

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	NAB1909136893
District RP	2RP-5324
Facility ID	fAB 1909136494
Application ID	pAB 1909136607

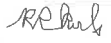
Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Rob Kirk Title: General Manager
Signature:  Date: Apr 30, 2020
email: rob.kirk@solarismidstream.com Telephone: 432-203-9020

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Closure of Release Investigation and Remedial Action Plan

General Site Information

Stella Blue Produced Water Release
NMOCD Reference No. 2RP-5324
Terracon Project No. AR197123

Site Contact

Mr. Rob Kirk, Solaris Water Midstream, LLC
907 Tradewinds Blvd., Suite B, Midland, Texas 79706
(432) 203-9020

Depth to Ground Water

Greater than 100 feet below grade surface

Distance to Nearest Surface Water

Red Bluff Reservoir (North-western Loving County, TX), approximately 6.1 miles to the Southwest

Driving Directions

From Hwy 128, South on Hwy 1 15.2 miles, West on State Line road 6.52 miles, North 0.05 mile, to release location.

Legal Description

Unit M, Section 30, T26S, R31E, Eddy County, New Mexico

Prepared for:

Solaris Water Midstream, LLC
Midland, Texas

Prepared by:

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

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Employee-Owned

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Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities



April 29, 2020

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

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

RE: **Closure of Release Investigation and Remedial Action Plan**
Stella Blue Produced Water Release
Unit M, Section 30, Township 26 South, Range 31 East
Eddy County, New Mexico
NMOCD Reference No. 2RP-5324
Terracon Project No. AR197123

Dear Mr. Kirk,

Terracon Consultants, Inc. (Terracon) is pleased to submit our Closure of Release Investigation and Remedial Action Plan (RAP) for the site referenced above. The Closure, Release Investigation, RAP and closure activities were executed in accordance with the New Mexico Oil Conservation Division (NMOCD) regulations concerning clean-up actions required for releases of crude oil and produced water. Based on the release investigation assessment, Terracon recommended the following actions be taken to achieve protection of fresh water and the environment in accordance with NMOCD regulations. Terracon developed the Closure of Release Investigation and RAP in general accordance with our proposal (AR197123) dated March 03, 2019.

Terracon appreciates this opportunity to provide environmental services to Solaris Water Midstream. 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 Street Lubbock, Texas 79424
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APPENDIX A – Exhibits

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram

Exhibit 3 – Soil Contaminant Concentration Map

Exhibit 4 – EM Survey Map (7/12/2019)

Exhibit 5 – EM Survey Map (2/11/2020)

Exhibit 6 – Supplemental Soil Concentration Map

Exhibit 7 – NMOSE POD Location Map

Exhibit 8 – Texas Water Development Board Well Location Map

APPENDIX B – Tables

Table 1 – Soil Sample Analytical Data Summary

Table 2 – Supplemental Soil Sample Analytical Data Summary

APPENDIX C – Photographic Documentation

Photographic Log – 03/21/2019

APPENDIX D – Certified Laboratory Reports and Chain of Custody

APPENDIX E – Standard of Care, Limitations, and Reliance Policies

Closure of Release Investigation and Remedial Action Plan
Stella Blue Produced Water Release
Unit M, Section 30, Township 26 South, Range 31 East
Eddy County, New Mexico
Terracon Project No. AR197123
April 29, 2020

1.0 SITE DESCRIPTION

The site was comprised of a meandering 1.5-mile long release with widths varying between 4 and 15 ft. wide along its extent within the Unit Letter M, Section 30, Township 26 South, Range 31 East, Eddy County, New Mexico and extending into Loving County, Texas (hereinafter, the site). The site consisted primarily of rights-of-way for pipelines, lease roads and pipeline crossings with the origin of the release being a 6-inch pipeline fusion coupling that became detached at a connection. A Topographic Map illustrating the site location is included as Exhibit 1 and a Site Diagram illustrating initial soil sample locations is included as Exhibit 2 in Appendix A. A water well record search is also included as New Mexico Office of the State Engineer (NMOSE) Point of Diversion (POD) Location Map as Exhibit 7 in Appendix A.

