56 - 150*	*08/24/21 13:04*	*08/25/21 00:07*	*25*
1,2-Dichloroethane-d4 (Surr)	*115*		*56 - 150*	*08/24/21 13:04*	*08/25/21 00:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*68 - 152*	*08/24/21 13:04*	*08/25/21 00:07*	*25*
4-Bromofluorobenzene (Surr)	*99*		*68 - 152*	*08/24/21 13:04*	*08/25/21 00:28*	*1*
Dibromofluoromethane (Surr)	*104*		*53 - 142*	*08/24/21 13:04*	*08/25/21 00:07*	*25*
Dibromofluoromethane (Surr)	*109*		*53 - 142*	*08/24/21 13:04*	*08/25/21 00:28*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*08/24/21 13:04*	*08/25/21 00:07*	*25*
Toluene-d8 (Surr)	*97*		*70 - 130*	*08/24/21 13:04*	*08/25/21 00:28*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		08/24/21 14:53	08/24/21 19:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		08/24/21 14:53	08/24/21 19:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		08/24/21 14:53	08/24/21 19:38	1
Total TPH	<49.9	U	49.9		mg/Kg		08/24/21 14:53	08/24/21 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*65 - 130*	*08/24/21 14:53*	*08/24/21 19:38*	*1*
o-Terphenyl	*119*		*65 - 130*	*08/24/21 14:53*	*08/24/21 19:38*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<9.98	U	9.98		mg/Kg		08/24/21 09:20	08/24/21 21:54	1

Client Sample ID: EB-1 (1.5-2)

Lab Sample ID: 820-1677-2
Matrix: Solid
Date Collected: 08/18/21 13:35
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
Toluene	<0.00502	U	0.00502		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
m,p-Xylenes	<0.00201	U	0.00201		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
o-Xylene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
Xylenes, Total	<0.00201	U	0.00201		mg/Kg		08/24/21 13:04	08/24/21 14:56	1
Total BTEX	<0.00502	U	0.00502		mg/Kg		08/24/21 13:04	08/24/21 14:56	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-1 (1.5-2)

Lab Sample ID: 820-1677-2

Date Collected: 08/18/21 13:35
Matrix: Solid
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		56 - 150	08/24/21 13:04	08/24/21 14:56	1
4-Bromofluorobenzene (Surr)	104		68 - 152	08/24/21 13:04	08/24/21 14:56	1
Dibromofluoromethane (Surr)	108		53 - 142	08/24/21 13:04	08/24/21 14:56	1
Toluene-d8 (Surr)	100		70 - 130	08/24/21 13:04	08/24/21 14:56	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		08/24/21 14:53	08/24/21 19:56	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/24/21 14:53	08/24/21 19:56	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/24/21 14:53	08/24/21 19:56	1
Total TPH	<49.7	U	49.7		mg/Kg		08/24/21 14:53	08/24/21 19:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		65 - 130	08/24/21 14:53	08/24/21 19:56	1
o-Terphenyl	118		65 - 130	08/24/21 14:53	08/24/21 19:56	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg		08/24/21 09:20	08/24/21 22:05	1

Client Sample ID: WB-1 (0-0.5)

Lab Sample ID: 820-1677-3

Date Collected: 08/18/21 13:40
Matrix: Solid
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
Toluene	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
o-Xylene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 15:16	1
Total BTEX	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 15:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		56 - 150	08/24/21 13:04	08/24/21 15:16	1
4-Bromofluorobenzene (Surr)	105		68 - 152	08/24/21 13:04	08/24/21 15:16	1
Dibromofluoromethane (Surr)	110		53 - 142	08/24/21 13:04	08/24/21 15:16	1
Toluene-d8 (Surr)	99		70 - 130	08/24/21 13:04	08/24/21 15:16	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:15	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:15	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:15	1
Total TPH	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:15	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: WB-1 (0-0.5)

Lab Sample ID: 820-1677-3
Matrix: Solid
Date Collected: 08/18/21 13:40
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:15*	*1*
o-Terphenyl	*115*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:15*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg		08/24/21 09:20	08/24/21 22:16	1

Client Sample ID: WB-1 (1.5-2)

Lab Sample ID: 820-1677-4
Matrix: Solid
Date Collected: 08/18/21 13:45
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000992	U	0.000992		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
Toluene	<0.00496	U	0.00496		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
Ethylbenzene	<0.000992	U	0.000992		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
m,p-Xylenes	<0.00198	U	0.00198		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
o-Xylene	<0.000992	U	0.000992		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
Xylenes, Total	<0.00198	U	0.00198		mg/Kg		08/24/21 13:04	08/24/21 15:36	1
Total BTEX	<0.00496	U	0.00496		mg/Kg		08/24/21 13:04	08/24/21 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*56 - 150*	*08/24/21 13:04*	*08/24/21 15:36*	*1*
4-Bromofluorobenzene (Surr)	*105*		*68 - 152*	*08/24/21 13:04*	*08/24/21 15:36*	*1*
Dibromofluoromethane (Surr)	*109*		*53 - 142*	*08/24/21 13:04*	*08/24/21 15:36*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*08/24/21 13:04*	*08/24/21 15:36*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	50.2		mg/Kg		08/24/21 14:53	08/24/21 20:34	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2		mg/Kg		08/24/21 14:53	08/24/21 20:34	1
OII Range Organics (Over C28-C36)	<50.2	U	50.2		mg/Kg		08/24/21 14:53	08/24/21 20:34	1
Total TPH	<50.2	U	50.2		mg/Kg		08/24/21 14:53	08/24/21 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:34*	*1*
o-Terphenyl	*111*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:34*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg		08/24/21 09:20	08/24/21 22:27	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-2 (0-0.5)

Lab Sample ID: 820-1677-5
Matrix: Solid

Date Collected: 08/18/21 13:50
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000990	U	0.000990		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
Toluene	<0.00495	U	0.00495		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
Ethylbenzene	<0.000990	U	0.000990		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
m,p-Xylenes	<0.00198	U	0.00198		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
o-Xylene	<0.000990	U	0.000990		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
Xylenes, Total	<0.00198	U	0.00198		mg/Kg		08/24/21 13:04	08/24/21 15:57	1
Total BTEX	<0.00495	U	0.00495		mg/Kg		08/24/21 13:04	08/24/21 15:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*56 - 150*	*08/24/21 13:04*	*08/24/21 15:57*	*1*
4-Bromofluorobenzene (Surr)	*111*		*68 - 152*	*08/24/21 13:04*	*08/24/21 15:57*	*1*
Dibromofluoromethane (Surr)	*106*		*53 - 142*	*08/24/21 13:04*	*08/24/21 15:57*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*08/24/21 13:04*	*08/24/21 15:57*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:53	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:53	1
OII Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:53	1
Total TPH	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:53*	*1*
o-Terphenyl	*116*		*65 - 130*	*08/24/21 14:53*	*08/24/21 20:53*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.1**		9.94		mg/Kg		08/24/21 09:20	08/24/21 22:38	1

Client Sample ID: EB-2 (1.5-2)

