

Incident ID	NRM2017461850
District RP	
Facility ID	
Application ID	

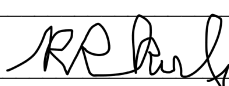
Closure

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: Rob Kirk, VP & General Manager, HSE & Compliance
Signature:  Date: 03/19/2021
email: rob.kirk@solariswater.com Telephone: 432-203-9020

OCD Only

Received by: Chad Hensley Date: 04/12/2021

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:  Date: 04/12/2021
Printed Name: Chad Hensley Title: Environmental Specialist Advanced

Closure Report

General Site Information:

Booster #1014

NMOCD Reference No. nRM2017461850

Site Contact:

Rob Kirk, Solaris Water Midstream, LLC
907 Tradwinds Blvd, Suite B, Midland, TX 79706
(432) 203-9020

Depth to Ground Water

Approximatley 85 feet below grade surface

Distance to Nearest Surface Water

Pecos River, approximately 1.2 miles to the southeast

Driving Directions

From Black River Village Rd, South on Hwy 285 4.18 mi, East on Lease Road 1.32 mi., South 0.57 mi, then West 85 ft. to location.

Legal Description

Unit L, Section 1, T25S, R28E, Eddy County, New Mexico

March 2, 2021

Terracon Project No. AR207121

Prepared for:

Solaris Water Midstream, LLC
Midland, Texas

Prepared by:

Terracon Consultants, Inc.
Lubbock, Texas
TBPG Firm No. 50058

Offices Nationwide
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terracon.com

Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

March 2, 2021



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

Attn: Mr. Rob Kirk
P: (432) 203-9020
M: (469) 217-5074
E: rob.kirk@solarismidstream.com

RE: **Closure Report**
Booster #1014
Unit L, Section 1, T25S, R28E, Eddy County, New Mexico
NMOCD Reference No. nRM2017461850
Terracon Project No. AR207121

Dear Mr. Kirk,

Terracon Consultants, Inc. (Terracon) is pleased to submit our 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. Terracon developed the 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.
Principal
Office Manager – Lubbock



Terracon Consultants, Inc. 5847 50th St. Lubbock, Texas 79424
P (806) 300 0140 F (806) 797 0947 terracon.com

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- Figure 5 – NMOSE POD Location Map
- Figure 6 – Cave Karst Public UCP

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- Table 2 – Soil Sample Analytical Results

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**Closure Report
Booster #1014
Unit L Section 1, Township 25 South, Range 28 East
Eddy County, New Mexico
NMOCD Reference No. nRM2017461850
Terracon Project No. AR207121
March 2, 2021**

1.0 SITE DESCRIPTION

The site is an approximate 0.5-acre tract of land within the Unit L Section 1, Township 25 South, Range 28 East, Eddy County, New Mexico (hereinafter, the site). The site consists primarily of developed land utilized for pipeline right of ways and a lease road. A Topographic Map illustrating the site location is included as Figure 1 and a Site Diagram is included as Figure 2 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon's scope of services is to investigate 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 15, 2020 release of approximately 23.5 barrels (bbls) of produced water originating from a pump shaft, which broke at the booster owned by Solaris.

3.0 INTRODUCTION AND NOTIFICATION

A release of produced water occurred on June 15, 2020 at the Booster #1014 site in Eddy County, New Mexico. The site is operated by Solaris. The site is comprised of an approximate 0.5-acre developed area, approximately 4.75 miles southeast of Malaga, New Mexico. Incident information is provided in the following table:

Required Information	Site and Release information	
Responsible party	The facility is operated by Solaris Water Midstream, LLC	
Local contact	Contact: Mr. Rob Kirk	P: (432) 203-9020 M: (469) 217-5074 E: rob.kirk@solarismidstream.com
NMOCD Notification	Notice of the release was provided to the NMOCD District 2 Artesia Office by Rob Kirk (Solaris) on June 18, 2020.	
Facility description	The facility is Booster #1014 in Eddy County, New Mexico. It is an approximate 0.5-acre tract located within the Unit L Section 1,	

Responsive ■ Resourceful ■ Reliable

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121



Required Information	Site and Release information	
	Township 25 South, Range 28 East, N.M.P.M., approximately 4.75 miles southeast of Malaga, New Mexico. The site is undeveloped.	
Time of incident	June 15, 2020, discovered at 7:00 a.m.	
Discharge event	Release of produced water originating from a pump shaft at the booster broke causing the pump to lock up and perforate the shaft seal housing, owned and operated by Solaris. The release area, near the origin of the release, was limited to an approximately 1,320 sq ft area. The entirety of the release is not located on a well pad. The release is illustrated on Figure 2 of Appendix A	
Type of discharge	The documented fluids release occurred at the surface and appears to be surficial to depth.	
Quantity of spilled material	Total Fluids: 23.5 bbls	Produced Water: 23.5 bbls
Site characteristics	Relatively flat with drainage following the native ground surface; very gently sloping to the south.	
Immediate corrective actions	Valves were isolated to shut off flow, and Terracon was enlisted to delineate and remediate the release.	

4.0 INITIAL RESPONSE ACTIONS**4.1 Source Elimination and Site Security**

Initial source elimination was accomplished by the Spur foreman isolating valves to shut off flow. Terracon's services were enlisted to delineate and remediate the release.

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121

**5.0 GENERAL SITE CHARACTERISTICS**

Remediation Determining Information	Site Ranking Characteristics
Groundwater	<u>POD Number:</u> RA 01880 <u>Depth to Groundwater:</u> 40 ft. bgs <u>Distance to Well:</u> 1.59 miles to the east <u>Date Drilled:</u> October 29, 1979 <u>Groundwater Quality:</u> The well referenced above, is utilized during discovery operations
Surface Water	Pecos River is located approximately 1.2 miles to the southeast.
Soil Characteristics	Soils at the site are mapped as Russler loam, 1 to 3 percent slopes, 0 to 11 inches loam, 11 to 45 inches clay loam, and 45 to 60 inches gypsiferous material. This soil has a surface layer of gravelly sand. Restrictive features are present at 20 to 60 inches bgs resulting in the formation being categorized with a high runoff classification.
Karst Characterization	Terracon evaluated data from the NMOCD Public FTP Site, Karst map designations in reference to the site location. The site appears to be within a high level Karst risk area. Based on site observations within the extent of the release margins, the potential for Karst formations in this specific area are of low potential. The site has a layer of solid competent rock from 20 to 60 inches bgs.
Depth of Remediation	The full extent of release quantities and excavation activities were not greater than 48 inches bgs.

6.0 SOIL REMEDIAL ACTION LEVELS

Crude oil facilities in New Mexico are generally regulated by the NMOCD. Terracon proposed to remediate produced water impacted soil of the Booster #1014 consistent with the remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) *Closure Criteria for Soils Impacted by a Release, June 21, 2018*.

The 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:

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121

**6.1 Remediation Levels**

Remediation limits for Chlorides, TPH (GRO+DRO+MRO), GRO+DRO, BTEX (includes benzene, toluene, ethylbenzene and xylenes), and Benzene are selected based on *Restoration, Reclamation, and Re-vegetation* (19.15.29.13) NMAC – D (Reclamation of areas no longer in use) being >100 feet:

Constituent	Remediation Limits
Chloride	600 mg/kg
TPH (GRO+DRO+MRO)	100 mg/kg
GRO+DRO	1,000 mg/kg
BTEX	50 mg/kg
Benzene	10 mg/kg

7.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's July 23, 2020 and November 10, 2020 release investigation activities, a total of 11 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. All samples were collected from within the release margins.

7.1 Release Margins Data Evaluation

Benzene was not detected above applicable laboratory SDLs in the 11 soil samples analyzed within the release margins. The benzene concentrations 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 11 soil samples analyzed within the release margins. The Total BTEX concentrations 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 the 11 soil samples analyzed within the release margins. The samples collected within the release margins did exhibit Total TPH concentrations above the 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 11 soil samples analyzed within the release margins. The chloride concentrations ranged from 21.1 mg/kg in soil sample HA-4 (surface to 0.5 ft bgs) to 10,300 mg/kg in soil sample HA-3 (surface to 0.5 ft bgs). Six of the

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121



samples analyzed within the release margins did exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

7.2 Release Investigation Data Summary

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

7.3 Confirmation Margins Data Evaluation

During Terracon's confirmation sampling on November 10, 2020 and December 10, 2020 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. Resulting in 20 total soil samples being collected from the site and analyzed for BTEX, chloride, and TPH.

7.3.1 Confirmation Assessment Data Evaluation

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

Total BTEX was detected above the applicable laboratory SDL in the 19 soil samples analyzed within the remediated margins. The BTEX concentrations ranged from 0.0168 mg/kg in the confirmation soil sample CS-4 (3.5 to 4 ft bgs.) to 0.129 mg/kg in confirmation soil sample EW-1 (1.5 ft bgs to 2 ft bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for BTEX of 50 mg/kg, as summarized in Table 2.

Total TPH was not detected above applicable laboratory SDLs in the 19 soil samples analyzed within the remediated margins. The 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.

Chloride was detected above applicable laboratory SDLs in the 19 soil samples analyzed within the remediated margins. The chloride concentrations ranged from 42.2 mg/kg in soil sample CS-4 (3.5 ft bgs to 4 ft bgs) to 485 mg/kg in soil sample NW-2 (1.5 ft bgs to 2 ft bgs). The samples analyzed within the release margins did not exhibit chloride concentrations above the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 2.

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121

**7.3.2 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, chloride and Total TPH. Terracon recommends beginning the restoration of the above mentioned site, and disposing of the stockpiled material.

8.0 SOIL REMEDIATION

Impacted soil was remediated and managed according to the criteria described below which will remove contaminants to protect fresh waters, public health and the environment.

8.1 Contaminated Soils

Soils exceeding the designated NMOCD RALs described in Section 6 will be remediated as follows:

- Highly impacted soils within the release margins, illustrated on Figure 2 of Appendix A, were excavated either to a maximum depth of 4 feet bgs, or upon refusal due to encountering a restrictive barrier, or field evidence demonstrates that impacted materials have been sufficiently mitigated, whichever occurs first.
- Following excavation, vertical and horizontal delineation samples were be collected from the base and walls of the excavation to confirm the remaining levels of soil contaminants are below the desired NMOCD RALs.

8.2 Soil Management

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

9.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING**9.1 Termination of Remedial Action**

Remedial action of soils at the site were terminated when the following criteria had been met. Contaminated soils were removed from the site. Sufficient contaminated soil was removed so that residual contaminant concentrations are below the soil remediation action levels.

Release Investigation and Remedial Action Plan

Booster #1014 ■ Eddy County, New Mexico

March 2, 2021 ■ Terracon Project No. AR207121



9.2 Final Closure

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

9.3 Final Report

Upon completion of remedial activities, this 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 Diagram

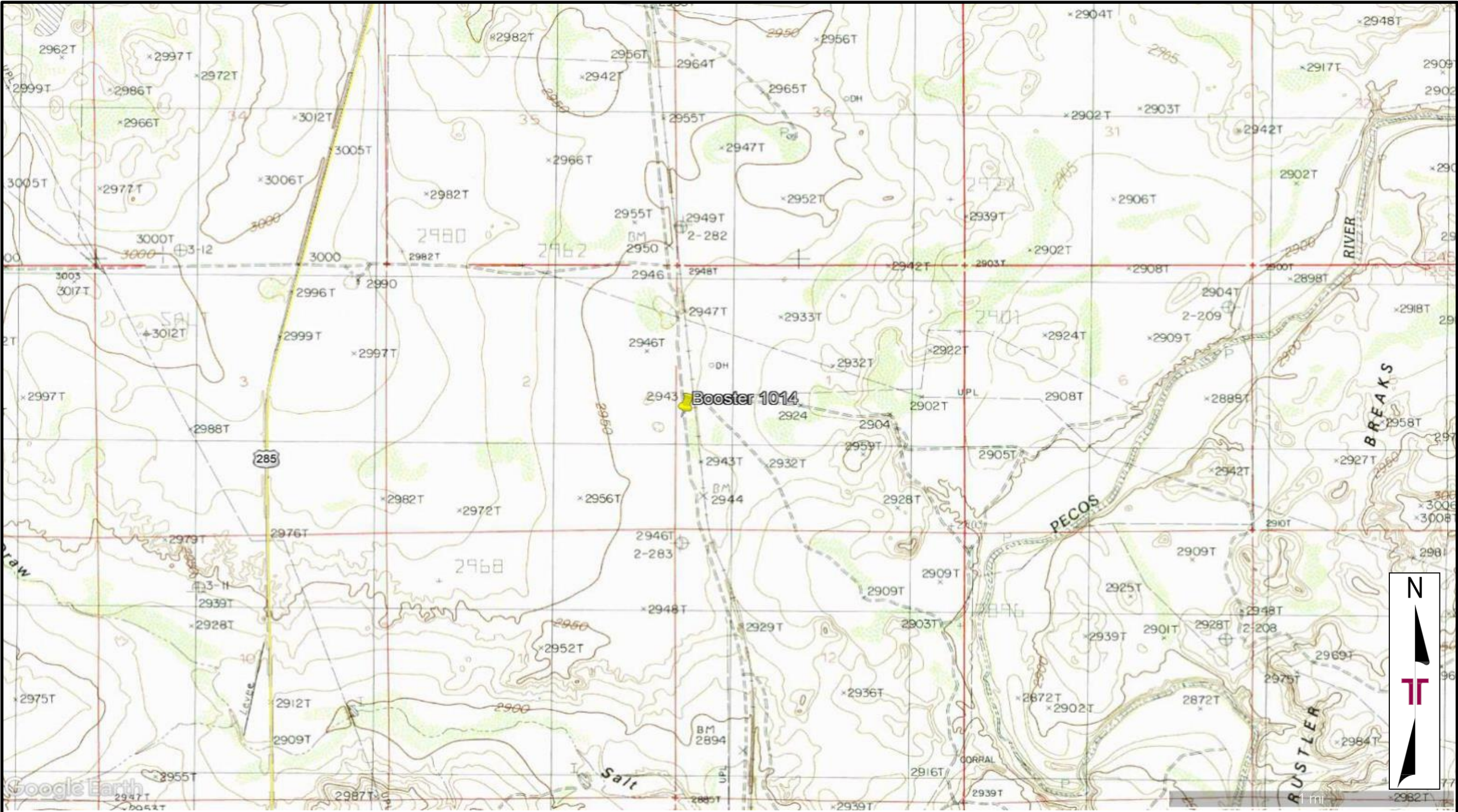
Figure 3 – Contamination Concentration Map