2.0 SCOPE OF SERVICES

Terracon Consultants Inc. (Terracon) scope of services was to investigate the magnitude and extent of the documented release and develop a Release Investigation and Remedial Action Plan (RAP) in accordance with the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM) requirements that detail site closure activities to be completed. This closure addresses the March 20, 2019 release of approximately 990 barrels (bbls) of produced water which contained an estimated 10 bbls of crude originating from a detached fusion coupling on a 6-inch pipeline connection on a Solaris Water Midstream LLC (Solaris) pipeline.

3.0 INTRODUCTION AND NOTIFICATION

A release of approximately 990 bbls of produced water which contained an estimated 10 bbls of crude oil occurred on March 20, 2019 at the Stella Blue site in Eddy County, New Mexico. The site is operated by Solaris Water Midstream LLC, and is comprised of an approximate 3-acre undeveloped area, approximately 21 miles southeast of Malaga, New Mexico. Incident information is provided in the following table:

Amended Release Investigation and Remedial Action Plan

Stella Blue Produced Water Release ■ Eddy County, New Mexico

April 29, 2020 ■ Terracon Project No. AR197123



Required Information	Site and Release information	
Responsible Party Local Contact	The Produced Water Line is operated by Solaris Water Midstream LLC	
	Contact: Mr. Rob Kirk	P: (469) 978-5620 E: rob.kirk@solarismidstream.com
NMOCD Notification	Notice of the release was provided to Jim Griswold, Bureau Chief of the NMOCD. Rob Kirk (Solaris) notified Brad Billings, District 2 Artesia Hydrologist on March 20, 2019.	
Facility Description	The Stella Blue transfer line is in Eddy County, New Mexico. It is an approximate 3-acre area located within Unit M, Section 30, Township 26 South, Range 31 East, approximately 21 miles southeast of Malaga, New Mexico. The site is being developed as an area for a transfer line.	
Time of Incident	March 20, 2019, discovered at 11:00 a.m.	
Discharge Event	A 6-inch pipeline fusing coupling detached at a connection allowing produced water to be released. At the release point, released fluid saturated proximal surface soil before pooling, then flowing west down the pipeline ROW until encountering a drainage channel which trends to the south-southwest and crosses State Line Road. After crossing State Line Road, released fluid continued to flow down the drainage channel to the south-southwest before terminating in rural pasture land. The release margins are illustrated on Figure 2 of Appendix A	
Type of Discharge	The documented fluids release occurred at the surface and appears to be limited to near surface soils.	
Quantity of Spilled Material	Total Fluids Released: 990 bbls	Produced Water: 990 bbls which contained an estimated 10 bbls of crude oil
	Total Fluids Recovered: 120 bbls	Produced Water: 118 bbls Crude Oil: 2 bbls
Site Characteristics	Relatively flat topography with the native ground surface very gently sloping to the southwest.	
Immediate Corrective Actions	Pipeline was shut in, and an onsite Solaris Contractor (C2) scraped the affected area proximate to the release origin.	

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4.0 INITIAL RESPONSE ACTIONS

4.1 Source Elimination and Site Security

Initial source elimination was accomplished by the Solaris Water Midstream foreman shutting in the leaking line and replaced the malfunctioning poly line saddle fusion with a T. Solaris Water Midstream deployed C2 Oilfield Services (C2), an on-site contractor, to secure the site and perform containment and site stabilization activities.

4.2 Containment and Site Stabilization

C2 Oilfield Services hydro vacuumed and trenched at the poly line to repair and consolidate affected soil proximate to the release origin, comprising an area measuring approximately 3,000 square feet (sf). From this area, C2 scraped affected materials totaling an estimated 50 yards (cy). Following consolidation of these materials, another Solaris contractor, M&J fenced off the area to deter inadvertent contact with the materials.

5.0 GENERAL SITE CHARACTERISTICS

5.1 Depth to Groundwater

A water well record search of the NMOSE POD Geographic Information System (GIS) data portal identified one registered well (C-02165) within 1.8 miles of the site. This well was registered to have water at 180 feet bgs. A supplemental search on the Texas Water Development Board (TWDB) Groundwater data viewer data portal identified two additional wells (327827 / 327829) within 1.2 miles of the site both were dry wells to 640 feet bgs. The depth to groundwater at the site is anticipated to be over 100 feet bgs. NMOSE registered wells within a 5-mile radius of the site has an average depth to groundwater of 266 feet bgs, with a minimum reported groundwater depth of 180 feet bgs (Exhibit 7 and 8 of Appendix A).