Lab Sample ID: 820-1677-6
Matrix: Solid

Date Collected: 08/18/21 13:55
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000994	U	0.000994		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
Toluene	<0.00497	U	0.00497		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
Ethylbenzene	<0.000994	U	0.000994		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
m,p-Xylenes	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
o-Xylene	<0.000994	U	0.000994		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/25/21 00:48	1
Total BTEX	<0.00497	U	0.00497		mg/Kg		08/24/21 13:04	08/25/21 00:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*56 - 150*	*08/24/21 13:04*	*08/25/21 00:48*	*1*
4-Bromofluorobenzene (Surr)	*103*		*68 - 152*	*08/24/21 13:04*	*08/25/21 00:48*	*1*
Dibromofluoromethane (Surr)	*108*		*53 - 142*	*08/24/21 13:04*	*08/25/21 00:48*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*08/24/21 13:04*	*08/25/21 00:48*	*1*

Eurofins Xenco, Lubbock

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-2 (1.5-2)

Lab Sample ID: 820-1677-6
Matrix: Solid
Date Collected: 08/18/21 13:55
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/24/21 14:53	08/24/21 21:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/21 14:53	08/24/21 21:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/21 14:53	08/24/21 21:11	1
Total TPH	<50.0	U	50.0		mg/Kg		08/24/21 14:53	08/24/21 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*100*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:11*	*1*
o-Terphenyl	*118*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:11*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.7**		9.88		mg/Kg		08/24/21 09:20	08/24/21 22:50	1

Client Sample ID: WB-2 (0-0.5)

Lab Sample ID: 820-1677-7
Matrix: Solid
Date Collected: 08/18/21 14:00
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000998	U	0.000998		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
Toluene	<0.00499	U	0.00499		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
Ethylbenzene	<0.000998	U	0.000998		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
o-Xylene	<0.000998	U	0.000998		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 16:38	1
Total BTEX	<0.00499	U	0.00499		mg/Kg		08/24/21 13:04	08/24/21 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*56 - 150*	*08/24/21 13:04*	*08/24/21 16:38*	*1*
4-Bromofluorobenzene (Surr)	*106*		*68 - 152*	*08/24/21 13:04*	*08/24/21 16:38*	*1*
Dibromofluoromethane (Surr)	*109*		*53 - 142*	*08/24/21 13:04*	*08/24/21 16:38*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*	*08/24/21 13:04*	*08/24/21 16:38*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 21:30	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 21:30	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 21:30	1
Total TPH	<50.1	U	50.1		mg/Kg		08/24/21 14:53	08/24/21 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*103*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:30*	*1*
o-Terphenyl	*120*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:30*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: WB-2 (0-0.5)

Lab Sample ID: 820-1677-7
Matrix: Solid
Date Collected: 08/18/21 14:00
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5850		100		mg/Kg		08/25/21 08:22	08/25/21 10:00	10

Client Sample ID: WB-2 (1.5-2)

Lab Sample ID: 820-1677-8
Matrix: Solid
Date Collected: 08/18/21 14:05
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
Toluene	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
o-Xylene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 16:58	1
Total BTEX	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*56 - 150*	*08/24/21 13:04*	*08/24/21 16:58*	*1*
4-Bromofluorobenzene (Surr)	*103*		*68 - 152*	*08/24/21 13:04*	*08/24/21 16:58*	*1*
Dibromofluoromethane (Surr)	*108*		*53 - 142*	*08/24/21 13:04*	*08/24/21 16:58*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*08/24/21 13:04*	*08/24/21 16:58*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/24/21 14:53	08/24/21 21:49	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/24/21 14:53	08/24/21 21:49	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/24/21 14:53	08/24/21 21:49	1
Total TPH	<49.8	U	49.8		mg/Kg		08/24/21 14:53	08/24/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:49*	*1*
o-Terphenyl	*114*		*65 - 130*	*08/24/21 14:53*	*08/24/21 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3820		10.0		mg/Kg		08/24/21 09:20	08/24/21 23:34	1

Client Sample ID: EB-3 (0-0.5)

Lab Sample ID: 820-1677-9
Matrix: Solid
Date Collected: 08/18/21 14:10
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 17:19	1
Toluene	<0.00498	U	0.00498		mg/Kg		08/24/21 13:04	08/24/21 17:19	1
Ethylbenzene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 17:19	1
m,p-Xylenes	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/24/21 17:19	1

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-3 (0-0.5)

Lab Sample ID: 820-1677-9
Matrix: Solid
Date Collected: 08/18/21 14:10
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 17:19	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/24/21 17:19	1
Total BTEX	<0.00498	U	0.00498		mg/Kg		08/24/21 13:04	08/24/21 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*56 - 150*	*08/24/21 13:04*	*08/24/21 17:19*	*1*
4-Bromofluorobenzene (Surr)	*104*		*68 - 152*	*08/24/21 13:04*	*08/24/21 17:19*	*1*
Dibromofluoromethane (Surr)	*103*		*53 - 142*	*08/24/21 13:04*	*08/24/21 17:19*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*	*08/24/21 13:04*	*08/24/21 17:19*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/24/21 14:53	08/24/21 22:08	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6		mg/Kg		08/24/21 14:53	08/24/21 22:08	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/24/21 14:53	08/24/21 22:08	1
Total TPH	<49.6	U	49.6		mg/Kg		08/24/21 14:53	08/24/21 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*65 - 130*	*08/24/21 14:53*	*08/24/21 22:08*	*1*
o-Terphenyl	*112*		*65 - 130*	*08/24/21 14:53*	*08/24/21 22:08*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**33.1**		9.96		mg/Kg		08/24/21 09:20	08/24/21 23:46	1

Client Sample ID: EB-3 (1.5-2)

Lab Sample ID: 820-1677-10
Matrix: Solid
Date Collected: 08/18/21 14:15
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
Toluene	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
o-Xylene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 17:39	1
Total BTEX	<0.00500	U	0.00500		mg/Kg		08/24/21 13:04	08/24/21 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*56 - 150*	*08/24/21 13:04*	*08/24/21 17:39*	*1*
4-Bromofluorobenzene (Surr)	*105*		*68 - 152*	*08/24/21 13:04*	*08/24/21 17:39*	*1*
Dibromofluoromethane (Surr)	*106*		*53 - 142*	*08/24/21 13:04*	*08/24/21 17:39*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*08/24/21 13:04*	*08/24/21 17:39*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-3 (1.5-2)

Lab Sample ID: 820-1677-10
Matrix: Solid

Date Collected: 08/18/21 14:15
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/24/21 15:06	08/24/21 23:41	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/24/21 15:06	08/24/21 23:41	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/24/21 15:06	08/24/21 23:41	1
Total TPH	<50.3	U	50.3		mg/Kg		08/24/21 15:06	08/24/21 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*102*		*65 - 130*	*08/24/21 15:06*	*08/24/21 23:41*	*1*
o-Terphenyl	*118*		*65 - 130*	*08/24/21 15:06*	*08/24/21 23:41*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2050**		10.0		mg/Kg		08/24/21 09:20	08/24/21 23:57	1

Client Sample ID: WB-3 (0-0.5)