Figure 4 – Remediation Concentration Map

Figure 5 – NMOSE POD Location Map

Figure 6 – Cave Karst Public UCP

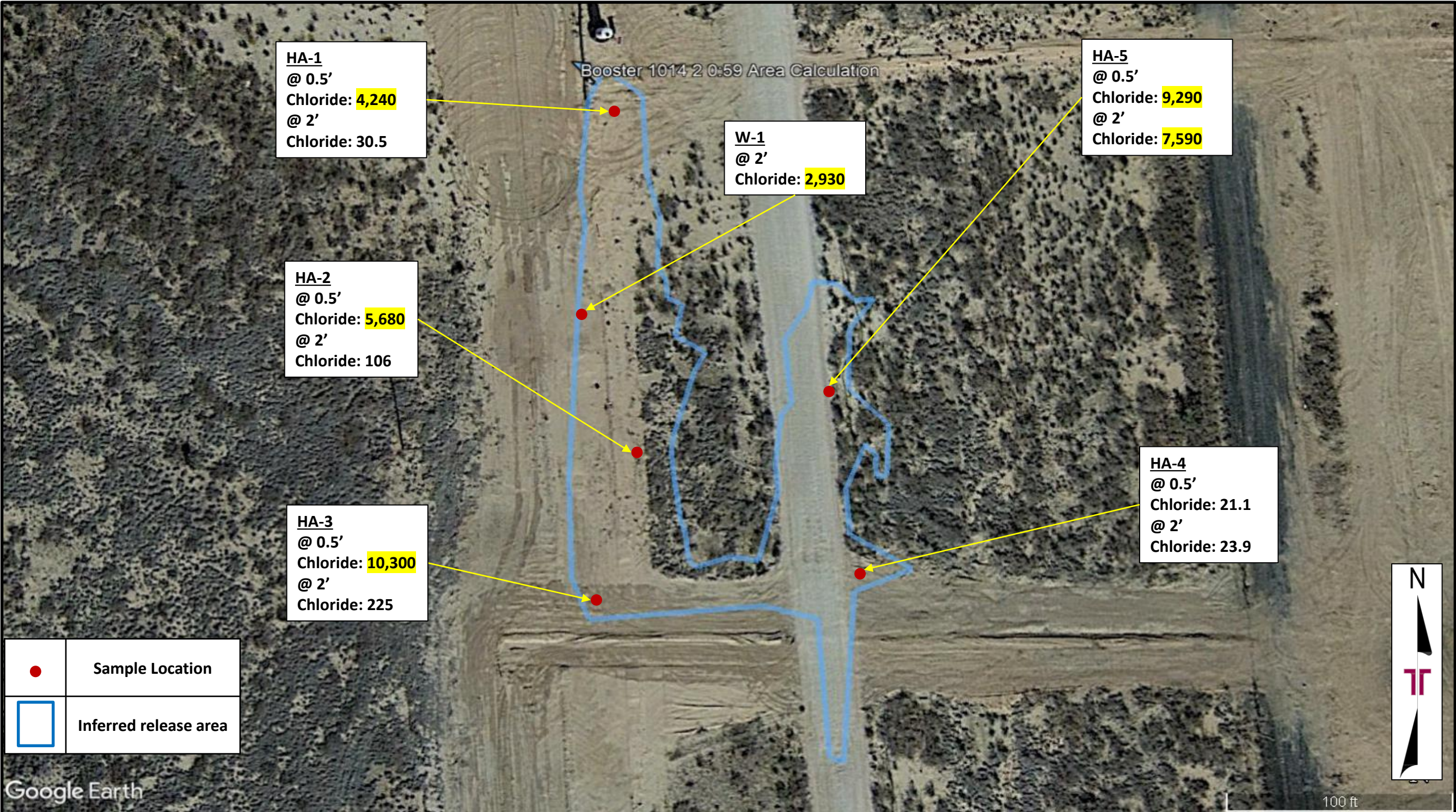
Table 2 – Soil Sample Analytical Results



Project No.	AR207121	 5847 50th St. Lubbock, Texas 79424 PH. (806) 300-0104 FAX. (806) 797 0947	Figure 1 – Topographic Map	
Scale:	As Shown		Booster #1014	
Source:	USGS		32.158325°, -104.049115°	
Date:	1985		Eddy County, New Mexico	



Project No.	AR207121	Terracon Consulting Engineers & Scientists 5847 50th St. Lubbock, Texas 79424 PH. (806) 300-0104 FAX. (806) 797 0947	Figure 2 – Site Map
Scale:	As Shown		Booster #1014
Source:	Google Earth		32.158325°, -1040491150°
Date:	2018		Eddy County, New Mexico



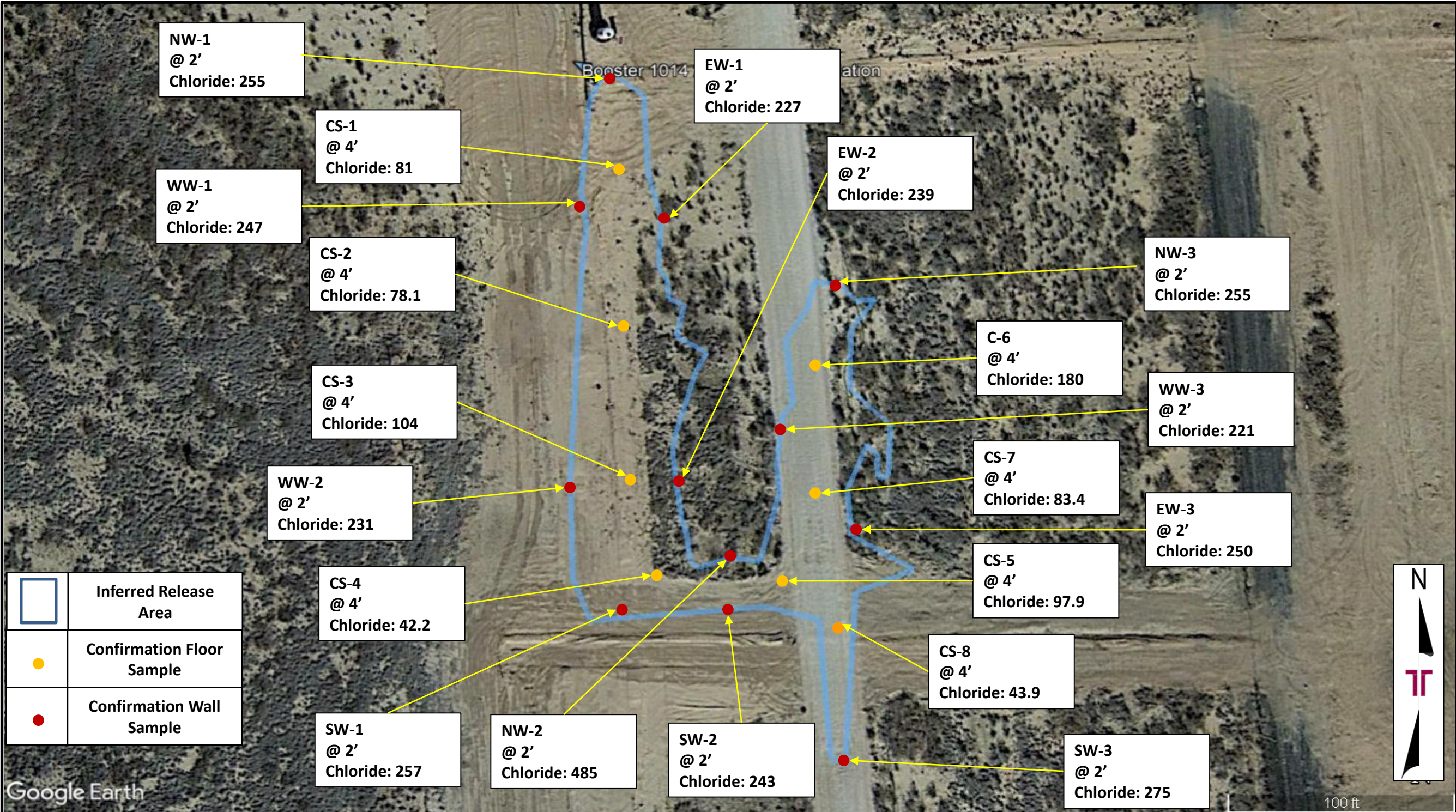
Project No.	AR207121
Scale:	As Shown
Source:	Google Earth
Image Date:	2018

Terracon
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5827 50th St. Suite 1
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Figure 3 – Contamination Concentration Map
Booster #1014 32.158273°, -104.049100° Eddy County, New Mexico



Project No.	AR207121
Scale:	As Shown
Source:	Google Earth
Image Date:	2018

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Consulting Engineers & Scientists

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Lubbock, Texas 79424
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Figure 4 – Remediation Concentration Map

Booster #1014

32.616751°, -104.488446°

Eddy County, New Mexico



-  Site Location
 NMOSE POD Location

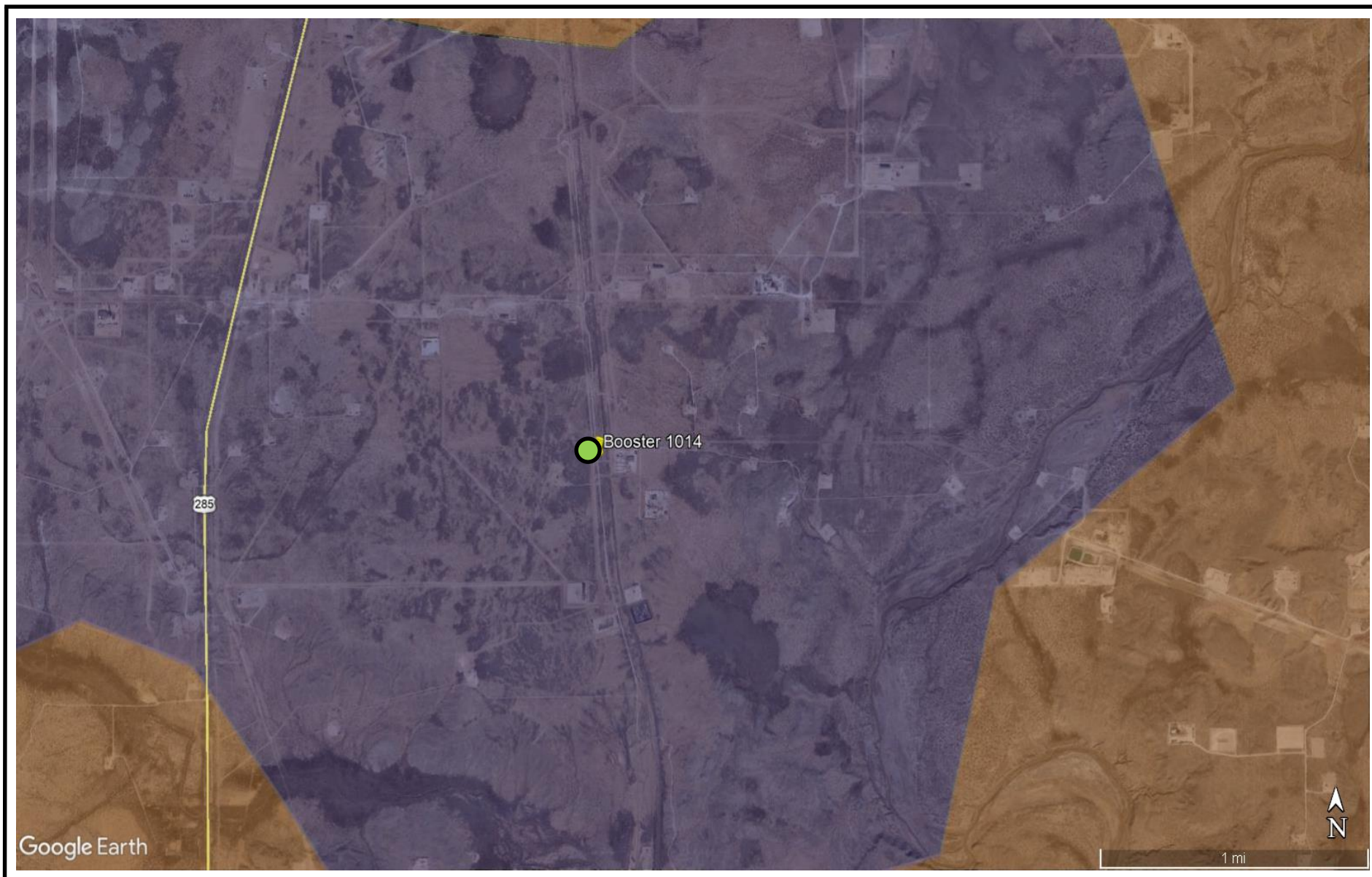


Project No.	A4207121
Scale:	1" = 950'
Source:	Google Earth
Date:	2020

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

Figure 5 - NMOSE POD Location Map

Booster #1014
 32.158273°, -104.049100°
 Eddy County, New Mexico



-  Site Location
-  Med-High Karst



Project No.	A4207121
Scale:	1" = .5mi
Source:	Google Earth
Date:	2020

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Figure 6 - Cave Karst Public UCP Location Map