5.2 Distance to Nearest Potable Water Well

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

5.3 Distance to Nearest Surface Water

The Red Bluff Reservoir is located approximately 6.1 miles southwest of the site.

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5.4 Soil Characteristics

Soils at the site are mapped as Pajarito loamy, fine sand, 0 to 3 percent slopes, eroded. This soil has a surface layer of fine- to coarse-grained sand. While the Pajarito is comprised of fine- to coarse-grained sands at the surface depth to restrictive features, are greater than 80 inches bgs resulting in the formation being categorized with a very low runoff classification.

5.5 Groundwater Quality

Groundwater quality is unknown at the site. As stated previously, there are no wells registered with the NMSEO website within 0.5 miles of the site.

6.0 SOIL REMEDIAL ACTION LEVELS

Produced water facilities in New Mexico are generally regulated by the NMOCD. Terracon proposed to remediate impacted soil from the Stella Blue produced water release 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 a total ranking score based on the depth to groundwater, distance to private and domestic water sources, and the distance to the nearest surface water body as follows:

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Table 1			
NMOCD 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 milligram per kilogram (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	50 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

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6.1 Reclamation Levels

NMOCD remediation action limits for Chlorides, TPH (GRO+DRO+MRO), GRO+DRO, BTEX (includes benzene, toluene, ethylbenzene and xylenes), and Benzene are selected based on the minimum depth below any point within the horizontal boundary of the release to ground water of being ≤ 50 feet: (NMOCD) regulation concerning Restoration, Reclamation, and Re-vegetation (19.15.29.13 NMAC – D (Reclamation of areas no longer in use)).

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

7.0 SOIL SAMPLING PROCEDURES

Soil sampling procedures are detailed as follows:

7.1 Soil Sampling Procedures for Laboratory Analysis

Soil Sampling Procedures

The collection of soil sampling for laboratory analysis were conducted in accordance with 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.

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- Chloride – EPA Method 300.0
- Total Petroleum Hydrocarbons - TPH (GRO+DRO+MRO) – EPA Method 8015M
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) – EPA Method 8021B
- Benzene – EPA Method 8021B

8.0 RELEASE INVESTIGATION DATA EVALUATION

During Terracon's March 25, 2019 release investigation activities, a total of 34 soil samples were collected from the site and analyzed for BTEX, chloride, and/or TPH. Twenty-six samples were collected from within the release margins; eight samples were collected outside of the impacted area to evaluate background concentrations. A Soil Contaminant Concentration Map illustrating the soil sample locations and contaminant concentrations is included as Exhibit 3 in Appendix A.

8.1 Background Data Evaluation

One of the eight background samples analyzed for Benzene exhibited concentrations above applicable laboratory sample detection limits (SDLs). Soil sample BG-3 (Surface to 0.5 ft. bgs) contained an estimated Benzene concentration above the SDL at 0.000575 mg/kg.

One of the eight background samples analyzed for Total BTEX exhibited concentrations above applicable laboratory SDLs. Soil sample BG-3 (Surface to 0.5 ft. bgs) contained an estimated total BTEX concentration of 0.00105J mg/kg.

Chloride was detected above applicable laboratory SDLs in each of the analyzed background samples. The chloride concentrations ranged from 1.85 mg/kg in soil sample BG-3 (Surface to 0.5 ft. bgs) to 26.3 mg/kg in soil sample BG-1 (surface to 0.5 ft. bgs).

The background samples analyzed for Total TPH did not exhibit concentrations above applicable SDLs.

Detected concentrations for BTEX, chloride, and TPH in background samples did not exceed NMOCD Action Levels based on the criteria ranking parameters. Based on the analytical results of the background samples, NMOCD Action Levels will continue to be utilized as the applicable Remedial Action Levels (RALs) for the site.

8.2 Release Margins Data Evaluation

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Benzene was not detected above applicable laboratory SDLs in the 20 soil samples analyzed within the release margins. The detected benzene concentrations did not exceed the applicable NMOCD RAL for benzene of 10 mg/kg, as summarized in Table 1.