Lab Sample ID: 820-1677-11
Matrix: Solid

Date Collected: 08/18/21 14:20
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
Toluene	<0.00498	U	0.00498		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
Ethylbenzene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
m,p-Xylenes	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
o-Xylene	<0.000996	U	0.000996		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
Xylenes, Total	<0.00199	U	0.00199		mg/Kg		08/24/21 13:04	08/24/21 18:00	1
Total BTEX	<0.00498	U	0.00498		mg/Kg		08/24/21 13:04	08/24/21 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*56 - 150*	*08/24/21 13:04*	*08/24/21 18:00*	*1*
4-Bromofluorobenzene (Surr)	*102*		*68 - 152*	*08/24/21 13:04*	*08/24/21 18:00*	*1*
Dibromofluoromethane (Surr)	*110*		*53 - 142*	*08/24/21 13:04*	*08/24/21 18:00*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*08/24/21 13:04*	*08/24/21 18:00*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/24/21 15:06	08/25/21 00:37	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/24/21 15:06	08/25/21 00:37	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/24/21 15:06	08/25/21 00:37	1
Total TPH	<49.8	U	49.8		mg/Kg		08/24/21 15:06	08/25/21 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*65 - 130*	*08/24/21 15:06*	*08/25/21 00:37*	*1*
o-Terphenyl	*113*		*65 - 130*	*08/24/21 15:06*	*08/25/21 00:37*	*1*

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: WB-3 (0-0.5)

Lab Sample ID: 820-1677-11
Matrix: Solid
Date Collected: 08/18/21 14:20
Date Received: 08/20/21 16:55
Sample Depth: 0 - 0.5

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.6		10.1		mg/Kg		08/24/21 09:20	08/25/21 00:08	1

Client Sample ID: WB-3 (1.5-2)

Lab Sample ID: 820-1677-12
Matrix: Solid
Date Collected: 08/18/21 14:25
Date Received: 08/20/21 16:55
Sample Depth: 1.5 - 2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
Toluene	<0.00501	U	0.00501		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
o-Xylene	<0.00100	U	0.00100		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg		08/24/21 13:04	08/24/21 18:20	1
Total BTEX	<0.00501	U	0.00501		mg/Kg		08/24/21 13:04	08/24/21 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*56 - 150*	*08/24/21 13:04*	*08/24/21 18:20*	*1*
4-Bromofluorobenzene (Surr)	*105*		*68 - 152*	*08/24/21 13:04*	*08/24/21 18:20*	*1*
Dibromofluoromethane (Surr)	*107*		*53 - 142*	*08/24/21 13:04*	*08/24/21 18:20*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*08/24/21 13:04*	*08/24/21 18:20*	*1*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		08/24/21 15:06	08/25/21 00:55	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		08/24/21 15:06	08/25/21 00:55	1
OII Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		08/24/21 15:06	08/25/21 00:55	1
Total TPH	<49.7	U	49.7		mg/Kg		08/24/21 15:06	08/25/21 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*65 - 130*	*08/24/21 15:06*	*08/25/21 00:55*	*1*
o-Terphenyl	*113*		*65 - 130*	*08/24/21 15:06*	*08/25/21 00:55*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.2		10.1		mg/Kg		08/24/21 09:20	08/25/21 00:19	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(56-150)	(68-152)	(53-142)	(70-130)
820-1660-A-9-E MS	Matrix Spike	98	100	101	103
820-1677-1	EB-1 (0-0.5)	115	99	109	97
820-1677-1	EB-1 (0-0.5)	108	101	104	100
820-1677-1 MS	EB-1 (0-0.5)	106	101	107	101
820-1677-2	EB-1 (1.5-2)	111	104	108	100
820-1677-3	WB-1 (0-0.5)	116	105	110	99
820-1677-4	WB-1 (1.5-2)	111	105	109	100
820-1677-5	EB-2 (0-0.5)	115	111	106	101
820-1677-6	EB-2 (1.5-2)	113	103	108	100
820-1677-7	WB-2 (0-0.5)	113	106	109	102
820-1677-8	WB-2 (1.5-2)	115	103	108	99
820-1677-9	EB-3 (0-0.5)	112	104	103	102
820-1677-10	EB-3 (1.5-2)	113	105	106	101
820-1677-11	WB-3 (0-0.5)	115	102	110	98
820-1677-12	WB-3 (1.5-2)	113	105	107	100
LCS 860-20026/3	Lab Control Sample	105	99	102	102
LCS 860-20125/3	Lab Control Sample	110	102	105	100
LCSD 860-20026/4	Lab Control Sample Dup	105	99	103	102
LCSD 860-20125/4	Lab Control Sample Dup	113	103	108	100
MB 860-20026/8	Method Blank	109	99	104	99
MB 860-20125/8	Method Blank	111	101	105	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(65-130)	(65-130)
820-1677-1	EB-1 (0-0.5)	102	119
820-1677-2	EB-1 (1.5-2)	102	118
820-1677-3	WB-1 (0-0.5)	98	115
820-1677-4	WB-1 (1.5-2)	96	111
820-1677-5	EB-2 (0-0.5)	100	116
820-1677-6	EB-2 (1.5-2)	100	118
820-1677-7	WB-2 (0-0.5)	103	120
820-1677-8	WB-2 (1.5-2)	98	114
820-1677-9	EB-3 (0-0.5)	96	112
820-1677-10	EB-3 (1.5-2)	102	118
820-1677-10 MS	EB-3 (1.5-2)	111	104
820-1677-10 MSD	EB-3 (1.5-2)	112	105
820-1677-11	WB-3 (0-0.5)	97	113
820-1677-12	WB-3 (1.5-2)	96	113
LCS 860-20096/2-A	Lab Control Sample	110	102
LCSD 860-20096/3-A	Lab Control Sample Dup	113	111

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-1677-1
Project/Site: Cabo Wabo Line Strike

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO1 (65-130)	OTPH1 (65-130)								
MB 860-20096/1-A	Method Blank	94	109								

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: 820-1660-A-9-E MS
Matrix: Solid
Analysis Batch: 20026

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.0249	U	1.25	1.339		mg/Kg		107	71 - 119
Toluene	<0.125	U	1.25	1.264		mg/Kg		101	74 - 122
Ethylbenzene	<0.0249	U	1.25	1.341		mg/Kg		108	80 - 123
m,p-Xylenes	<0.0498	U	1.25	1.340		mg/Kg		108	78 - 127
o-Xylene	<0.0249	U	1.25	1.340		mg/Kg		108	79 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*56 - 150*
4-Bromofluorobenzene (Surr)	*100*		*68 - 152*
Dibromofluoromethane (Surr)	*101*		*53 - 142*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 860-20026/8
Matrix: Solid
Analysis Batch: 20026

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg			08/24/21 12:33	1
Toluene	<0.00500	U	0.00500		mg/Kg			08/24/21 12:33	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg			08/24/21 12:33	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg			08/24/21 12:33	1
o-Xylene	<0.00100	U	0.00100		mg/Kg			08/24/21 12:33	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg			08/24/21 12:33	1
Total BTEX	<0.00500	U	0.00500		mg/Kg			08/24/21 12:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*56 - 150*		*08/24/21 12:33*	*1*
4-Bromofluorobenzene (Surr)	*99*		*68 - 152*		*08/24/21 12:33*	*1*
Dibromofluoromethane (Surr)	*104*		*53 - 142*		*08/24/21 12:33*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*08/24/21 12:33*	*1*