Booster #1014
32.158273°, -104.049100°
Eddy County, New Mexico

APPENDIX B – TABLES & PROCEDURES

Exhibit 1 – Soil Sampling Procedures

Table 1 – Closure Criteria for Soils Impacted by a Release

Table 2 – Soil Sample Analytical Results

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 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 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
	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

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Booster #1014 Terracon Project No. AR207121									
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
Initial Release Margin Samples (Off Pad)									
HA-1	0 - 0.5	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	4,240	ND	ND	ND	ND
	1.5 - 2	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	30.5	ND	ND	ND	ND
HA-2	0 - 0.5	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	5,680	ND	ND	ND	ND
	1.5 - 2	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	106	ND	ND	ND	ND
HA-3	0 - 0.5	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	10,300	ND	ND	ND	ND
	1.5 - 2	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	225	ND	ND	ND	ND
HA-4	0 - 0.5	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	21.1	ND	ND	ND	ND
	1.5 - 2	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	23.9	ND	ND	ND	ND
HA-5	0 - 0.5	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	9,290	ND	ND	ND	ND
	1.5 - 2	Grab	07/23/20	Benzene - ND Toluene - ND Ethylbenzene - ND Total Xylenes - ND Total BTEX - ND	7,590	ND	ND	ND	ND
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	20,000	1,000	N/A		2,500

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

2. Chloride = Chloride analyzed by EPA Method 300.

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

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

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

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

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Booster #1014 Terracon Project No. AR207121									
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
Initial Release Margin Samples (Off Pad)									
W-1	1.5 - 2	Grab	11/10/20	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	2,930	NA	NA	NA	NA
Confirmation Samples (Off Pad)									
C-6	3.5 - 4	Composite	11/10/20	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	180	NA	NA	NA	NA
WW-1	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0123 Total Xylenes - 0.0817 Total BTEX - 0.094	247	ND	ND	ND	ND
WW-2	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0123 Total Xylenes - 0.0826 Total BTEX - 0.0949	231	ND	ND	ND	ND
WW-3	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00465 Total Xylenes - 0.0305 Total BTEX - 0.0352	221	ND	ND	ND	ND
EW-1	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.016 Total Xylenes - 0.113 Total BTEX - 0.129	227	ND	ND	ND	ND
EW-2	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0137 Total Xylenes - 0.0894 Total BTEX - 0.103	239	ND	ND	ND	ND
EW-3	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0118 Total Xylenes - 0.0809 Total BTEX - 0.0927	250	ND	ND	ND	ND
SW-1	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0035 Total Xylenes - 0.0232 Total BTEX - 0.0267	257	ND	ND	ND	ND
SW-2	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00551 Total Xylenes - 0.0364 Total BTEX - 0.0419	243	ND	ND	ND	ND
SW-3	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00628 Total Xylenes - 0.04 Total BTEX - 0.0462	275	ND	ND	ND	ND
NW-1	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00544 Total Xylenes - 0.0344 Total BTEX - 0.0398	255	ND	ND	ND	ND
NW-2	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00896 Total Xylenes - 0.0566 Total BTEX - 0.0656	485	ND	ND	ND	ND
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	20,000	1,000	N/A		2,500

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

2. Chloride = Chloride analyzed by EPA Method 300.

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

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

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

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A = Not Applicable

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

TABLE 2 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Booster #1014 Terracon Project No. AR207121									
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
NW-3	1.5 - 2	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0149 Total Xylenes - 0.096 Total BTEX - 0.111	255	ND	ND	ND	ND
CS-1	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00394 Total Xylenes - 0.0284 Total BTEX - 0.0323	81.0	ND	ND	ND	ND
CS-2	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00349 Total Xylenes - 0.0293 Total BTEX - 0.0328	78.1	ND	ND	ND	ND
CS-3	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.0133 Total Xylenes - 0.0843 Total BTEX - 0.0976	104	ND	ND	ND	ND
CS-4	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00225 Total Xylenes - 0.0145 Total BTEX - 0.0168	42.2	ND	ND	ND	ND
CS-5	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00567 Total Xylenes - 0.0358 Total BTEX - 0.0415	97.9	ND	ND	ND	ND
CS-7	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00482 Total Xylenes - 0.03 Total BTEX - 0.0348	83.4	ND	ND	ND	ND
CS-8	3.5 - 4	Composite	12/10/20	Benzene - ND Toluene - ND Ethylbenzene - 0.00242 Total Xylenes - 0.0183 Total BTEX - 0.0207	43.9	ND	ND	ND	ND
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	20,000	1,000			N/A 2,500

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

2. Chloride = Chloride analyzed by EPA Method 300.

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

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

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

< = Constituent not detected above the indicated laboratory SDL.

NA = Not Analyzed

N/A = Not Applicable

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

APPENDIX C – PHOTOGRAPHIC LOG

Booster 1014 ■ Eddy County, New Mexico
February 10, 2021 ■ Terracon Project No. AR207121

Terracon



PHOTO 1: View of Release area, facing south. 7/21/2020



PHOTO 2: View of Release area, facing north. 7/21/2020

Responsive ■ Resourceful ■ Reliable

Booster 1014 ■ Eddy County, New Mexico
February 10, 2021 ■ Terracon Project No. AR207121

Terracon



PHOTO 3: View at Point of release, facing northwest. 7/21/2020



PHOTO 4: View of Excavation around HA-4 / HA-5, facing north. 12/01/2020

Responsive ■ Resourceful ■ Reliable

Booster 1014 ■ Eddy County, New Mexico
February 10, 2021 ■ Terracon Project No. AR207121

Terracon



PHOTO 5: View of Excavation around HA-3, facing northwest. 12/01/2020



PHOTO 6: View of Excavation around HA-1 / HA-2, facing north. 12/01/2020

Responsive ■ Resourceful ■ Reliable

APPENDIX D – ANALYTICAL REPORT AND CHAIN OF CUSTODY

Certificate of Analysis Summary 668305

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
 Contact: Joseph Guesnier
 Project Location:

Date Received in Lab: Mon 07.27.2020 16:36
 Report Date: 07.29.2020 15:56
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	668305-001	668305-003	668305-004	668305-006	668305-007	668305-009
	<i>Field Id:</i>	HA-1 (0-0.5)	HA-1 (1.5-2)	HA-2 (0-0.5)	HA-2 (1.5-2)	HA-3 (0-0.5)	HA-3 (1.5-2)
	<i>Depth:</i>	0-0.5	1.5-2	0-0.5	1.5-2	0-0.5	1.5-2
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.23.2020 14:55	07.23.2020 15:05	07.23.2020 15:10	07.23.2020 15:20	07.23.2020 15:25	07.23.2020 15:35
BTEX by EPA 8021B SUB: T104704400-20-20	<i>Extracted:</i>	07.27.2020 16:45	07.27.2020 16:45	07.28.2020 17:00	07.28.2020 17:00	07.28.2020 17:00	07.28.2020 17:00
	<i>Analyzed:</i>	07.28.2020 20:45	07.28.2020 21:06	07.29.2020 00:30	07.29.2020 00:50	07.29.2020 01:11	07.29.2020 01:31
	<i>Units/RL:</i>	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	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00397 0.00397	<0.00396 0.00396	<0.00398 0.00398	<0.00398 0.00398	<0.00396 0.00396	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Xylenes, Total		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-20-20	<i>Extracted:</i>	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20
	<i>Analyzed:</i>	07.29.2020 00:49	07.29.2020 00:55	07.29.2020 01:14	07.29.2020 01:21	07.29.2020 01:27	07.29.2020 01:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		4240 50.2	30.5 4.98	5680 50.0	106 5.00	10300 100	225 5.04
TPH by SW8015 Mod SUB: T104704400-20-20	<i>Extracted:</i>	07.28.2020 12:00	07.28.2020 12:00	07.28.2020 12:00	07.28.2020 12:00	07.28.2020 12:00	07.28.2020 12:00
	<i>Analyzed:</i>	07.28.2020 18:55	07.28.2020 19:14	07.28.2020 19:33	07.28.2020 19:52	07.28.2020 20:11	07.28.2020 20:29
	<i>Units/RL:</i>	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	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 668305

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
 Contact: Joseph Guesnier
 Project Location:

Date Received in Lab: Mon 07.27.2020 16:36
 Report Date: 07.29.2020 15:56
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	668305-010	668305-012	668305-013	668305-015		
	Field Id:	HA-4 (0-0.5)	HA-4 (1.5-2)	HA-5 (0-0.5)	HA-5 (1.5-2)		
	Depth:	0-0.5	1.5-2	0-0.5	1.5-2		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	07.23.2020 15:40	07.23.2020 15:50	07.23.2020 15:55	07.23.2020 16:05		
BTEX by EPA 8021B SUB: T104704400-20-20	Extracted:	07.28.2020 17:00	07.28.2020 17:00	07.28.2020 17:00	07.28.2020 17:00		
	Analyzed:	07.29.2020 01:52	07.29.2020 02:12	07.29.2020 02:32	07.29.2020 02:53		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
m,p-Xylenes		<0.00399 0.00399	<0.00397 0.00397	<0.00398 0.00398	<0.00398 0.00398		
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Xylenes, Total		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199		
Chloride by EPA 300 SUB: T104704400-20-20	Extracted:	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20	07.28.2020 14:20		
	Analyzed:	07.29.2020 01:40	07.29.2020 01:46	07.29.2020 02:05	07.29.2020 02:11		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		21.1 4.98	23.9 4.95	9290 50.3	7590 49.6		
TPH by SW8015 Mod SUB: T104704400-20-20	Extracted:	07.28.2020 12:00	07.28.2020 16:00	07.28.2020 16:00	07.28.2020 16:00		
	Analyzed:	07.28.2020 20:48	07.28.2020 23:37	07.28.2020 23:56	07.29.2020 00:14		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9		
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9		
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9		

BRL - Below Reporting Limit

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



Analytical Report 668305

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Booster 1014

AR207121

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)



07.29.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **668305**

Booster 1014

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) 668305. 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. 668305 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,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-0.5)	S	07.23.2020 14:55	0 - 0.5	668305-001
HA-1 (1.5-2)	S	07.23.2020 15:05	1.5 - 2	668305-003
HA-2 (0-0.5)	S	07.23.2020 15:10	0 - 0.5	668305-004
HA-2 (1.5-2)	S	07.23.2020 15:20	1.5 - 2	668305-006
HA-3 (0-0.5)	S	07.23.2020 15:25	0 - 0.5	668305-007
HA-3 (1.5-2)	S	07.23.2020 15:35	1.5 - 2	668305-009
HA-4 (0-0.5)	S	07.23.2020 15:40	0 - 0.5	668305-010
HA-4 (1.5-2)	S	07.23.2020 15:50	1.5 - 2	668305-012
HA-5 (0-0.5)	S	07.23.2020 15:55	0 - 0.5	668305-013
HA-5 (1.5-2)	S	07.23.2020 16:05	1.5 - 2	668305-015
HA-1 (0.5-1)	S	07.23.2020 15:00	0.5 - 1	Not Analyzed
HA-2 (0.5-1)	S	07.23.2020 15:15	0.5 - 1	Not Analyzed
HA-3 (0.5-1)	S	07.23.2020 15:30	0.5 - 1	Not Analyzed
HA-4 (0.5-1)	S	07.23.2020 15:45	0.5 - 1	Not Analyzed
HA-5 (0.5-1)	S	07.23.2020 16:00	0.5 - 1	Not Analyzed



CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Booster 1014

Project ID: AR207121
Work Order Number(s): 668305

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

Analytical non conformances and comments:

Batch: LBA-3132872 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected

Samples affected are: 668305-006,668305-007,668305-015,668305-012,668305-009.