Total BTEX was detected above applicable laboratory SDLs in 3 of the 20 soil samples analyzed within the release margins. The Total BTEX concentrations ranged from 0.000467 mg/kg in soil sample HA-6 (surface to 0.5 ft. bgs) to 0.0294 mg/kg in soil sample HA-2 (Surface to 0.5 ft. bgs). The detected Total BTEX concentrations did not exceed the applicable NMOCD RAL for Total BTEX of 120 mg/kg, as summarized in Table 1.

Chloride was detected above applicable laboratory SDLs in each of the 24 soil samples analyzed within the release margins. The chloride concentrations ranged from 68.2 mg/kg in soil sample HA-1 (Surface to 0.5 ft. bgs) to 2,820 mg/kg in soil sample HA-4 (Surface to 0.5 ft. bgs). The soil samples analyzed within the release margins did not exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 1.

DRO was detected above applicable laboratory SDLs in 21 of the 26 soil samples analyzed within the release margins. The DRO concentrations ranged from 11.2 mg/kg in soil sample HA-6 (1.5 ft. bgs to 2.0 ft. bgs) to 1,990 mg/kg in soil sample HA-2 (surface to 0.5 ft. bgs). The soil samples analyzed within the release margins did not exhibit DRO concentrations above NMOCD RAL of 1,000 mg/kg for DRO, with soil sample HA-2 (surface to 0.5 ft. bgs) being the exception, as summarized in Table 1.

Total TPH was detected above applicable laboratory SDLs in 21 of the 23 soil samples analyzed within the release margins. The Total TPH concentrations ranged from 11.2 mg/kg in soil sample HA-6 (1.5 ft. bgs to 2.0 ft. bgs) to 2,200 mg/kg in soil sample HA-2 (surface to 0.5 ft. bgs). The soil samples analyzed within the release margins did not exhibit Total TPH concentrations above the NMOCD RAL of 2,500 mg/kg for Total TPH, as summarized in Table 1.

8.3 Release Investigation Data Summary

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

9.0 FDEMI SUPPLEMENTAL INVESTIGATION

The purpose of the geophysical exploration was to repeat a survey conducted in July of 2019 at the Solaris Water Midstream LLC Stella Blue site. Frequency Domain Electromagnetic Induction (FDEMI) was utilized to evaluate shallow soil conditions for the presence of elevated soil

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conductivity that may be relayed to the produced water release incident that occurred on March 20, 2019.

9.1 GEOPHYSICAL METHODS

9.2 Equipment Discussion

The Geonics EM-31 is a frequency domain electromagnetic profiler. Frequency domain electromagnetic induction (FDEMI) works by introducing a sinusoidally varying current at a specific frequency. The electromagnetic force is shifted in both the primary and secondary field. Ground conductivity and magnetic susceptibility can be measured using the device. Data is collected using a data logger and then is post-processed in the office to yield a contour map of magnetic susceptibility and ground conductivity. The EM-31 uses a GPS system to precisely plot the points of collection, so the collection grid can be approximate.

9.3 Methodology

The EM-31 was traversed over accessible portions of the area of concern with data tracked and recorded via GPS. The data is then processed using Trackmaker31, ArcGIS, and Golden Software's Surfer. A contour map of the soil conductivity readings was produced and compared to the previous investigation and soil sample data, which is included as exhibit 4 in Appendix A.

9.4 FINDINGS AND CONCLUSIONS

The EM-31 conductivity data indicated that the baseline soil conductivity on this site generally ranged from 0 mS/m to 20 mS/m. Readings above 50 mS/m at this site are interpreted as elevated. In general, the FDEMI readings from February 2020 (Exhibit 5 in Appendix A) showed a reduction in the amount of high conductivity anomalies in the area when compared to the July 2019 FDEMI Survey (Exhibit 4 in Appendix A). It should be noted that these soil conductivity readings can vary slightly from a number of factors including temperature or season, soil moisture from rain events, and different instrument coils. In this case, the overall data ranges between the two investigations were very similar. The most recent data showed a significant reduction in the most elevated areas with the large majority of the surveyed area including the release extent returning to expected background levels.