Lab Sample ID: LCS 860-20026/3
Matrix: Solid
Analysis Batch: 20026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05069		mg/Kg		101	66 - 142
Toluene	0.0500	0.04667		mg/Kg		93	74 - 130
Ethylbenzene	0.0500	0.04973		mg/Kg		99	80 - 130
m,p-Xylenes	0.0500	0.05004		mg/Kg		100	78 - 130
o-Xylene	0.0500	0.05060		mg/Kg		101	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*56 - 150*
4-Bromofluorobenzene (Surr)	*99*		*68 - 152*
Dibromofluoromethane (Surr)	*102*		*53 - 142*
Toluene-d8 (Surr)	*102*		*70 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 860-20026/4
Matrix: Solid
Analysis Batch: 20026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05270		mg/Kg		105	66 - 142	4	25
Toluene			0.0500	0.04970		mg/Kg		99	74 - 130	6	25
Ethylbenzene			0.0500	0.05185		mg/Kg		104	80 - 130	4	25
m,p-Xylenes			0.0500	0.05182		mg/Kg		104	78 - 130	3	25
o-Xylene			0.0500	0.05313		mg/Kg		106	79 - 130	5	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*56 - 150*
4-Bromofluorobenzene (Surr)	*99*		*68 - 152*
Dibromofluoromethane (Surr)	*103*		*53 - 142*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 820-1677-1 MS
Matrix: Solid
Analysis Batch: 20125

Client Sample ID: EB-1 (0-0.5)
Prep Type: Total/NA
Prep Batch: 20075

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.0251	U	1.25	1.383		mg/Kg		110	71 - 119
Toluene	<0.125	U	1.25	1.232		mg/Kg		98	74 - 122
Ethylbenzene	<0.0251	U	1.25	1.305		mg/Kg		104	80 - 123
m,p-Xylenes	<0.0501	U	1.25	1.302		mg/Kg		104	78 - 127
o-Xylene	<0.0251	U	1.25	1.332		mg/Kg		106	79 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*56 - 150*
4-Bromofluorobenzene (Surr)	*101*		*68 - 152*
Dibromofluoromethane (Surr)	*107*		*53 - 142*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 860-20125/8
Matrix: Solid
Analysis Batch: 20125

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00100	U	0.00100		mg/Kg			08/24/21 23:47	1
Toluene	<0.00500	U	0.00500		mg/Kg			08/24/21 23:47	1
Ethylbenzene	<0.00100	U	0.00100		mg/Kg			08/24/21 23:47	1
m,p-Xylenes	<0.00200	U	0.00200		mg/Kg			08/24/21 23:47	1
o-Xylene	<0.00100	U	0.00100		mg/Kg			08/24/21 23:47	1
Xylenes, Total	<0.00200	U	0.00200		mg/Kg			08/24/21 23:47	1
Total BTEX	<0.00500	U	0.00500		mg/Kg			08/24/21 23:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*56 - 150*		*08/24/21 23:47*	*1*
4-Bromofluorobenzene (Surr)	*101*		*68 - 152*		*08/24/21 23:47*	*1*
Dibromofluoromethane (Surr)	*105*		*53 - 142*		*08/24/21 23:47*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*08/24/21 23:47*	*1*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 860-20125/3
Matrix: Solid
Analysis Batch: 20125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05435		mg/Kg		109	66 - 142		
Toluene			0.0500	0.04799		mg/Kg		96	74 - 130		
Ethylbenzene			0.0500	0.05113		mg/Kg		102	80 - 130		
m,p-Xylenes			0.0500	0.05092		mg/Kg		102	78 - 130		
o-Xylene			0.0500	0.05211		mg/Kg		104	79 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*56 - 150*
4-Bromofluorobenzene (Surr)	*102*		*68 - 152*
Dibromofluoromethane (Surr)	*105*		*53 - 142*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 860-20125/4
Matrix: Solid
Analysis Batch: 20125

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.05640		mg/Kg		113	66 - 142	4	25
Toluene			0.0500	0.04943		mg/Kg		99	74 - 130	3	25
Ethylbenzene			0.0500	0.05281		mg/Kg		106	80 - 130	3	25
m,p-Xylenes			0.0500	0.05315		mg/Kg		106	78 - 130	4	25
o-Xylene			0.0500	0.05391		mg/Kg		108	79 - 130	3	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*113*		*56 - 150*
4-Bromofluorobenzene (Surr)	*103*		*68 - 152*
Dibromofluoromethane (Surr)	*108*		*53 - 142*
Toluene-d8 (Surr)	*100*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 860-20096/1-A
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20096

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/24/21 15:06	08/24/21 22:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/24/21 15:06	08/24/21 22:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/24/21 15:06	08/24/21 22:26	1
Total TPH	<50.0	U	50.0		mg/Kg		08/24/21 15:06	08/24/21 22:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*65 - 130*	*08/24/21 15:06*	*08/24/21 22:26*	*1*
o-Terphenyl	*109*		*65 - 130*	*08/24/21 15:06*	*08/24/21 22:26*	*1*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 860-20096/2-A
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20096

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1117		mg/Kg		111	70 - 135		
Diesel Range Organics (Over C10-C28)			999	1065		mg/Kg		107	70 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*110*		*65 - 130*
o-Terphenyl	*102*		*65 - 130*

Lab Sample ID: LCSD 860-20096/3-A
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20096

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1151		mg/Kg		115	70 - 135	3	35
Diesel Range Organics (Over C10-C28)			999	1104		mg/Kg		110	70 - 135	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*113*		*65 - 130*
o-Terphenyl	*111*		*65 - 130*

Lab Sample ID: 820-1677-10 MS
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: EB-3 (1.5-2)
Prep Type: Total/NA
Prep Batch: 20096

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	1145		mg/Kg		114	70 - 135		
Diesel Range Organics (Over C10-C28)	<50.3	U	1000	1081		mg/Kg		108	70 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*111*		*65 - 130*
o-Terphenyl	*104*		*65 - 130*

Lab Sample ID: 820-1677-10 MSD
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: EB-3 (1.5-2)
Prep Type: Total/NA
Prep Batch: 20096

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	999	1077		mg/Kg		108	70 - 135	6	35
Diesel Range Organics (Over C10-C28)	<50.3	U	995	1085		mg/Kg		109	70 - 135	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*112*		*65 - 130*

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 820-1677-10 MSD
Matrix: Solid
Analysis Batch: 20013

Client Sample ID: EB-3 (1.5-2)
Prep Type: Total/NA
Prep Batch: 20096

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	105		65 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 860-20021/1-A
Matrix: Solid
Analysis Batch: 19983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg		08/24/21 09:20	08/24/21 10:28	1

Lab Sample ID: LCS 860-20021/2-A
Matrix: Solid
Analysis Batch: 19983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20021

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	102.3		mg/Kg		102	80 - 120		

Lab Sample ID: LCSD 860-20021/3-A
Matrix: Solid
Analysis Batch: 19983

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20021

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	103.2		mg/Kg		103	80 - 120	1	20