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-1 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-001

Date Collected: 07.23.2020 14:55

Sample Depth: 0 - 0.5

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	4240	50.2	mg/kg	07.29.2020 00:49		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.28.2020 12:00

Basis: Wet Weight

Seq Number: 3132908

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 18:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 18:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 18:55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 18:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	07.28.2020 18:55	
o-Terphenyl	84-15-1	121	%	70-130	07.28.2020 18:55	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-1 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-001

Date Collected: 07.23.2020 14:55

Sample Depth: 0 - 0.5

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	<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.28.2020 20:45	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.28.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	07.28.2020 20:45	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.28.2020 20:45	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-1 (1.5-2)** Matrix: Soil Date Received: 07.27.2020 16:36
 Lab Sample Id: 668305-003 Date Collected: 07.23.2020 15:05 Sample Depth: 1.5 - 2
 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	30.5	4.98	mg/kg	07.29.2020 00:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 07.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3132908 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	07.28.2020 19:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.28.2020 19:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.28.2020 19:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.28.2020 19:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	07.28.2020 19:14	
o-Terphenyl	84-15-1	125	%	70-130	07.28.2020 19:14	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-1 (1.5-2)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-003

Date Collected: 07.23.2020 15:05

Sample Depth: 1.5 - 2

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	<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.28.2020 21:06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.28.2020 21:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	07.28.2020 21:06	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.28.2020 21:06	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-2 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-004

Date Collected: 07.23.2020 15:10

Sample Depth: 0 - 0.5

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	5680	50.0	mg/kg	07.29.2020 01:14		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.28.2020 12:00

Basis: Wet Weight

Seq Number: 3132908

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 19:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 19:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 19:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 19:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	07.28.2020 19:33	
o-Terphenyl	84-15-1	126	%	70-130	07.28.2020 19:33	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-2 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-004

Date Collected: 07.23.2020 15:10

Sample Depth: 0 - 0.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.2020 00:30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.2020 00:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	07.29.2020 00:30	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.2020 00:30	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-2 (1.5-2)** Matrix: Soil Date Received: 07.27.2020 16:36
 Lab Sample Id: 668305-006 Date Collected: 07.23.2020 15:20 Sample Depth: 1.5 - 2
 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	106	5.00	mg/kg	07.29.2020 01:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 07.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3132908 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 19:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 19:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 19:52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 19:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-130	07.28.2020 19:52	
o-Terphenyl	84-15-1	120	%	70-130	07.28.2020 19:52	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-2 (1.5-2)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-006

Date Collected: 07.23.2020 15:20

Sample Depth: 1.5 - 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.2020 00:50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.2020 00:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	134	%	70-130	07.29.2020 00:50	**
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.2020 00:50	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-3 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-007

Date Collected: 07.23.2020 15:25

Sample Depth: 0 - 0.5

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	10300	100	mg/kg	07.29.2020 01:27		20

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.28.2020 12:00

Basis: Wet Weight

Seq Number: 3132908

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	07.28.2020 20:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.28.2020 20:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.28.2020 20:11	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.28.2020 20:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	07.28.2020 20:11	
o-Terphenyl	84-15-1	122	%	70-130	07.28.2020 20:11	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-3 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-007

Date Collected: 07.23.2020 15:25

Sample Depth: 0 - 0.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	07.29.2020 01:11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.2020 01:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	132	%	70-130	07.29.2020 01:11	**	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.2020 01:11		



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-3 (1.5-2)** Matrix: Soil Date Received: 07.27.2020 16:36
 Lab Sample Id: 668305-009 Date Collected: 07.23.2020 15:35 Sample Depth: 1.5 - 2
 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	225	5.04	mg/kg	07.29.2020 01:33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 07.28.2020 12:00 Basis: Wet Weight
 Seq Number: 3132908 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	07.28.2020 20:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.28.2020 20:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.28.2020 20:29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.28.2020 20:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	07.28.2020 20:29	
o-Terphenyl	84-15-1	125	%	70-130	07.28.2020 20:29	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-3 (1.5-2)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-009

Date Collected: 07.23.2020 15:35

Sample Depth: 1.5 - 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.2020 01:31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.2020 01:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	132	%	70-130	07.29.2020 01:31	**
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.2020 01:31	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-4 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-010

Date Collected: 07.23.2020 15:40

Sample Depth: 0 - 0.5

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	21.1	4.98	mg/kg	07.29.2020 01:40		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 07.28.2020 12:00

Basis: Wet Weight

Seq Number: 3132908

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 20:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 20:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 20:48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 20:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-130	07.28.2020 20:48	
o-Terphenyl	84-15-1	123	%	70-130	07.28.2020 20:48	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-4 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-010

Date Collected: 07.23.2020 15:40

Sample Depth: 0 - 0.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.29.2020 01:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.29.2020 01:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.29.2020 01:52	
4-Bromofluorobenzene	460-00-4	130	%	70-130	07.29.2020 01:52	



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Booster 1014

Sample Id: **HA-4 (1.5-2)** Matrix: Soil Date Received: 07.27.2020 16:36
 Lab Sample Id: 668305-012 Date Collected: 07.23.2020 15:50 Sample Depth: 1.5 - 2
 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	23.9	4.95	mg/kg	07.29.2020 01:46		1

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	<49.9	49.9	mg/kg	07.28.2020 23:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.28.2020 23:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.28.2020 23:37	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.28.2020 23:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	07.28.2020 23:37	
o-Terphenyl	84-15-1	127	%	70-130	07.28.2020 23:37	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-4 (1.5-2)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-012

Date Collected: 07.23.2020 15:50

Sample Depth: 1.5 - 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.29.2020 02:12	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.29.2020 02:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.2020 02:12		
4-Bromofluorobenzene	460-00-4	137	%	70-130	07.29.2020 02:12	**	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-5 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-013

Date Collected: 07.23.2020 15:55

Sample Depth: 0 - 0.5

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	9290	50.3	mg/kg	07.29.2020 02:05		10

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 23:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.28.2020 23:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.28.2020 23:56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.28.2020 23:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	07.28.2020 23:56	
o-Terphenyl	84-15-1	123	%	70-130	07.28.2020 23:56	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-5 (0-0.5)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-013

Date Collected: 07.23.2020 15:55

Sample Depth: 0 - 0.5

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.2020 02:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.2020 02:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	07.29.2020 02:32	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.29.2020 02:32	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-5 (1.5-2)** Matrix: Soil Date Received: 07.27.2020 16:36
 Lab Sample Id: 668305-015 Date Collected: 07.23.2020 16:05 Sample Depth: 1.5 - 2
 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	7590	49.6	mg/kg	07.29.2020 02:11		10

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	<49.9	49.9	mg/kg	07.29.2020 00:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.29.2020 00:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.29.2020 00:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.29.2020 00:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	07.29.2020 00:14	
o-Terphenyl	84-15-1	123	%	70-130	07.29.2020 00:14	



Certificate of Analytical Results 668305

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **HA-5 (1.5-2)**

Matrix: Soil

Date Received: 07.27.2020 16:36

Lab Sample Id: 668305-015

Date Collected: 07.23.2020 16:05

Sample Depth: 1.5 - 2

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: AMF

% Moisture:

Analyst: AMF

Date Prep: 07.28.2020 17:00

Basis: Wet Weight

Seq Number: 3132872

SUB: T104704400-20-20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.29.2020 02:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.29.2020 02:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	136	%	70-130	07.29.2020 02:53	**	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.29.2020 02:53		

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



Terracon-Lubbock

Booster 1014

Analytical Method: Chloride by EPA 300

Seq Number: 3132874

MB Sample Id: 7708211-1-BLK

Matrix: Solid

LCS Sample Id: 7708211-1-BKS

Prep Method: E300P

Date Prep: 07.28.2020

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

Seq Number: 3132874

Parent Sample Id: 668296-006

Matrix: Soil

MS Sample Id: 668296-006 S

Prep Method: E300P

Date Prep: 07.28.2020

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

Seq Number: 3132874

Parent Sample Id: 668305-012

Matrix: Soil

MS Sample Id: 668305-012 S

Prep Method: E300P

Date Prep: 07.28.2020

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

Seq Number: 3132908

MB Sample Id: 7708249-1-BLK

Matrix: Solid

LCS Sample Id: 7708249-1-BKS

Prep Method: SW8015P

Date Prep: 07.28.2020

LCSD Sample Id: 7708249-1-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	876	88	851	85	70-130	3	20	mg/kg	07.28.2020 12:43	
Diesel Range Organics (DRO)	<50.0	1000	901	90	900	90	70-130	0	20	mg/kg	07.28.2020 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		129		125		70-130	%	07.28.2020 12:43
o-Terphenyl	123		121		118		70-130	%	07.28.2020 12:43

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132917

MB Sample Id: 7708255-1-BLK

Matrix: Solid

LCS Sample Id: 7708255-1-BKS

Prep Method: SW8015P

Date Prep: 07.28.2020

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

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

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

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

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



Terracon-Lubbock

Booster 1014

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132908

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.28.2020

MB Sample Id: 7708249-1-BLK

Parameter

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.28.2020 12:24	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132917

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.28.2020

MB Sample Id: 7708255-1-BLK

Parameter

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132908

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.28.2020

Parent Sample Id: 668220-021

MS Sample Id: 668220-021 S

MSD Sample Id: 668220-021 SD

Parameter

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	998	877	88	780	78	70-130	12	20	mg/kg	07.28.2020 14:08	
Diesel Range Organics (DRO)	<49.9	998	846	85	810	81	70-130	4	20	mg/kg	07.28.2020 14:08	

Surrogate

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		108		70-130	%	07.28.2020 14:08
o-Terphenyl	126		100		70-130	%	07.28.2020 14:08

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132917

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.28.2020

Parent Sample Id: 668301-001

MS Sample Id: 668301-001 S

MSD Sample Id: 668301-001 SD

Parameter

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

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

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

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

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

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



Terracon-Lubbock Booster 1014

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132827

Matrix: Solid

Prep Method: SW5035A

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

Seq Number: 3132872

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.28.2020

MB Sample Id: 7708271-1-BLK

LCS Sample Id: 7708271-1-BKS

LCSD Sample Id: 7708271-1-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	0.0987	99	0.102	102	70-130	3	35	mg/kg	07.28.2020 22:07	
Toluene	<0.00200	0.100	0.0955	96	0.102	102	70-130	7	35	mg/kg	07.28.2020 22:07	
Ethylbenzene	<0.00200	0.100	0.0953	95	0.103	103	70-130	8	35	mg/kg	07.28.2020 22:07	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.202	101	70-130	8	35	mg/kg	07.28.2020 22:07	
o-Xylene	<0.00200	0.100	0.0924	92	0.101	101	70-130	9	35	mg/kg	07.28.2020 22:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		98		97		70-130	%	07.28.2020 22:07
4-Bromofluorobenzene	117		103		110		70-130	%	07.28.2020 22:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132827

Matrix: Soil

Prep Method: SW5035A

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
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

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

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



Terracon-Lubbock

Booster 1014

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132872

Parent Sample Id: 668346-005

Matrix: Soil

MS Sample Id: 668346-005 S

Prep Method: SW5035A

Date Prep: 07.28.2020

MSD Sample Id: 668346-005 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	0.0872	87	0.0931	93	70-130	7	35	mg/kg	07.28.2020 22:48	
Toluene	<0.00200	0.0998	0.0866	87	0.0925	93	70-130	7	35	mg/kg	07.28.2020 22:48	
Ethylbenzene	<0.00200	0.0998	0.0856	86	0.0916	92	70-130	7	35	mg/kg	07.28.2020 22:48	
m,p-Xylenes	<0.00399	0.200	0.168	84	0.181	91	70-130	7	35	mg/kg	07.28.2020 22:48	
o-Xylene	<0.00200	0.0998	0.0828	83	0.0893	89	70-130	8	35	mg/kg	07.28.2020 22:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.28.2020 22:48
4-Bromofluorobenzene	111		115		70-130	%	07.28.2020 22:48

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

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

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

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

668305

Terracon

CHAIN OF CUSTODY RECORD

Office Location Lubbock		Laboratory: Xenco		Address: 6701 Aberdeen Lubbock, Texas 79424		Phone: J. Guesnier 806-544-9276		Contact: J. Guesnier		SRS #: _____		Page <u>1</u> of <u>1</u>	
Project Manager Sampler's Name J. Guesnier E. Vazquez		Project Name AR207121		Project Number Booster 1014		Identifying Marks of Sample(s)		Start Depth		End Depth		No. Type of Containers	
Matrix		Date		Time		Comp		Grab		4 oz Glass		60 ml VOA	
S		7/23/2020		2:55		X		X		0 0.5		X	
S		7/23/2020		3:00		X		X		0.5 1		X	
S		7/23/2020		3:05		X		X		1.5 2		X	
S		7/23/2020		3:10		X		X		0 0.5		X	
S		7/23/2020		3:15		X		X		0.5 1		X	
S		7/23/2020		3:20		X		X		1.5 2		X	
S		7/23/2020		3:25		X		X		0 0.5		X	
S		7/23/2020		3:30		X		X		0.5 1		X	
S		7/23/2020		3:35		X		X		1.5 2		X	
S		7/23/2020		3:40		X		X		0 0.5		X	
S		7/23/2020		3:45		X		X		0.5 1		X	
S		7/23/2020		3:50		X		X		1.5 2		X	
S		7/23/2020		3:55		X		X		0 0.5		X	
S		7/23/2020		4:00		X		X		0.5 1		X	
S		7/23/2020		4:05		X		X		1.5 2		X	

ANALYSIS REQUESTED		LAB USE ONLY	
Chloride (EPA Method 300)		DUE DATE:	
TPH Extended 8015		TEMP OF COOLER WHEN RECEIVED (°C)	
BTEX (EPA Method 8021B)		Page <u>1</u> of <u>1</u>	
Hold		Lab Sample ID	
X		668305-001	
X		-002	
X		-003	
X		-004	
X		-005	
X		-006	
X		-007	
X		-008	
X		-009	
X		-010	
X		-011	
X		-012	
X		-013	
X		-014	
X		-015	

TURNAROUND TIME		48-Hour Rush		24-Hour Rush	
Relinquished by (Signature)		Date: <u>7-27-20</u> Time: <u>4:36</u>		Date: <u>7/27/20</u> Time: <u>16:36</u>	
Relinquished by (Signature)		Date: _____ Time: _____		Date: _____ Time: _____	
Relinquished by (Signature)		Date: _____ Time: _____		Date: _____ Time: _____	
Relinquished by (Signature)		Date: _____ Time: _____		Date: _____ Time: _____	

NOTES: Client: Solaris Midstream
e-mail results to: bryant.mcbrauer@terracon.com
erin.loyd@terracon.com
jguesnier@terracon.com

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ Resourceful ■ Reliable

Inter-Office Shipment

IOS Number : **67756**

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
668305-001	S	HA-1 (0-0.5)	07.23.2020 14:55	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-001	S	HA-1 (0-0.5)	07.23.2020 14:55	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-001	S	HA-1 (0-0.5)	07.23.2020 14:55	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-002	S	HA-1 (0.5-1)	07.23.2020 15:00	SW8021B	BTEX by EPA 8021B	HOLD	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-002	S	HA-1 (0.5-1)	07.23.2020 15:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-002	S	HA-1 (0.5-1)	07.23.2020 15:00	E300_CL	Chloride by EPA 300	HOLD	08.20.2020	JKR	CL	
668305-003	S	HA-1 (1.5-2)	07.23.2020 15:05	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-003	S	HA-1 (1.5-2)	07.23.2020 15:05	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-003	S	HA-1 (1.5-2)	07.23.2020 15:05	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-004	S	HA-2 (0-0.5)	07.23.2020 15:10	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-004	S	HA-2 (0-0.5)	07.23.2020 15:10	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-004	S	HA-2 (0-0.5)	07.23.2020 15:10	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-005	S	HA-2 (0.5-1)	07.23.2020 15:15	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-005	S	HA-2 (0.5-1)	07.23.2020 15:15	E300_CL	Chloride by EPA 300	HOLD	08.20.2020	JKR	CL	
668305-005	S	HA-2 (0.5-1)	07.23.2020 15:15	SW8021B	BTEX by EPA 8021B	HOLD	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-006	S	HA-2 (1.5-2)	07.23.2020 15:20	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-006	S	HA-2 (1.5-2)	07.23.2020 15:20	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-006	S	HA-2 (1.5-2)	07.23.2020 15:20	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-007	S	HA-3 (0-0.5)	07.23.2020 15:25	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-007	S	HA-3 (0-0.5)	07.23.2020 15:25	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-007	S	HA-3 (0-0.5)	07.23.2020 15:25	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-008	S	HA-3 (0.5-1)	07.23.2020 15:30	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	08.06.2020	JKR	PHCC10C28 PHCC28C35	
668305-008	S	HA-3 (0.5-1)	07.23.2020 15:30	SW8021B	BTEX by EPA 8021B	HOLD	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-008	S	HA-3 (0.5-1)	07.23.2020 15:30	E300_CL	Chloride by EPA 300	HOLD	08.20.2020	JKR	CL	
668305-009	S	HA-3 (1.5-2)	07.23.2020 15:35	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	

Inter-Office Shipment

IOS Number : **67756**

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**

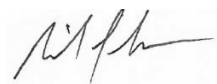
Air Bill No.: 771104404257

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
668305-009	S	HA-3 (1.5-2)	07.23.2020 15:35	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-009	S	HA-3 (1.5-2)	07.23.2020 15:35	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-010	S	HA-4 (0-0.5)	07.23.2020 15:40	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-010	S	HA-4 (0-0.5)	07.23.2020 15:40	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-010	S	HA-4 (0-0.5)	07.23.2020 15:40	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-011	S	HA-4 (0.5-1)	07.23.2020 15:45	SW8021B	BTEX by EPA 8021B	HOLD	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-011	S	HA-4 (0.5-1)	07.23.2020 15:45	E300_CL	Chloride by EPA 300	HOLD	08.20.2020	JKR	CL	
668305-011	S	HA-4 (0.5-1)	07.23.2020 15:45	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-012	S	HA-4 (1.5-2)	07.23.2020 15:50	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-012	S	HA-4 (1.5-2)	07.23.2020 15:50	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-012	S	HA-4 (1.5-2)	07.23.2020 15:50	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-013	S	HA-5 (0-0.5)	07.23.2020 15:55	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-013	S	HA-5 (0-0.5)	07.23.2020 15:55	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-013	S	HA-5 (0-0.5)	07.23.2020 15:55	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-014	S	HA-5 (0.5-1)	07.23.2020 16:00	SW8021B	BTEX by EPA 8021B	HOLD	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-014	S	HA-5 (0.5-1)	07.23.2020 16:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	08.06.2020	JKR	PHCC10C28 PHCC28C3	
668305-014	S	HA-5 (0.5-1)	07.23.2020 16:00	E300_CL	Chloride by EPA 300	HOLD	08.20.2020	JKR	CL	
668305-015	S	HA-5 (1.5-2)	07.23.2020 16:05	E300_CL	Chloride by EPA 300	07.29.2020	08.20.2020	JKR	CL	
668305-015	S	HA-5 (1.5-2)	07.23.2020 16:05	SW8021B	BTEX by EPA 8021B	07.29.2020	08.06.2020	JKR	BR4FBZ BZ BZME EBZ	
668305-015	S	HA-5 (1.5-2)	07.23.2020 16:05	SW8015MOD_NM	TPH by SW8015 Mod	07.29.2020	08.06.2020	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By:



Michael J Turner

Received By:



Brianna Teel

Date Relinquished: 07.27.2020

Date Received: 07.28.2020

Inter-Office Shipment

IOS Number : 67756

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

Inter Office Shipment or Sample Comments:

Cooler Temperature: 0.4

Xenco



Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 67756

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 05.15 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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 07.27.2020 04.36.00 PM

Work Order #: 668305

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

Certificate of Analysis Summary 677463

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
 Contact: Bryant McBrayer
 Project Location:

Date Received in Lab: Wed 11.11.2020 08:49
 Report Date: 11.13.2020 14:28
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	677463-001	677463-002				
	Field Id:	W-1	C-6				
	Depth:	1.5-2	3.5-4				
	Matrix:	SOIL	SOIL				
	Sampled:	11.10.2020 10:00	11.10.2020 10:05				
Chloride by EPA 300 SUB: T104704400-20-21	Extracted:	11.12.2020 17:10	11.12.2020 17:10				
	Analyzed:	11.13.2020 01:13	11.13.2020 01:18				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		2930 49.8	180 49.7				

BRL - Below Reporting Limit

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



Analytical Report 677463

for

Terracon-Lubbock

Project Manager: Bryant McBrayer

Booster 1014

AR207121

11.13.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



11.13.2020

Project Manager: **Bryant McBrayer**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **677463**

Booster 1014

Project Address:

Bryant McBrayer:

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) 677463. 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. 677463 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,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 677463

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
W-1	S	11.10.2020 10:00	1.5 - 2	677463-001
C-6	S	11.10.2020 10:05	3.5 - 4	677463-002



CASE NARRATIVE

Client Name: Terracon-Lubbock

Project Name: Booster 1014

Project ID: AR207121
Work Order Number(s): 677463

Report Date: 11.13.2020
Date Received: 11.11.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

**Certificate of Analytical Results 677463****Terracon-Lubbock, Lubbock, TX**

Booster 1014

Sample Id: **W-1**
Lab Sample Id: 677463-001

Matrix: Soil
Date Collected: 11.10.2020 10:00

Date Received: 11.11.2020 08:49
Sample Depth: 1.5 - 2

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: SPC

Analyst: CHE

Date Prep: 11.12.2020 17:10

% Moisture:
Basis: Wet Weight
SUB: T104704400-20-21

Seq Number: 3142164

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2930	49.8	mg/kg	11.13.2020 01:13		10



Certificate of Analytical Results 677463

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: C-6 Matrix: Soil Date Received: 11.11.2020 08:49
Lab Sample Id: 677463-002 Date Collected: 11.10.2020 10:05 Sample Depth: 3.5 - 4
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: SPC
Analyst: CHE Date Prep: 11.12.2020 17:10 % Moisture:
Seq Number: 3142164 Basis: Wet Weight
SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	180	49.7	mg/kg	11.13.2020 01:18		10

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



Terracon-Lubbock

Booster 1014

Analytical Method: Chloride by EPA 300

Seq Number: 3142164

MB Sample Id: 7715092-1-BLK

Matrix: Solid

LCS Sample Id: 7715092-1-BKS

Prep Method: E300P

Date Prep: 11.12.2020

LCSD Sample Id: 7715092-1-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	261	104	262	105	90-110	0	20	mg/kg	11.12.2020 22:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3142164

Parent Sample Id: 677577-026

Matrix: Soil

MS Sample Id: 677577-026 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677577-026 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	82.0	250	340	103	339	103	90-110	0	20	mg/kg	11.12.2020 23:01	

Analytical Method: Chloride by EPA 300

Seq Number: 3142164

Parent Sample Id: 677687-002

Matrix: Soil

MS Sample Id: 677687-002 S

Prep Method: E300P

Date Prep: 11.12.2020

MSD Sample Id: 677687-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.7	252	274	104	273	104	90-110	0	20	mg/kg	11.13.2020 00:15	

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

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

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

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

677463

[illegible]

Inter-Office Shipment

IOS Number : **73135**

Date/Time: 11.11.2020

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**

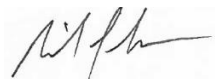
Air Bill No.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
677463-001	S	W-1	11.10.2020 10:00	E300_CL	Chloride by EPA 300	11.13.2020	12.08.2020	JKR	CL	
677463-002	S	C-6	11.10.2020 10:05	E300_CL	Chloride by EPA 300	11.13.2020	12.08.2020	JKR	CL	

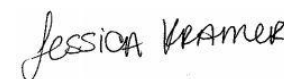
Inter Office Shipment or Sample Comments:

Relinquished By:



Michael J Turner

Received By:



Jessica Kramer

Date Relinquished: 11.11.2020

Date Received: 11.12.2020

Cooler Temperature: 1.0



Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 73135

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Michael J Turner

Date Sent: 11.11.2020 09.17 AM

Received By: Jessica Kramer

Date Received: 11.12.2020 10.26 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1
#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:

Jessica Kramer

Date: 11.12.2020

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 11.11.2020 08.49.00 AM

Work Order #: 677463

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : ir-4

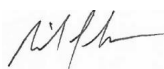
Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.1
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	No
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain 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:

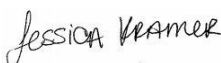
PH Device/Lot#:

Checklist completed by:


 Michael J Turner

Date: 11.11.2020

Checklist reviewed by:


 Jessica Kramer

Date: 11.12.2020

Certificate of Analysis Summary 680923

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
Report Date: 12.16.2020 16:37
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680923-001	680923-002	680923-003	680923-004	680923-005	680923-006
	<i>Field Id:</i>	WW-1 (1.5-2)	WW-2 (1.5-2)	WW-3 (1.5-2)	EW-1 (1.5-2)	EW-2 (1.5-2)	EW-3 (1.5-2)
	<i>Depth:</i>	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 11:00	12.10.2020 11:05	12.10.2020 11:10	12.10.2020 11:15	12.10.2020 11:20	12.10.2020 11:25
BTEX by EPA 8021B SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00
	<i>Analyzed:</i>	12.16.2020 00:34	12.16.2020 00:54	12.16.2020 01:15	12.16.2020 01:35	12.16.2020 01:55	12.16.2020 02:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		0.0123 0.00199	0.0123 0.00202	0.00465 0.00200	0.0160 0.00200	0.0137 0.00198	0.0118 0.00199
m,p-Xylenes		0.0644 0.00398	0.0649 0.00403	0.0240 0.00399	0.0885 0.00399	0.0707 0.00397	0.0637 0.00398
o-Xylene		0.0173 0.00199	0.0177 0.00202	0.00651 0.00200	0.0245 0.00200	0.0187 0.00198	0.0172 0.00199
Xylenes, Total		0.0817 0.00199	0.0826 0.00202	0.0305 0.00200	0.113 0.00200	0.0894 0.00198	0.0809 0.00199
Total BTEX		0.0940 0.00199	0.0949 0.00202	0.0352 0.00200	0.129 0.00200	0.103 0.00198	0.0927 0.00199
Chloride by EPA 300 SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50
	<i>Analyzed:</i>	12.15.2020 19:52	12.15.2020 20:08	12.15.2020 20:13	12.15.2020 20:28	12.15.2020 20:34	12.15.2020 20:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		247 25.0	231 25.2	221 24.8	227 25.0	239 24.9	250 24.8
TPH by SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00
	<i>Analyzed:</i>	12.15.2020 20:43	12.15.2020 21:40	12.15.2020 21:58	12.15.2020 22:17	12.15.2020 22:36	12.15.2020 22:55
	<i>Units/RL:</i>	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	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9

BRL - Below Reporting Limit

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



Certificate of Analysis Summary 680923

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
Report Date: 12.16.2020 16:37
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680923-007	680923-008	680923-009	680923-010	680923-011	680923-012
	<i>Field Id:</i>	SW-1 (1.5-2)	SW-2 (1.5-2)	SW-3 (1.5-2)	NW-1 (1.5-2)	NW-2 (1.5-2)	NW-3 (1.5-2)
	<i>Depth:</i>	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft	1.5-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 11:30	12.10.2020 11:35	12.10.2020 11:40	12.10.2020 11:45	12.10.2020 11:50	12.10.2020 11:55
BTEX by EPA 8021B SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00
	<i>Analyzed:</i>	12.16.2020 02:36	12.16.2020 02:57	12.16.2020 03:17	12.16.2020 03:38	12.16.2020 05:00	12.16.2020 05:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		0.00350 0.00201	0.00551 0.00201	0.00628 0.00199	0.00544 0.00199	0.00896 0.00201	0.0149 0.00201
m,p-Xylenes		0.0183 0.00402	0.0286 0.00402	0.0317 0.00398	0.0272 0.00398	0.0447 0.00402	0.0760 0.00402
o-Xylene		0.00493 0.00201	0.00775 0.00201	0.00826 0.00199	0.00718 0.00199	0.0119 0.00201	0.0200 0.00201
Xylenes, Total		0.0232 0.00201	0.0364 0.00201	0.0400 0.00199	0.0344 0.00199	0.0566 0.00201	0.0960 0.00201
Total BTEX		0.0267 0.00201	0.0419 0.00201	0.0462 0.00199	0.0398 0.00199	0.0656 0.00201	0.111 0.00201
Chloride by EPA 300 SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 16:50	12.15.2020 17:05	12.15.2020 17:05
	<i>Analyzed:</i>	12.15.2020 20:44	12.15.2020 20:49	12.15.2020 20:54	12.15.2020 21:00	12.15.2020 21:31	12.15.2020 21:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		257 50.2	243 50.0	275 50.0	255 50.0	485 X 50.0	255 49.6
TPH by SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00
	<i>Analyzed:</i>	12.15.2020 23:13	12.15.2020 23:32	12.15.2020 23:51	12.16.2020 00:09	12.16.2020 00:47	12.16.2020 01:06
	<i>Units/RL:</i>	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	<50.0 50.0	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9