Lab Sample ID: 860-10455-B-2-B MS
Matrix: Solid
Analysis Batch: 19983

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20021

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	11.3		99.8	111.1		mg/Kg		100	80 - 120		

Lab Sample ID: 860-10455-B-2-C MSD
Matrix: Solid
Analysis Batch: 19983

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20021

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11.3		100	111.7		mg/Kg		100	80 - 120	1	20

Lab Sample ID: MB 860-20174/1-A
Matrix: Solid
Analysis Batch: 20163

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<10.0	U	10.0		mg/Kg		08/25/21 08:22	08/25/21 09:26	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 860-20174/2-A
Matrix: Solid
Analysis Batch: 20163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20174

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	97.98		mg/Kg		98	80 - 120		

Lab Sample ID: LCSD 860-20174/3-A
Matrix: Solid
Analysis Batch: 20163

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20174

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	98.05		mg/Kg		98	80 - 120	0	20

Lab Sample ID: 860-10257-A-11-H MS
Matrix: Solid
Analysis Batch: 20163

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20174

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	94.5		100	197.2		mg/Kg		103	80 - 120		

Lab Sample ID: 860-10257-A-11-I MSD
Matrix: Solid
Analysis Batch: 20163

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20174

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	94.5		100	197.8		mg/Kg		103	80 - 120	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

GC/MS VOA

Prep Batch: 19923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1660-A-9-E MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 20026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	8260C	20075
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	8260C	20075
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	8260C	20075
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	8260C	20075
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	8260C	20075
MB 860-20026/8	Method Blank	Total/NA	Solid	8260C	
LCS 860-20026/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 860-20026/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
820-1660-A-9-E MS	Matrix Spike	Total/NA	Solid	8260C	19923

Prep Batch: 20075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	5035	
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	5035	
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	5035	
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	5035	
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	5035	
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	5035	
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	5035	
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	5035	
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	5035	
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	5035	
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	5035	
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	5035	
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	5035	
820-1677-1 MS	EB-1 (0-0.5)	Total/NA	Solid	5035	

Analysis Batch: 20125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	8260C	20075
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	8260C	20075
MB 860-20125/8	Method Blank	Total/NA	Solid	8260C	
LCS 860-20125/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 860-20125/4	Lab Control Sample Dup	Total/NA	Solid	8260C	
820-1677-1 MS	EB-1 (0-0.5)	Total/NA	Solid	8260C	20075

GC Semi VOA

Prep Batch: 19960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

GC Semi VOA (Continued)

Prep Batch: 19960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	8015NM Prep	

Analysis Batch: 20013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	8015B NM	19960
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	8015B NM	19960
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	8015B NM	19960
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	8015B NM	19960
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	8015B NM	19960
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	8015B NM	19960
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	8015B NM	19960
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	8015B NM	19960
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	8015B NM	19960
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	8015B NM	20096
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	8015B NM	20096
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	8015B NM	20096
MB 860-20096/1-A	Method Blank	Total/NA	Solid	8015B NM	20096
LCS 860-20096/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20096
LCSD 860-20096/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20096
820-1677-10 MS	EB-3 (1.5-2)	Total/NA	Solid	8015B NM	20096
820-1677-10 MSD	EB-3 (1.5-2)	Total/NA	Solid	8015B NM	20096

Prep Batch: 20096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	8015NM Prep	
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	8015NM Prep	
MB 860-20096/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 860-20096/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 860-20096/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-1677-10 MS	EB-3 (1.5-2)	Total/NA	Solid	8015NM Prep	
820-1677-10 MSD	EB-3 (1.5-2)	Total/NA	Solid	8015NM Prep	

HPLC/IC

Analysis Batch: 19983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	300.0	20021
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	300.0	20021
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	300.0	20021
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	300.0	20021
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	300.0	20021
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	300.0	20021
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	300.0	20021

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

HPLC/IC (Continued)

Analysis Batch: 19983 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	300.0	20021
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	300.0	20021
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	300.0	20021
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	300.0	20021
MB 860-20021/1-A	Method Blank	Total/NA	Solid	300.0	20021
LCS 860-20021/2-A	Lab Control Sample	Total/NA	Solid	300.0	20021
LCSD 860-20021/3-A	Lab Control Sample Dup	Total/NA	Solid	300.0	20021
860-10455-B-2-B MS	Matrix Spike	Total/NA	Solid	300.0	20021
860-10455-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	300.0	20021

Prep Batch: 20021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-1	EB-1 (0-0.5)	Total/NA	Solid	300_Prep	
820-1677-2	EB-1 (1.5-2)	Total/NA	Solid	300_Prep	
820-1677-3	WB-1 (0-0.5)	Total/NA	Solid	300_Prep	
820-1677-4	WB-1 (1.5-2)	Total/NA	Solid	300_Prep	
820-1677-5	EB-2 (0-0.5)	Total/NA	Solid	300_Prep	
820-1677-6	EB-2 (1.5-2)	Total/NA	Solid	300_Prep	
820-1677-8	WB-2 (1.5-2)	Total/NA	Solid	300_Prep	
820-1677-9	EB-3 (0-0.5)	Total/NA	Solid	300_Prep	
820-1677-10	EB-3 (1.5-2)	Total/NA	Solid	300_Prep	
820-1677-11	WB-3 (0-0.5)	Total/NA	Solid	300_Prep	
820-1677-12	WB-3 (1.5-2)	Total/NA	Solid	300_Prep	
MB 860-20021/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 860-20021/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
LCSD 860-20021/3-A	Lab Control Sample Dup	Total/NA	Solid	300_Prep	
860-10455-B-2-B MS	Matrix Spike	Total/NA	Solid	300_Prep	
860-10455-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	300_Prep	

Analysis Batch: 20163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	300.0	20174
MB 860-20174/1-A	Method Blank	Total/NA	Solid	300.0	20174
LCS 860-20174/2-A	Lab Control Sample	Total/NA	Solid	300.0	20174
LCSD 860-20174/3-A	Lab Control Sample Dup	Total/NA	Solid	300.0	20174
860-10257-A-11-H MS	Matrix Spike	Total/NA	Solid	300.0	20174
860-10257-A-11-I MSD	Matrix Spike Duplicate	Total/NA	Solid	300.0	20174

Prep Batch: 20174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1677-7	WB-2 (0-0.5)	Total/NA	Solid	300_Prep	
MB 860-20174/1-A	Method Blank	Total/NA	Solid	300_Prep	
LCS 860-20174/2-A	Lab Control Sample	Total/NA	Solid	300_Prep	
LCSD 860-20174/3-A	Lab Control Sample Dup	Total/NA	Solid	300_Prep	
860-10257-A-11-H MS	Matrix Spike	Total/NA	Solid	300_Prep	
860-10257-A-11-I MSD	Matrix Spike Duplicate	Total/NA	Solid	300_Prep	

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-1 (0-0.5)

Lab Sample ID: 820-1677-1
Matrix: Solid
Date Collected: 08/18/21 13:30
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		25	5 mL	5 mL	20125	08/25/21 00:07	CSP	XEN STF
Total/NA	Prep	5035			4.97 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20125	08/25/21 00:28	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 19:38	IS	XEN STF
Total/NA	Prep	300_Prep			5.01 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 21:54	JM	XEN STF