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Certificate of Analysis Summary 680923

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
Report Date: 12.16.2020 16:37
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	680923-013	680923-014	680923-015	680923-016	680923-017	680923-019
	<i>Field Id:</i>	CS-1 (3.5-4)	CS-2 (3.5-4)	CS-3 (3.5-4)	CS-4 (3.5-4)	CS-5 (3.5-4)	CS-7 (3.5-4)
	<i>Depth:</i>	3.5-4 ft	3.5-4 ft	3.5-4 ft	3.5-4 ft	3.5-4 ft	3.5-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	12.10.2020 12:00	12.10.2020 12:05	12.10.2020 12:10	12.10.2020 12:15	12.10.2020 12:20	12.10.2020 12:25
BTEX by EPA 8021B SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00	12.15.2020 17:00
	<i>Analyzed:</i>	12.16.2020 05:41	12.16.2020 06:01	12.16.2020 06:22	12.16.2020 06:42	12.16.2020 07:03	12.16.2020 07:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		0.00394 0.00202	0.00349 0.00201	0.0133 0.00200	0.00225 0.00202	0.00567 0.00199	0.00482 0.00200
m,p-Xylenes		0.0217 0.00404	0.0217 0.00402	0.0666 0.00399	0.0110 0.00403	0.0282 0.00398	0.0236 0.00400
o-Xylene		0.00669 0.00202	0.00758 0.00201	0.0177 0.00200	0.00352 0.00202	0.00761 0.00199	0.00641 0.00200
Xylenes, Total		0.0284 0.00202	0.0293 0.00201	0.0843 0.00200	0.0145 0.00202	0.0358 0.00199	0.0300 0.00200
Total BTEX		0.0323 0.00202	0.0328 0.00201	0.0976 0.00200	0.0168 0.00202	0.0415 0.00199	0.0348 0.00200
Chloride by EPA 300 SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 17:05	12.15.2020 17:05	12.15.2020 17:05	12.15.2020 17:05	12.15.2020 17:05	12.15.2020 17:05
	<i>Analyzed:</i>	12.15.2020 21:52	12.15.2020 21:57	12.15.2020 22:02	12.15.2020 22:17	12.15.2020 22:23	12.15.2020 22:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		81.0 4.99	78.1 49.7	104 50.4	42.2 25.0	97.9 49.6	83.4 50.2
TPH by SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00	12.15.2020 12:00
	<i>Analyzed:</i>	12.16.2020 01:25	12.16.2020 01:44	12.16.2020 02:03	12.16.2020 02:22	12.16.2020 02:41	12.16.2020 02:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

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Certificate of Analysis Summary 680923

Terracon-Lubbock, Lubbock, TX

Project Name: Booster 1014

Project Id: AR207121
 Contact: Joseph Guesnier
 Project Location:

Date Received in Lab: Fri 12.11.2020 16:45
 Report Date: 12.16.2020 16:37
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id: 680923-020 Field Id: CS-8 (3.5-4) Depth: 3.5-4 ft Matrix: SOIL Sampled: 12.10.2020 12:30					
BTEX by EPA 8021B SUB: T104704400-20-21	Extracted: 12.15.2020 17:00 Analyzed: 12.16.2020 07:44 Units/RL: mg/kg RL					
Benzene	<0.00198 0.00198					
Toluene	<0.00198 0.00198					
Ethylbenzene	0.00242 0.00198					
m,p-Xylenes	0.0138 0.00397					
o-Xylene	0.00451 0.00198					
Xylenes, Total	0.0183 0.00198					
Total BTEX	0.0207 0.00198					
Chloride by EPA 300 SUB: T104704400-20-21	Extracted: 12.15.2020 17:05 Analyzed: 12.15.2020 22:33 Units/RL: mg/kg RL					
Chloride	43.9 25.0					
TPH by SW8015 Mod SUB: T104704400-20-21	Extracted: 12.15.2020 12:00 Analyzed: 12.16.2020 03:18 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



Analytical Report 680923

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Booster 1014

AR207121

12.16.2020

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNi02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



12.16.2020

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: Eurofins Xenco, LLC Report No(s): **680923**

Booster 1014

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) 680923. 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. 680923 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,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WW-1 (1.5-2)	S	12.10.2020 11:00	1.5 - 2 ft	680923-001
WW-2 (1.5-2)	S	12.10.2020 11:05	1.5 - 2 ft	680923-002
WW-3 (1.5-2)	S	12.10.2020 11:10	1.5 - 2 ft	680923-003
EW-1 (1.5-2)	S	12.10.2020 11:15	1.5 - 2 ft	680923-004
EW-2 (1.5-2)	S	12.10.2020 11:20	1.5 - 2 ft	680923-005
EW-3 (1.5-2)	S	12.10.2020 11:25	1.5 - 2 ft	680923-006
SW-1 (1.5-2)	S	12.10.2020 11:30	1.5 - 2 ft	680923-007
SW-2 (1.5-2)	S	12.10.2020 11:35	1.5 - 2 ft	680923-008
SW-3 (1.5-2)	S	12.10.2020 11:40	1.5 - 2 ft	680923-009
NW-1 (1.5-2)	S	12.10.2020 11:45	1.5 - 2 ft	680923-010
NW-2 (1.5-2)	S	12.10.2020 11:50	1.5 - 2 ft	680923-011
NW-3 (1.5-2)	S	12.10.2020 11:55	1.5 - 2 ft	680923-012
CS-1 (3.5-4)	S	12.10.2020 12:00	3.5 - 4 ft	680923-013
CS-2 (3.5-4)	S	12.10.2020 12:05	3.5 - 4 ft	680923-014
CS-3 (3.5-4)	S	12.10.2020 12:10	3.5 - 4 ft	680923-015
CS-4 (3.5-4)	S	12.10.2020 12:15	3.5 - 4 ft	680923-016
CS-5 (3.5-4)	S	12.10.2020 12:20	3.5 - 4 ft	680923-017
CS-7 (3.5-4)	S	12.10.2020 12:25	3.5 - 4 ft	680923-019
CS-8 (3.5-4)	S	12.10.2020 12:30	3.5 - 4 ft	680923-020

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Booster 1014**Project ID: AR207121
Work Order Number(s): 680923Report Date: 12.16.2020
Date Received: 12.11.2020**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3145005 BTEX by EPA 8021B

Lab Sample ID 680923-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 680923-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -019, -020.

The Laboratory Control Sample for Toluene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3145041 Chloride by EPA 300

Lab Sample ID 680935-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 680923-011, -012, -013, -014, -015, -016, -017, -019, -020.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-001

Date Collected: 12.10.2020 11:00

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	247	25.0	mg/kg	12.15.2020 19:52		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 20:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 20:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 20:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 20:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	82	%	70-130	12.15.2020 20:43		
o-Terphenyl	84-15-1	84	%	70-130	12.15.2020 20:43		



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-001

Date Collected: 12.10.2020 11:00

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.16.2020 00:34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.16.2020 00:34	UX	1
Ethylbenzene	100-41-4	0.0123	0.00199	mg/kg	12.16.2020 00:34		1
m,p-Xylenes	179601-23-1	0.0644	0.00398	mg/kg	12.16.2020 00:34		1
o-Xylene	95-47-6	0.0173	0.00199	mg/kg	12.16.2020 00:34		1
Xylenes, Total	1330-20-7	0.0817	0.00199	mg/kg	12.16.2020 00:34		1
Total BTEX		0.0940	0.00199	mg/kg	12.16.2020 00:34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.16.2020 00:34	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.16.2020 00:34	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-002

Date Collected: 12.10.2020 11:05

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	231	25.2	mg/kg	12.15.2020 20:08		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 21:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 21:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 21:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 21:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	12.15.2020 21:40	
o-Terphenyl	84-15-1	85	%	70-130	12.15.2020 21:40	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-002

Date Collected: 12.10.2020 11:05

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.16.2020 00:54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.16.2020 00:54	U	1
Ethylbenzene	100-41-4	0.0123	0.00202	mg/kg	12.16.2020 00:54		1
m,p-Xylenes	179601-23-1	0.0649	0.00403	mg/kg	12.16.2020 00:54		1
o-Xylene	95-47-6	0.0177	0.00202	mg/kg	12.16.2020 00:54		1
Xylenes, Total	1330-20-7	0.0826	0.00202	mg/kg	12.16.2020 00:54		1
Total BTEX		0.0949	0.00202	mg/kg	12.16.2020 00:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 00:54	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.16.2020 00:54	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-003

Date Collected: 12.10.2020 11:10

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	24.8	mg/kg	12.15.2020 20:13		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 21:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 21:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 21:58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 21:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	12.15.2020 21:58	
o-Terphenyl	84-15-1	88	%	70-130	12.15.2020 21:58	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **WW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-003

Date Collected: 12.10.2020 11:10

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 01:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 01:15	U	1
Ethylbenzene	100-41-4	0.00465	0.00200	mg/kg	12.16.2020 01:15		1
m,p-Xylenes	179601-23-1	0.0240	0.00399	mg/kg	12.16.2020 01:15		1
o-Xylene	95-47-6	0.00651	0.00200	mg/kg	12.16.2020 01:15		1
Xylenes, Total	1330-20-7	0.0305	0.00200	mg/kg	12.16.2020 01:15		1
Total BTEX		0.0352	0.00200	mg/kg	12.16.2020 01:15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.16.2020 01:15	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 01:15	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-004

Date Collected: 12.10.2020 11:15

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	227	25.0	mg/kg	12.15.2020 20:28		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 22:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 22:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 22:17	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 22:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-130	12.15.2020 22:17	
o-Terphenyl	84-15-1	84	%	70-130	12.15.2020 22:17	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-004

Date Collected: 12.10.2020 11:15

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 01:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 01:35	U	1
Ethylbenzene	100-41-4	0.0160	0.00200	mg/kg	12.16.2020 01:35		1
m,p-Xylenes	179601-23-1	0.0885	0.00399	mg/kg	12.16.2020 01:35		1
o-Xylene	95-47-6	0.0245	0.00200	mg/kg	12.16.2020 01:35		1
Xylenes, Total	1330-20-7	0.113	0.00200	mg/kg	12.16.2020 01:35		1
Total BTEX		0.129	0.00200	mg/kg	12.16.2020 01:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	12.16.2020 01:35	
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.16.2020 01:35	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-005

Date Collected: 12.10.2020 11:20

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	239	24.9	mg/kg	12.15.2020 20:34		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 22:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 22:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 22:36	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 22:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.15.2020 22:36	
o-Terphenyl	84-15-1	86	%	70-130	12.15.2020 22:36	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-005

Date Collected: 12.10.2020 11:20

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.16.2020 01:55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.16.2020 01:55	U	1
Ethylbenzene	100-41-4	0.0137	0.00198	mg/kg	12.16.2020 01:55		1
m,p-Xylenes	179601-23-1	0.0707	0.00397	mg/kg	12.16.2020 01:55		1
o-Xylene	95-47-6	0.0187	0.00198	mg/kg	12.16.2020 01:55		1
Xylenes, Total	1330-20-7	0.0894	0.00198	mg/kg	12.16.2020 01:55		1
Total BTEX		0.103	0.00198	mg/kg	12.16.2020 01:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.16.2020 01:55	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.16.2020 01:55	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-006

Date Collected: 12.10.2020 11:25

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	250	24.8	mg/kg	12.15.2020 20:39		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 22:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 22:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 22:55	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 22:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	12.15.2020 22:55	
o-Terphenyl	84-15-1	85	%	70-130	12.15.2020 22:55	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **EW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-006

Date Collected: 12.10.2020 11:25

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.16.2020 02:16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.16.2020 02:16	U	1
Ethylbenzene	100-41-4	0.0118	0.00199	mg/kg	12.16.2020 02:16		1
m,p-Xylenes	179601-23-1	0.0637	0.00398	mg/kg	12.16.2020 02:16		1
o-Xylene	95-47-6	0.0172	0.00199	mg/kg	12.16.2020 02:16		1
Xylenes, Total	1330-20-7	0.0809	0.00199	mg/kg	12.16.2020 02:16		1
Total BTEX		0.0927	0.00199	mg/kg	12.16.2020 02:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.16.2020 02:16	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.16.2020 02:16	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-007

Date Collected: 12.10.2020 11:30

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	257	50.2	mg/kg	12.15.2020 20:44		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 23:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 23:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 23:13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 23:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.15.2020 23:13	
o-Terphenyl	84-15-1	87	%	70-130	12.15.2020 23:13	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-007

Date Collected: 12.10.2020 11:30

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.16.2020 02:36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.16.2020 02:36	U	1
Ethylbenzene	100-41-4	0.00350	0.00201	mg/kg	12.16.2020 02:36		1
m,p-Xylenes	179601-23-1	0.0183	0.00402	mg/kg	12.16.2020 02:36		1
o-Xylene	95-47-6	0.00493	0.00201	mg/kg	12.16.2020 02:36		1
Xylenes, Total	1330-20-7	0.0232	0.00201	mg/kg	12.16.2020 02:36		1
Total BTEX		0.0267	0.00201	mg/kg	12.16.2020 02:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.16.2020 02:36	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 02:36	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-008

Date Collected: 12.10.2020 11:35

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	243	50.0	mg/kg	12.15.2020 20:49		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.15.2020 23:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.15.2020 23:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.15.2020 23:32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.15.2020 23:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-130	12.15.2020 23:32	
o-Terphenyl	84-15-1	89	%	70-130	12.15.2020 23:32	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-008