Client Sample ID: EB-1 (1.5-2)

Lab Sample ID: 820-1677-2
Matrix: Solid
Date Collected: 08/18/21 13:35
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 14:56	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 19:56	IS	XEN STF
Total/NA	Prep	300_Prep			5.00 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 22:05	JM	XEN STF

Client Sample ID: WB-1 (0-0.5)

Lab Sample ID: 820-1677-3
Matrix: Solid
Date Collected: 08/18/21 13:40
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 15:16	CSP	XEN STF
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 20:15	IS	XEN STF
Total/NA	Prep	300_Prep			4.98 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 22:16	JM	XEN STF

Client Sample ID: WB-1 (1.5-2)

Lab Sample ID: 820-1677-4
Matrix: Solid
Date Collected: 08/18/21 13:45
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 15:36	CSP	XEN STF
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 20:34	IS	XEN STF
Total/NA	Prep	300_Prep			4.99 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 22:27	JM	XEN STF

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-2 (0-0.5)

Lab Sample ID: 820-1677-5
Matrix: Solid
Date Collected: 08/18/21 13:50
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 15:57	CSP	XEN STF
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 20:53	IS	XEN STF
Total/NA	Prep	300_Prep			5.03 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 22:38	JM	XEN STF

Client Sample ID: EB-2 (1.5-2)

Lab Sample ID: 820-1677-6
Matrix: Solid
Date Collected: 08/18/21 13:55
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20125	08/25/21 00:48	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 21:11	IS	XEN STF
Total/NA	Prep	300_Prep			5.06 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 22:50	JM	XEN STF

Client Sample ID: WB-2 (0-0.5)

Lab Sample ID: 820-1677-7
Matrix: Solid
Date Collected: 08/18/21 14:00
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 16:38	CSP	XEN STF
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 21:30	IS	XEN STF
Total/NA	Prep	300_Prep			4.98 g	50 mL	20174	08/25/21 08:22	JM	XEN STF
Total/NA	Analysis	300.0		10			20163	08/25/21 10:00	JM	XEN STF

Client Sample ID: WB-2 (1.5-2)

Lab Sample ID: 820-1677-8
Matrix: Solid
Date Collected: 08/18/21 14:05
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 16:58	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 21:49	IS	XEN STF
Total/NA	Prep	300_Prep			4.98 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 23:34	JM	XEN STF

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Client Sample ID: EB-3 (0-0.5)

Lab Sample ID: 820-1677-9
Matrix: Solid
Date Collected: 08/18/21 14:10
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 17:19	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	19960	08/24/21 14:53	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 22:08	IS	XEN STF
Total/NA	Prep	300_Prep			5.02 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 23:46	JM	XEN STF

Client Sample ID: EB-3 (1.5-2)

Lab Sample ID: 820-1677-10
Matrix: Solid
Date Collected: 08/18/21 14:15
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 17:39	CSP	XEN STF
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	20096	08/24/21 15:06	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/24/21 23:41	IS	XEN STF
Total/NA	Prep	300_Prep			5.00 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/24/21 23:57	JM	XEN STF

Client Sample ID: WB-3 (0-0.5)

Lab Sample ID: 820-1677-11
Matrix: Solid
Date Collected: 08/18/21 14:20
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 18:00	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	20096	08/24/21 15:06	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/25/21 00:37	IS	XEN STF
Total/NA	Prep	300_Prep			4.96 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/25/21 00:08	JM	XEN STF

Client Sample ID: WB-3 (1.5-2)

Lab Sample ID: 820-1677-12
Matrix: Solid
Date Collected: 08/18/21 14:25
Date Received: 08/20/21 16:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	20075	08/24/21 13:04	CSP	XEN STF
Total/NA	Analysis	8260C		1	5 mL	5 mL	20026	08/24/21 18:20	CSP	XEN STF
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	20096	08/24/21 15:06	DAW	XEN STF
Total/NA	Analysis	8015B NM		1			20013	08/25/21 00:55	IS	XEN STF
Total/NA	Prep	300_Prep			4.97 g	50 mL	20021	08/24/21 09:20	JM	XEN STF
Total/NA	Analysis	300.0		1			19983	08/25/21 00:19	JM	XEN STF

Laboratory References:

XEN STF = Eurofins Xenco, Stafford, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Eurofins Xenco, Lubbock

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-1677-1
Project/Site: Cabo Wabo Line Strike

Laboratory: Eurofins Xenco, Stafford

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-21-44	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015B NM	8015NM Prep	Solid	Diesel Range Organics (Over C10-C28)
8015B NM	8015NM Prep	Solid	Gasoline Range Organics (GRO)-C6-C10
8015B NM	8015NM Prep	Solid	OII Range Organics (Over C28-C36)
8015B NM	8015NM Prep	Solid	Total TPH
8260C	5035	Solid	Total BTEX

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	XEN STF
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN STF
300.0	Anions, Ion Chromatography	MCAWW	XEN STF
300_Prep	Anions, Ion Chromatography, 10% Wt/Vol	MCAWW	XEN STF
5035	Closed System Purge and Trap	SW846	XEN STF
8015NM Prep	Microextraction	SW846	XEN STF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN STF = Eurofins Xenco, Stafford, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo Line Strike

Job ID: 820-1677-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
820-1677-1	EB-1 (0-0.5)	Solid	08/18/21 13:30	08/20/21 16:55	0 - 0.5
820-1677-2	EB-1 (1.5-2)	Solid	08/18/21 13:35	08/20/21 16:55	1.5 - 2
820-1677-3	WB-1 (0-0.5)	Solid	08/18/21 13:40	08/20/21 16:55	0 - 0.5
820-1677-4	WB-1 (1.5-2)	Solid	08/18/21 13:45	08/20/21 16:55	1.5 - 2
820-1677-5	EB-2 (0-0.5)	Solid	08/18/21 13:50	08/20/21 16:55	0 - 0.5
820-1677-6	EB-2 (1.5-2)	Solid	08/18/21 13:55	08/20/21 16:55	1.5 - 2
820-1677-7	WB-2 (0-0.5)	Solid	08/18/21 14:00	08/20/21 16:55	0 - 0.5
820-1677-8	WB-2 (1.5-2)	Solid	08/18/21 14:05	08/20/21 16:55	1.5 - 2
820-1677-9	EB-3 (0-0.5)	Solid	08/18/21 14:10	08/20/21 16:55	0 - 0.5
820-1677-10	EB-3 (1.5-2)	Solid	08/18/21 14:15	08/20/21 16:55	1.5 - 2
820-1677-11	WB-3 (0-0.5)	Solid	08/18/21 14:20	08/20/21 16:55	0 - 0.5
820-1677-12	WB-3 (1.5-2)	Solid	08/18/21 14:25	08/20/21 16:55	1.5 - 2

Loc: 820
1677

820-1677 Chain of Custody

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Contact: J. Guesnier 806-544-9276
Project Manager: J. Guesnier
SRS #:
Sampler's Name: A. Adams
Sampler's Signature