Date Collected: 12.10.2020 11:35

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.16.2020 02:57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.16.2020 02:57	U	1
Ethylbenzene	100-41-4	0.00551	0.00201	mg/kg	12.16.2020 02:57		1
m,p-Xylenes	179601-23-1	0.0286	0.00402	mg/kg	12.16.2020 02:57		1
o-Xylene	95-47-6	0.00775	0.00201	mg/kg	12.16.2020 02:57		1
Xylenes, Total	1330-20-7	0.0364	0.00201	mg/kg	12.16.2020 02:57		1
Total BTEX		0.0419	0.00201	mg/kg	12.16.2020 02:57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 02:57	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.16.2020 02:57	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-009

Date Collected: 12.10.2020 11:40

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	275	50.0	mg/kg	12.15.2020 20:54		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.15.2020 23:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.15.2020 23:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.15.2020 23:51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.15.2020 23:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.15.2020 23:51	
o-Terphenyl	84-15-1	87	%	70-130	12.15.2020 23:51	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **SW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-009

Date Collected: 12.10.2020 11:40

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.16.2020 03:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.16.2020 03:17	U	1
Ethylbenzene	100-41-4	0.00628	0.00199	mg/kg	12.16.2020 03:17		1
m,p-Xylenes	179601-23-1	0.0317	0.00398	mg/kg	12.16.2020 03:17		1
o-Xylene	95-47-6	0.00826	0.00199	mg/kg	12.16.2020 03:17		1
Xylenes, Total	1330-20-7	0.0400	0.00199	mg/kg	12.16.2020 03:17		1
Total BTEX		0.0462	0.00199	mg/kg	12.16.2020 03:17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 03:17	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.16.2020 03:17	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **NW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-010

Date Collected: 12.10.2020 11:45

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 16:50

% Moisture:

Basis: Wet Weight

Seq Number: 3145040

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	255	50.0	mg/kg	12.15.2020 21:00		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 00:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 00:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 00:09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 00:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	12.16.2020 00:09	
o-Terphenyl	84-15-1	84	%	70-130	12.16.2020 00:09	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **NW-1 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-010

Date Collected: 12.10.2020 11:45

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.16.2020 03:38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.16.2020 03:38	U	1
Ethylbenzene	100-41-4	0.00544	0.00199	mg/kg	12.16.2020 03:38		1
m,p-Xylenes	179601-23-1	0.0272	0.00398	mg/kg	12.16.2020 03:38		1
o-Xylene	95-47-6	0.00718	0.00199	mg/kg	12.16.2020 03:38		1
Xylenes, Total	1330-20-7	0.0344	0.00199	mg/kg	12.16.2020 03:38		1
Total BTEX		0.0398	0.00199	mg/kg	12.16.2020 03:38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.16.2020 03:38	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 03:38	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: NW-2 (1.5-2)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-011

Date Collected: 12.10.2020 11:50

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	485	50.0	mg/kg	12.15.2020 21:31	X	10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 00:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 00:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 00:47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	12.16.2020 00:47	
o-Terphenyl	84-15-1	83	%	70-130	12.16.2020 00:47	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **NW-2 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-011

Date Collected: 12.10.2020 11:50

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.16.2020 05:00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.16.2020 05:00	U	1
Ethylbenzene	100-41-4	0.00896	0.00201	mg/kg	12.16.2020 05:00		1
m,p-Xylenes	179601-23-1	0.0447	0.00402	mg/kg	12.16.2020 05:00		1
o-Xylene	95-47-6	0.0119	0.00201	mg/kg	12.16.2020 05:00		1
Xylenes, Total	1330-20-7	0.0566	0.00201	mg/kg	12.16.2020 05:00		1
Total BTEX		0.0656	0.00201	mg/kg	12.16.2020 05:00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 05:00	
4-Bromofluorobenzene	460-00-4	97	%	70-130	12.16.2020 05:00	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **NW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-012

Date Collected: 12.10.2020 11:55

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	255	49.6	mg/kg	12.15.2020 21:46		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.2020 01:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.2020 01:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.2020 01:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.2020 01:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	12.16.2020 01:06	
o-Terphenyl	84-15-1	84	%	70-130	12.16.2020 01:06	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **NW-3 (1.5-2)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-012

Date Collected: 12.10.2020 11:55

Sample Depth: 1.5 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.16.2020 05:21	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.16.2020 05:21	U	1
Ethylbenzene	100-41-4	0.0149	0.00201	mg/kg	12.16.2020 05:21		1
m,p-Xylenes	179601-23-1	0.0760	0.00402	mg/kg	12.16.2020 05:21		1
o-Xylene	95-47-6	0.0200	0.00201	mg/kg	12.16.2020 05:21		1
Xylenes, Total	1330-20-7	0.0960	0.00201	mg/kg	12.16.2020 05:21		1
Total BTEX		0.111	0.00201	mg/kg	12.16.2020 05:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.16.2020 05:21	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 05:21	



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Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-1 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-013

Date Collected: 12.10.2020 12:00

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.0	4.99	mg/kg	12.15.2020 21:52		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.2020 01:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.2020 01:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.2020 01:25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.2020 01:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-130	12.16.2020 01:25	
o-Terphenyl	84-15-1	85	%	70-130	12.16.2020 01:25	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **CS-1 (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-013

Date Collected: 12.10.2020 12:00

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.16.2020 05:41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.16.2020 05:41	U	1
Ethylbenzene	100-41-4	0.00394	0.00202	mg/kg	12.16.2020 05:41		1
m,p-Xylenes	179601-23-1	0.0217	0.00404	mg/kg	12.16.2020 05:41		1
o-Xylene	95-47-6	0.00669	0.00202	mg/kg	12.16.2020 05:41		1
Xylenes, Total	1330-20-7	0.0284	0.00202	mg/kg	12.16.2020 05:41		1
Total BTEX		0.0323	0.00202	mg/kg	12.16.2020 05:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.16.2020 05:41	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.16.2020 05:41	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-2 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-014

Date Collected: 12.10.2020 12:05

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	78.1	49.7	mg/kg	12.15.2020 21:57		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.16.2020 01:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.16.2020 01:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.16.2020 01:44	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.16.2020 01:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.16.2020 01:44	
o-Terphenyl	84-15-1	89	%	70-130	12.16.2020 01:44	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-2 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-014

Date Collected: 12.10.2020 12:05

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145005

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.16.2020 06:01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.16.2020 06:01	U	1
Ethylbenzene	100-41-4	0.00349	0.00201	mg/kg	12.16.2020 06:01		1
m,p-Xylenes	179601-23-1	0.0217	0.00402	mg/kg	12.16.2020 06:01		1
o-Xylene	95-47-6	0.00758	0.00201	mg/kg	12.16.2020 06:01		1
Xylenes, Total	1330-20-7	0.0293	0.00201	mg/kg	12.16.2020 06:01		1
Total BTEX		0.0328	0.00201	mg/kg	12.16.2020 06:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 06:01	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.16.2020 06:01	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-3 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-015

Date Collected: 12.10.2020 12:10

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	104	50.4	mg/kg	12.15.2020 22:02		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 02:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 02:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 02:03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 02:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.16.2020 02:03	
o-Terphenyl	84-15-1	86	%	70-130	12.16.2020 02:03	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-3 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-015

Date Collected: 12.10.2020 12:10

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 06:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 06:22	U	1
Ethylbenzene	100-41-4	0.0133	0.00200	mg/kg	12.16.2020 06:22		1
m,p-Xylenes	179601-23-1	0.0666	0.00399	mg/kg	12.16.2020 06:22		1
o-Xylene	95-47-6	0.0177	0.00200	mg/kg	12.16.2020 06:22		1
Xylenes, Total	1330-20-7	0.0843	0.00200	mg/kg	12.16.2020 06:22		1
Total BTEX		0.0976	0.00200	mg/kg	12.16.2020 06:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.16.2020 06:22	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.16.2020 06:22	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-4 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-016

Date Collected: 12.10.2020 12:15

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.2	25.0	mg/kg	12.15.2020 22:17		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.2020 02:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.2020 02:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.2020 02:22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.2020 02:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-130	12.16.2020 02:22	
o-Terphenyl	84-15-1	89	%	70-130	12.16.2020 02:22	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **CS-4 (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-016

Date Collected: 12.10.2020 12:15

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.16.2020 06:42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.16.2020 06:42	U	1
Ethylbenzene	100-41-4	0.00225	0.00202	mg/kg	12.16.2020 06:42		1
m,p-Xylenes	179601-23-1	0.0110	0.00403	mg/kg	12.16.2020 06:42		1
o-Xylene	95-47-6	0.00352	0.00202	mg/kg	12.16.2020 06:42		1
Xylenes, Total	1330-20-7	0.0145	0.00202	mg/kg	12.16.2020 06:42		1
Total BTEX		0.0168	0.00202	mg/kg	12.16.2020 06:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.16.2020 06:42	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 06:42	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-5 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-017

Date Collected: 12.10.2020 12:20

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.9	49.6	mg/kg	12.15.2020 22:23		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.2020 02:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.2020 02:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.2020 02:41	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.2020 02:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	12.16.2020 02:41	
o-Terphenyl	84-15-1	86	%	70-130	12.16.2020 02:41	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-5 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-017

Date Collected: 12.10.2020 12:20

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.16.2020 07:03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.16.2020 07:03	U	1
Ethylbenzene	100-41-4	0.00567	0.00199	mg/kg	12.16.2020 07:03		1
m,p-Xylenes	179601-23-1	0.0282	0.00398	mg/kg	12.16.2020 07:03		1
o-Xylene	95-47-6	0.00761	0.00199	mg/kg	12.16.2020 07:03		1
Xylenes, Total	1330-20-7	0.0358	0.00199	mg/kg	12.16.2020 07:03		1
Total BTEX		0.0415	0.00199	mg/kg	12.16.2020 07:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 07:03	
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.16.2020 07:03	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-7 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-019

Date Collected: 12.10.2020 12:25

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	83.4	50.2	mg/kg	12.15.2020 22:28		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 02:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 02:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 02:59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 02:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	12.16.2020 02:59	
o-Terphenyl	84-15-1	88	%	70-130	12.16.2020 02:59	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: CS-7 (3.5-4)

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-019

Date Collected: 12.10.2020 12:25

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.16.2020 07:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.16.2020 07:23	U	1
Ethylbenzene	100-41-4	0.00482	0.00200	mg/kg	12.16.2020 07:23		1
m,p-Xylenes	179601-23-1	0.0236	0.00400	mg/kg	12.16.2020 07:23		1
o-Xylene	95-47-6	0.00641	0.00200	mg/kg	12.16.2020 07:23		1
Xylenes, Total	1330-20-7	0.0300	0.00200	mg/kg	12.16.2020 07:23		1
Total BTEX		0.0348	0.00200	mg/kg	12.16.2020 07:23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.16.2020 07:23	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 07:23	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **CS-8 (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-020

Date Collected: 12.10.2020 12:30

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

Analyst: CHE

Date Prep: 12.15.2020 17:05

% Moisture:

Basis: Wet Weight

Seq Number: 3145041

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	43.9	25.0	mg/kg	12.15.2020 22:33		5

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

Analyst: ARM

Date Prep: 12.15.2020 12:00

% Moisture:

Basis: Wet Weight

Seq Number: 3145075

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.2020 03:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.2020 03:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.2020 03:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.2020 03:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	12.16.2020 03:18	
o-Terphenyl	84-15-1	87	%	70-130	12.16.2020 03:18	



Certificate of Analytical Results 680923

Terracon-Lubbock, Lubbock, TX

Booster 1014

Sample Id: **CS-8 (3.5-4)**

Matrix: Soil

Date Received: 12.11.2020 16:45

Lab Sample Id: 680923-020

Date Collected: 12.10.2020 12:30

Sample Depth: 3.5 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

Analyst: KTL

Date Prep: 12.15.2020 17:00

% Moisture:

Seq Number: 3145005

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.16.2020 07:44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.16.2020 07:44	U	1
Ethylbenzene	100-41-4	0.00242	0.00198	mg/kg	12.16.2020 07:44		1
m,p-Xylenes	179601-23-1	0.0138	0.00397	mg/kg	12.16.2020 07:44		1
o-Xylene	95-47-6	0.00451	0.00198	mg/kg	12.16.2020 07:44		1
Xylenes, Total	1330-20-7	0.0183	0.00198	mg/kg	12.16.2020 07:44		1
Total BTEX		0.0207	0.00198	mg/kg	12.16.2020 07:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.16.2020 07:44	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.16.2020 07:44	

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



Terracon-Lubbock

Booster 1014

Analytical Method: Chloride by EPA 300

Seq Number: 3145040

MB Sample Id: 7717197-1-BLK

Matrix: Solid

LCS Sample Id: 7717197-1-BKS

Prep Method: E300P

Date Prep: 12.15.2020

LCSD Sample Id: 7717197-1-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	260	104	259	104	90-110	0	20	mg/kg	12.15.2020 18:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

MB Sample Id: 7717198-1-BLK

Matrix: Solid

LCS Sample Id: 7717198-1-BKS

Prep Method: E300P

Date Prep: 12.15.2020

LCSD Sample Id: 7717198-1-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	254	102	254	102	90-110	0	20	mg/kg	12.15.2020 21:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3145040

Parent Sample Id: 680913-001

Matrix: Soil

MS Sample Id: 680913-001 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680913-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.75	253	291	112	279	108	90-110	4	20	mg/kg	12.15.2020 18:45	X

Analytical Method: Chloride by EPA 300

Seq Number: 3145040

Parent Sample Id: 680923-001

Matrix: Soil

MS Sample Id: 680923-001 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680923-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	247	1250	1600	108	1580	107	90-110	1	20	mg/kg	12.15.2020 19:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

Parent Sample Id: 680923-011

Matrix: Soil

MS Sample Id: 680923-011 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680923-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	485	2500	3320	113	3270	111	90-110	2	20	mg/kg	12.15.2020 21:36	X