Project Number: AR207115
Project Name: Cabo Wabo Line Strike

REQUESTED

TEMP OF COOLER WHEN RECEIVED (°C)

Page 1 of 1

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8260B)	Lab Sample ID
S	8/18/2021	13:30	X		EB-1 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	13:35	X		EB-1 (1.5-2)	1.5'	2'	X				X	X	X	
S	8/18/2021	13:40	X		WB-1 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	13:45	X		WB-1 (1.5-2)	1.5'	2'	X				X	X	X	
S	8/18/2021	13:50	X		EB-2 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	13:55	X		EB-2 (1.5-2)	1.5'	2'	X				X	X	X	
S	8/18/2021	14:00	X		WB-2 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	14:05	X		WB-2 (1.5-2)	1.5'	2'	X				X	X	X	
S	8/18/2021	14:10	X		EB-3 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	14:15	X		EB-3 (1.5-2)	1.5'	2'	X				X	X	X	
S	8/18/2021	14:20	X		WB-3 (0-0.5)	0	0.5'	X				X	X	X	
S	8/18/2021	14:25	X		WB-3 (1.5-2)	1.5'	2'	X				X	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:
	8/20/21	16:55	Teddy Hendrix		

NOTES: Client:

e-mail results to:

brett.dennis@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

-8.6/-8.64 FR-4 CF: -0.04

Eurofins Xenco, Lubbock
6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone: 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-1909.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP Texas		Job #: 820-1677-1
Address: 4147 Greenbriar Dr	Due Date Requested: 8/26/2021			Preservation Codes:
City: Stafford	TAT Requested (days):			A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 Q Na2SO3 F MeOH R Na2S2O3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other:
State, Zip: TX, 77477				
Phone: 281-240-4200(Tel)	PO #:			
Email:	WO #:			
Project Name: Cabo Wabo Line Strike AR207115	Project #: 82000340			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Perform MS/MSD (Y/N)	Field Filtered Sample (Y/N)	8260C/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/300_Prep Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
EB-1 (0-0.5) (820-1677-1)	8/18/21	13:30 Central		Solid			X	X	X		
EB-1 (1.5-2) (820-1677-2)	8/18/21	13:35 Central		Solid			X	X	X		
WB-1 (0-0.5) (820-1677-3)	8/18/21	13:40 Central		Solid			X	X	X		
WB-1 (1.5-2) (820-1677-4)	8/18/21	13:45 Central		Solid			X	X	X		
EB-2 (0-0.5) (820-1677-5)	8/18/21	13:50 Central		Solid			X	X	X		
EB-2 (1.5-2) (820-1677-6)	8/18/21	13:55 Central		Solid			X	X	X		
WB-2 (0-0.5) (820-1677-7)	8/18/21	14:00 Central		Solid			X	X	X		
WB-2 (1.5-2) (820-1677-8)	8/18/21	14.05 Central		Solid			X	X	X		
EB-3 (0-0.5) (820-1677-9)	8/18/21	14.10 Central		Solid			X	X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Teddy Randolph Lee FedEx	8/23/21 1700		FedEx		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			Pedro Pena	8/24/21 1000	Ex
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:
		Temp: 3.7 IR ID HOU-188 C/F +0.2 Corrected Temp: 3.9

06/08/2021

Eurofins Xenco, Lubbock
6701 Aberdeen Ave. Suite 8
Lubbock, TX 79424
Phone: 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-1909.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 2 of 2
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-1677-1
Address: 4147 Greenbriar Dr	Due Date Requested: 8/26/2021			
City: Stafford	TAT Requested (days):			
State, Zip: TX, 77477				
Phone: 281-240-4200(Tel)	PO #:			
Email:	WO #:			
Project Name: Cabo Wabo Line Strike AR207115	Project #: 82000340			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Z other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Perform MS/MSD (Yes or No)	Field Filtered Sample (Yes or No)	8260C/5035FP_Calc BTEX	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	300_ORGFM_28D/300_Prep Chloride	Total Number of containers	Special Instructions/Note:
EB-3 (1.5-2) (820-1677-10)	8/18/21	14.15 Central		Solid			X	X	X		
WB-3 (0-0.5) (820-1677 11)	8/18/21	14:20 Central		Solid			X	X	X		
WB-3 (1.5-2) (820-1677 12)	8/18/21	14:25 Central		Solid			X	X	X		

Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Teddy Kendell Lee	8/23/21 1700		FedEx		
Relinquished by: FedEx	Date/Time:	Company	Received by: Pedro Pdm	Date/Time: 8/24/21 1000	Company Ex
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks:
		Temp: 3.7 IR ID HOU-188 C/F +0.2 Corrected Temp: 3.9

06/08/2021

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-1677-1

Login Number: 1677 **List Source: Eurofins Xenco, Lubbock**
List Number: 1
Creator: Lee, Randell

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 820-1677-1

Login Number: 1677
List Number: 2
Creator: Palmar, Pedro

List Source: Eurofins Xenco, Stafford
List Creation: 08/24/21 12:23 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

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ANALYTICAL REPORT

Eurofins Xenco, Lubbock
6701 Aberdeen Ave.
Suite 8
Lubbock, TX 79424
Tel: (806)794-1296

Laboratory Job ID: 820-1788-1
Client Project/Site: Cabo Wabo AR207115

For:
Terracon Consulting Eng & Scientists
5827 50th St
Suite 1
Lubbock, Texas 79424

Attn: Joseph Guesnier

JKramer

Authorized for release by:
9/7/2021 9:47:42 AM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD,and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Coliform MCLs
· Based on the EPA primary drinking water standard MCL for total coliforms, a water supply is considered bacteriologically “SAFE” if no coliform bacteria are detected. To be considered “SAFE” your report should indicate “<1 cfu/100mL” or “NEG” for the coliform test. If you report indicates a positive result “POS” or a value greater than or equal to one, then your supply is “UNSAFE FOR DRINKING” contact your local health department.

Warranties, Terms, and Conditions
· Analyses for Field Parameters are performed by EQC field staff. Locations and certifications are identified on the Chain of Custody as follows:
ERF = field staff performs tests under NJ State certification #02015
VL = field staff performs tests under NJ State certification #06005
WG = field staff performs tests under NJ State certification #PA001
H = field staff performs tests under NJ NELAP certification #PA093, PA NELAP certification # 46-05499

· Test results meet all TNI or other applicable regulatory agency requirements, including holding times and preservation, unless otherwise indicated.

· The report shall not be reproduced, except in full, without the written consent of the laboratory

· All samples are collected as “grab” samples unless otherwise identified.

· Reported results related only to the samples as tested. EQC is not responsible for sample integrity unless sampling has been performed by a member of our staff.

· EQC is not responsible for sampling and/or testing omissions. Note that regulatory authorities may assess substantial fines for testing omissions. Please track your sample collection schedules and results on a regular basis (e.g. weekly, monthly, or quarterly) to ensure compliance.

· Eurofins’ online data portal “TotalAccess” will provide you with real-time access to collection dates and testing results. Please contact Client Services for further information.

· The following personnel or their deputies have approved the results of the tests performed by EQC: Nicki Smith (Environmental Chemistry) and Zachary Smith (Water Microbiology).

JKramer

Jessica Kramer
Project Manager
9/7/2021 9:47:42 AM

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Laboratory Job ID: 820-1788-1

Table of Contents

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Job ID: 820-1788-1

Laboratory: Eurofins Xenco, Lubbock

Narrative

Job Narrative
820-1788-1

Receipt
The samples were received on 9/2/2021 10:21 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.4°C

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Client Sample ID: EB-3.1 (1.5-2)
Lab Sample ID: 820-1788-1
Date Collected: 08/30/21 12:00
Matrix: Solid
Date Received: 09/02/21 10:21

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20.7		5.02		mg/Kg			09/03/21 17:48	1

Client Sample ID: WB-2.1 (0-0.5)
Lab Sample ID: 820-1788-2
Date Collected: 08/30/21 12:05
Matrix: Solid
Date Received: 09/02/21 10:21

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.0		5.01		mg/Kg			09/03/21 17:53	1

Client Sample ID: WB-2.1 (1.5-2)
Lab Sample ID: 820-1788-3
Date Collected: 08/30/21 12:10
Matrix: Solid
Date Received: 09/02/21 10:21

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21.9		4.99		mg/Kg			09/03/21 17:59	1

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-7498/1-A
Matrix: Solid
Analysis Batch: 7500

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			09/03/21 16:29	1

Lab Sample ID: LCS 880-7498/2-A
Matrix: Solid
Analysis Batch: 7500

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	249.9		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-7498/3-A
Matrix: Solid
Analysis Batch: 7500

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	250.7		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

HPLC/IC

Leach Batch: 7498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1788-1	EB-3.1 (1.5-2)	Soluble	Solid	DI Leach	
820-1788-2	WB-2.1 (0-0.5)	Soluble	Solid	DI Leach	
820-1788-3	WB-2.1 (1.5-2)	Soluble	Solid	DI Leach	

Analysis Batch: 7500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
820-1788-1	EB-3.1 (1.5-2)	Soluble	Solid	300.0	7498
820-1788-2	WB-2.1 (0-0.5)	Soluble	Solid	300.0	7498
820-1788-3	WB-2.1 (1.5-2)	Soluble	Solid	300.0	7498

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Client Sample ID: EB-3.1 (1.5-2)

Lab Sample ID: 820-1788-1
Matrix: Solid
Date Collected: 08/30/21 12:00
Date Received: 09/02/21 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	7498	09/03/21 11:32	SC	XEN MID
Soluble	Analysis	300.0		1			7500	09/03/21 17:48	SC	XEN MID

Client Sample ID: WB-2.1 (0-0.5)

Lab Sample ID: 820-1788-2
Matrix: Solid
Date Collected: 08/30/21 12:05
Date Received: 09/02/21 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	7498	09/03/21 11:32	SC	XEN MID
Soluble	Analysis	300.0		1			7500	09/03/21 17:53	SC	XEN MID

Client Sample ID: WB-2.1 (1.5-2)

Lab Sample ID: 820-1788-3
Matrix: Solid
Date Collected: 08/30/21 12:10
Date Received: 09/02/21 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.01 g	50 mL	7498	09/03/21 11:32	SC	XEN MID
Soluble	Analysis	300.0		1			7500	09/03/21 17:59	SC	XEN MID

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 820-1788-1
Project/Site: Cabo Wabo AR207115

Laboratory: Eurofins Xenco, Midland

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-20-21	06-30-22

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

Laboratory References:

XEN MID = Eurofins Xenco, Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Cabo Wabo AR207115

Job ID: 820-1788-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
820-1788-1	EB-3.1 (1.5-2)	Solid	08/30/21 12:00	09/02/21 10:21
820-1788-2	WB-2.1 (0-0.5)	Solid	08/30/21 12:05	09/02/21 10:21
820-1788-3	WB-2.1 (1.5-2)	Solid	08/30/21 12:10	09/02/21 10:21

1788

Loc: 820
1788

9/7/2021

CHAIN OF CUSTODY RECORD

Terracon

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Office Location: Lubbock
Phone:
Project Manager: J. Guesnier
Contact: J. Guesnier 806-544-9276
Sampler's Name: J.Guesnier
SRS #:
Sampler's Signature

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE:
TEMP OF COOLER WHEN RECEIVED (°C): 9.4/5.3 IR-4

Page 1 of 1

Project Number: AR207115
Project Name: Cabo Wabo

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers: 4 oz Glass	40 ml VOA	250 ml Poly	5035 kit	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8260B)	Lab Sample ID
S	8/30/2021	12:00	X		EB-3.1 (1.5-2)	1.5'	2'	X				X			
S	8/30/2021	12:05	X		WB-2.1 (0-0.5)	0	0.5'	X				X			
S	8/30/2021	12:10	X		WB-2.1 (1.5-2)	1.5'	2'	X				X			

820-1788 Chain of Custody

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
	9/2/21	1021		9/2	1021

NOTES: Client:

e-mail results to:

brett.dennis@terracon.com
erin.loyd@terracon.com
jrguesnier@terracon.com

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

Eurofins Xenco, Lubbock
6701 Aberdeen Ave Suite 8
Lubbock, TX 79424
Phone 806-794-1296

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer Jessica	Carrier Tracking No(s):	COC No: 820-1970 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica.kramer@eurofinset.com	State of Origin: Texas	Page: Page 1 of 1
Company: Eurofins Xenco		Accreditations Required (See note): NELAP - Texas		Job #: 820-1788-1
Address: 1211 W Florida Ave,	Due Date Requested: 9/7/2021			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email:	WO #:			
Project Name: New Mexico Soils	Project #: 82000268			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL	M Hexane
B NaOH	N None
C - Zn Acetate	O - AsNaO2
D Nitric Acid	P - Na2O4S
E - NaHSO4	Q Na2SO3
F MeOH	R - Na2S2O3
G - Amchlor	S H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U Acetone
J - DI Water	V - MCAA
K - EDTA	W pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/DI_LEACH Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
EB-3.1 (1 5-2) (820-1788-1)	8/30/21	12 00 Central		Solid			X	1	
WB-2.1 (0-0 5) (820-1788-2)	8/30/21	12:05 Central		Solid			X	1	
WB-2 1 (1 5-2) (820-1788-3)	8/30/21	12 10 Central		Solid			X	1	

Note. Since laboratory accreditations are subject to change, Eurofins Xenco LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II III, IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ashley T. Ruggles	9/2/21 17:00	Xenco		9/3/21 10:45	Xenco
2	Relinquished by:	Date/Time	Company	Received by	Date/Time:	Company
3	Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.2/3.7

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-1788-1

Login Number: 1788 **List Source: Eurofins Xenco, Lubbock**
List Number: 1
Creator: Lee, Randell

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists Job Number: 820-1788-1

Login Number: 1788
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Xenco, Midland
List Creation: 09/03/21 10:50 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

APPENDIX F – 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

The development of this Closure Report 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 recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Solaris Water Midstream, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Solaris Water Midstream and Terracon. Any unauthorized distribution or reuse is at Solaris Water Midstream sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Solaris Water Midstream and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Solaris Water Midstream and all relying parties unless otherwise agreed in writing.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 47126

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 47126
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	10/5/2021