Analytical Method: Chloride by EPA 300

Seq Number: 3145041

Parent Sample Id: 680935-001

Matrix: Soil

MS Sample Id: 680935-001 S

Prep Method: E300P

Date Prep: 12.15.2020

MSD Sample Id: 680935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	359	1240	1710	109	1700	108	90-110	1	20	mg/kg	12.15.2020 22:49	

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

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

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

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



Terracon-Lubbock

Booster 1014

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145075

MB Sample Id: 7717212-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.15.2020

LCS Sample Id: 7717212-1-BKS

LCSD Sample Id: 7717212-1-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	1090	109	926	93	70-130	16	20	mg/kg	12.15.2020 20:06	
Diesel Range Organics (DRO)	<50.0	1000	1030	103	980	98	70-130	5	20	mg/kg	12.15.2020 20:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		113		123		70-130	%	12.15.2020 20:06
o-Terphenyl	101		93		110		70-130	%	12.15.2020 20:06

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145075

Matrix: Solid

Prep Method: SW8015P

Date Prep: 12.15.2020

MB Sample Id: 7717212-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.15.2020 19:47	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3145075

Matrix: Soil

Prep Method: SW8015P

Date Prep: 12.15.2020

Parent Sample Id: 680923-001

MS Sample Id: 680923-001 S

MSD Sample Id: 680923-001 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	934	94	918	92	70-130	2	20	mg/kg	12.15.2020 21:02	
Diesel Range Organics (DRO)	<49.9	997	1050	105	1010	101	70-130	4	20	mg/kg	12.15.2020 21:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		103		70-130	%	12.15.2020 21:02
o-Terphenyl	80		94		70-130	%	12.15.2020 21:02

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145005

Matrix: Solid

Prep Method: SW5035A

Date Prep: 12.15.2020

MB Sample Id: 7717196-1-BLK

LCS Sample Id: 7717196-1-BKS

LCSD Sample Id: 7717196-1-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	0.0933	93	0.0949	95	70-130	2	35	mg/kg	12.15.2020 22:12	
Toluene	<0.00200	0.100	0.0878	88	0.0901	90	70-130	3	35	mg/kg	12.15.2020 22:12	
Ethylbenzene	<0.00200	0.100	0.0947	95	0.0977	98	70-130	3	35	mg/kg	12.15.2020 22:12	
m,p-Xylenes	<0.00400	0.200	0.183	92	0.191	96	70-130	4	35	mg/kg	12.15.2020 22:12	
o-Xylene	<0.00200	0.100	0.0914	91	0.0952	95	70-130	4	35	mg/kg	12.15.2020 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		103		103		70-130	%	12.15.2020 22:12
4-Bromofluorobenzene	104		94		97		70-130	%	12.15.2020 22:12

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

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

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

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

Terracon-Lubbock

Booster 1014

Analytical Method: BTEX by EPA 8021B

Seq Number: 3145005

Parent Sample Id: 680923-001

Matrix: Soil

MS Sample Id: 680923-001 S

Prep Method: SW5035A

Date Prep: 12.15.2020

MSD Sample Id: 680923-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0732	73	0.0778	78	70-130	6	35	mg/kg	12.15.2020 22:53	
Toluene	<0.00200	0.100	0.0694	69	0.0738	74	70-130	6	35	mg/kg	12.15.2020 22:53	X
Ethylbenzene	0.0123	0.100	0.0888	77	0.0933	81	70-130	5	35	mg/kg	12.15.2020 22:53	
m,p-Xylenes	0.0644	0.200	0.213	74	0.224	80	70-130	5	35	mg/kg	12.15.2020 22:53	
o-Xylene	0.0173	0.100	0.0895	72	0.0940	77	70-130	5	35	mg/kg	12.15.2020 22:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	12.15.2020 22:53
4-Bromofluorobenzene	101		99		70-130	%	12.15.2020 22:53

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

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

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

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

680923

Terracon

CHAIN OF CUSTODY RECORD

LAB USE ONLY
 DUE DATE: 12-4
 TEMP OF COOLER WHEN RECEIVED (°C): -4.8 (-4.0) 10.3
 Page 1 of 1

ANALYSIS REQUESTED
 Chloride (EPA Method 300) X
 TPH Extended 8015 X
 BTEX (EPA Method 8021B) X
 Hold X
 Lab Sample ID

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

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

Project Number: AR207121
Project Name: Booster 1014

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers	5035 Kit	60 ml VOA	40 ml VOA	4 oz Glass
S	12/10/2020	11:00	X		WW - 1 (1.5-2)	1.5	2	X				
S	12/10/2020	11:05	X		WW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	11:10	X		WW - 3 (1.5-2)	1.5	2	X				
S	12/10/2020	11:15	X		EW - 1 (1.5-2)	1.5	2	X				
S	12/10/2020	11:20	X		EW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	11:25	X		EW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	11:30	X		SW - 1 (1.5-2)	1.5	2	X				
S	12/10/2020	11:35	X		SW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	11:40	X		SW - 3 (1.5-2)	1.5	2	X				
S	12/10/2020	11:45	X		NW - 1 (1.5-2)	1.5	2	X				
S	12/10/2020	11:50	X		NW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	11:55	X		NW - 2 (1.5-2)	1.5	2	X				
S	12/10/2020	12:00	X		CS - 1 (3.5-4)	3.5	4	X				
S	12/10/2020	12:05	X		CS - 2 (3.5-4)	3.5	4	X				
S	12/10/2020	12:10	X		CS - 3 (3.5-4)	3.5	4	X				
S	12/10/2020	12:15	X		CS - 4 (3.5-4)	3.5	4	X				
S	12/10/2020	12:20	X		CS - 5 (3.5-4)	3.5	4	X				
S	12/10/2020	12:25	X		CS - 7 (3.5-4)	3.5	4	X				
S	12/10/2020	12:30	X		CS - 8 (3.5-4)	3.5	4	X				

TURNAROUND TIME
 Relinquished by (Signature): [Signature] Date: 12-11-20 Time: 4:45
 Relinquished by (Signature): [Signature] Date: 12/11/20 Time: 16:45
 Relinquished by (Signature): [Signature] Date: [] Time: []
 Relinquished by (Signature): [Signature] Date: [] Time: []

TRRP Laboratory Review Checklist
☒ 48-Hour Rush
☐ 24-Hour Rush
 Received by (Signature): [Signature] Date: 12/11/20 Time: 4:45
 Received by (Signature): [Signature] Date: [] Time: []
 Received by (Signature): [Signature] Date: [] Time: []
 Received by (Signature): [Signature] Date: [] Time: []

NOTES: Client: Solaris Water Midstream LLC
 e-mail results to: bryant.mcbrayer@terracon.com
 erin.loyd@terracon.com
 jrguesnier@terracon.com

Matrix: WW-Wastewater
 VOA-40 ml vial
 W- Water
 AG- Amber Glass 1L
 S- Soil
 L- Liquid
 A- Air Bag
 C- Charcoal tube
 P/D- Plastic or other

Lubbock Office ■ 5827 50th Street, Suite 1 ■ Lubbock, Texas 79424 ■ 806-300-0140
Responsive ■ **Resourceful** ■ **Reliable**

Inter-Office Shipment

IOS Number : **74763**

Date/Time: 12.14.2020

Created by: Randall Lee

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.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680923-001	S	WW-1 (1.5-2)	12.10.2020 11:00	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-001	S	WW-1 (1.5-2)	12.10.2020 11:00	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-001	S	WW-1 (1.5-2)	12.10.2020 11:00	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-002	S	WW-2 (1.5-2)	12.10.2020 11:05	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-002	S	WW-2 (1.5-2)	12.10.2020 11:05	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-002	S	WW-2 (1.5-2)	12.10.2020 11:05	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-003	S	WW-3 (1.5-2)	12.10.2020 11:10	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-003	S	WW-3 (1.5-2)	12.10.2020 11:10	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-003	S	WW-3 (1.5-2)	12.10.2020 11:10	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-004	S	EW-1 (1.5-2)	12.10.2020 11:15	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-004	S	EW-1 (1.5-2)	12.10.2020 11:15	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-004	S	EW-1 (1.5-2)	12.10.2020 11:15	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-005	S	EW-2 (1.5-2)	12.10.2020 11:20	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-005	S	EW-2 (1.5-2)	12.10.2020 11:20	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-005	S	EW-2 (1.5-2)	12.10.2020 11:20	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-006	S	EW-3 (1.5-2)	12.10.2020 11:25	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-006	S	EW-3 (1.5-2)	12.10.2020 11:25	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-006	S	EW-3 (1.5-2)	12.10.2020 11:25	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-007	S	SW-1 (1.5-2)	12.10.2020 11:30	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-007	S	SW-1 (1.5-2)	12.10.2020 11:30	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-007	S	SW-1 (1.5-2)	12.10.2020 11:30	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-008	S	SW-2 (1.5-2)	12.10.2020 11:35	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-008	S	SW-2 (1.5-2)	12.10.2020 11:35	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-008	S	SW-2 (1.5-2)	12.10.2020 11:35	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-009	S	SW-3 (1.5-2)	12.10.2020 11:40	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	

Inter-Office Shipment

IOS Number : **74763**

Date/Time: 12.14.2020

Created by: Randall Lee

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.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680923-009	S	SW-3 (1.5-2)	12.10.2020 11:40	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-009	S	SW-3 (1.5-2)	12.10.2020 11:40	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-010	S	NW-1 (1.5-2)	12.10.2020 11:45	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-010	S	NW-1 (1.5-2)	12.10.2020 11:45	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-010	S	NW-1 (1.5-2)	12.10.2020 11:45	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-011	S	NW-2 (1.5-2)	12.10.2020 11:50	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-011	S	NW-2 (1.5-2)	12.10.2020 11:50	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-011	S	NW-2 (1.5-2)	12.10.2020 11:50	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-012	S	NW-3 (1.5-2)	12.10.2020 11:55	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-012	S	NW-3 (1.5-2)	12.10.2020 11:55	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-012	S	NW-3 (1.5-2)	12.10.2020 11:55	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-013	S	CS-1 (3.5-4)	12.10.2020 12:00	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-013	S	CS-1 (3.5-4)	12.10.2020 12:00	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-013	S	CS-1 (3.5-4)	12.10.2020 12:00	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-014	S	CS-2 (3.5-4)	12.10.2020 12:05	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-014	S	CS-2 (3.5-4)	12.10.2020 12:05	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-014	S	CS-2 (3.5-4)	12.10.2020 12:05	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-015	S	CS-3 (3.5-4)	12.10.2020 12:10	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-015	S	CS-3 (3.5-4)	12.10.2020 12:10	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-015	S	CS-3 (3.5-4)	12.10.2020 12:10	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-016	S	CS-4 (3.5-4)	12.10.2020 12:15	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-016	S	CS-4 (3.5-4)	12.10.2020 12:15	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-016	S	CS-4 (3.5-4)	12.10.2020 12:15	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-017	S	CS-5 (3.5-4)	12.10.2020 12:20	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C35	
680923-017	S	CS-5 (3.5-4)	12.10.2020 12:20	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number : **74763**

Date/Time: 12.14.2020

Created by: Randall Lee

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.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
680923-017	S	CS-5 (3.5-4)	12.10.2020 12:20	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-019	S	CS-7 (3.5-4)	12.10.2020 12:25	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-019	S	CS-7 (3.5-4)	12.10.2020 12:25	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680923-019	S	CS-7 (3.5-4)	12.10.2020 12:25	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	
680923-020	S	CS-8 (3.5-4)	12.10.2020 12:30	SW8021B	BTEX by EPA 8021B	12.15.2020	12.24.2020	JKR	BR4FBZ BZ BZME EBZ	
680923-020	S	CS-8 (3.5-4)	12.10.2020 12:30	SW8015MOD_NM	TPH by SW8015 Mod	12.15.2020	12.24.2020	JKR	PHCC10C28 PHCC28C3	
680923-020	S	CS-8 (3.5-4)	12.10.2020 12:30	E300_CL	Chloride by EPA 300	12.15.2020	01.07.2021	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:



Received By:



Date Relinquished:

Randall Lee

Date Received:

Jessica Kramer

12.14.2020

12.16.2020

Cooler Temperature: 2.9



Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 74763

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Randall Lee

Date Sent: 12.14.2020 12.22 PM

Received By: Jessica Kramer

Date Received: 12.16.2020 09.10 AM

Sample Receipt Checklist

Comments

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Jessica Kramer

Date: 12.16.2020

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 12.11.2020 04.45.00 PM

Work Order #: 680923

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)?	-4.8
#2 *Shipping container in good condition?	N/A
#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: Teddy Randall Lee
Randall Lee

Date: 12.14.2020

Checklist reviewed by: Jessica Kramer
Jessica Kramer

Date: 12.15.2020

APPENDIX E – TERRACON STANDARD OF CARE, LIMITATION, AND RELIANCE

Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with you, Solaris Water Midstream, as reflected in our proposal (PA4197040).

Additional Scope Limitations

Development of this RAP is based upon information provided by the Client and Terracon's remediation and construction services line. Such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those by information provided by the Client. The data, interpretations, findings, and our recommendations are based solely upon reformation executed within the scope of these services.

Reliance

This report has been prepared for the exclusive use of Spur Energy Partners, 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 Spur Energy Partners and Terracon. Any unauthorized distribution or reuse is at Spur Energy Partner's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Spur Energy Partners 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 Spur Energy Partners and all relying parties unless otherwise agreed in writing.

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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 21352

CONDITIONS OF APPROVAL

Operator:	SOLARIS WATER MIDSTREAM, LLC	907 Tradewinds Blvd, Suite B	Midland, TX79706	OGRID:	371643	Action Number:	21352	Action Type:	C-141
OCD Reviewer	Condition								
chensley	None								