9.5 FDEMI LIMITATIONS

It should be noted that, as with any geophysical testing method, the process relies on instrument signals to indicate physical conditions in the field. Signal information can be affected by on-site conditions beyond the control of the operator, such as, but not limited to, soils types, soil moisture, and other natural phenomena at the site. Interpretation of those signals is based on a combination

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of known factors combined with the experience of the operator and geophysical scientist evaluating the results. Utilizing conventional observation, sampling and testing ("truthing") of select areas is recommended to confirm the results from the exploration. As with all geophysical methods, the results provide a level of confidence, but should not be considered absolute. We cannot be responsible for the misinterpretation of unverified results by others.

10.0 SUPPLEMENTAL RELEASE INVESTIGATION DATA EVALUATION

During Terracon's December 10, 2019 and March 16, 2020 supplemental release investigation activities, a total of 38 soil samples were collected from the site and analyzed for chloride, and/or TPH. 38 samples were collected from within the release margins. A Soil Contaminant Concentration Map illustrating the soil sample locations and contaminant concentrations is included as Exhibit 6 in Appendix A.

10.1 Supplemental Release Margins Data Evaluation

Chloride was detected above applicable laboratory SDLs in all of the 38 soil samples analyzed within the release margins. The chloride concentrations ranged from 8.4 mg/kg in soil sample HA-10 (1.5 ft bgs to 2 ft bgs) to 184 mg/kg in soil sample HA-2 (1.5 ft bgs to 2 ft bgs). The soil samples analyzed within the release margins did not exhibit chloride concentrations exceeding the applicable NMOCD RAL for chloride of 600 mg/kg, as summarized in Table 1.

Total TPH was detected above applicable laboratory SDLs in one of the 38 soil samples analyzed within the release margins. The Total TPH concentration was 43.7 mg/kg in soil sample HS-1 (surface to 0.5 ft bgs). The soil samples analyzed within the release margins did not exhibit Total TPH concentrations above the NMOCD RAL of 100 mg/kg for Total TPH, as summarized in Table 1.

11.0 SOIL REMEDIATION & RECLAMATION

Soils exhibiting elevated chloride and TPH impacts observed during the initial investigation, have naturally attenuated with time as evidenced from the data collected. This reduction is illustrated in exhibit 6 in appendix A. Two EM surveys of the release flow path supported by laboratory data from a supplemental investigation, resampled soils within the release margins have achieved regulatory objectives in accordance with NMOCD standards for Remediation, and Reclamation. The criteria described below were utilized to track contaminants to provide a more detailed plan, to ensure remedial efforts were appropriately concentrated throughout the release area.

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11.1 Monitored Natural Attenuation

Soils exceeding the designated NMOCD RALs described in Section 6 were tracked as follows:

- Soils within the release margins, illustrated on Figure 2 of Appendix A, were surveyed utilizing a electromagnetic survey (EM-31) to identify areas of pooling for chlorides to minimize the removal of soil not containing, contaminated, earthen material with chloride concentrations less than 600 mg/kg.
- Terracon's supplemental release investigation data follows along with the findings of the EM-31 showing many samples at background chloride levels and no samples over the 600 mg/kg remediation level.
- Terracon at this time has found no further contaminants above the NMOCD RALs and recommends no further remedial efforts at this site.

11.2 Soil Management

The selected method of soil management was removal and disposal at a NMOCD-approved facility. Excavated soils were to be 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. Following the monitoring of soils within the release margins demonstrated no need for removal or disposal of soils. Natural attenuation proved to be the most effective method to achieve the goals of protecting human health, the environment, and adequate protection of Groundwater.

12.0 TERMINATION OF REMEDIAL ACTIONS, FINAL CLOSURE AND REPORTING

12.1 Termination of Remedial Action

Remedial action of soils at the site were terminated when the following criteria were met. Contaminated soils were reevaluated at the site. Terracon returned to resample the site following the data from the initial EM-31 survey to determine what contaminate levels correlated with the electromagnetic data. Following that additional sampling and a secondary EM-31 survey it was observed that contaminated soil had naturally attenuated from the site. The residual contaminant concentrations are below the soil remediation action levels and no longer require any remedial action.

- Considering the distance to groundwater to be greater than 100 ft bgs and the natural topography that have transformed 85% of the release location into a natural drainage area, provided for rapid and efficient natural attenuation.

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- Terracon, relying on the EM-31 Survey, supplemental laboratory analysis, and visual observation; believes that the natural attenuation at the site was achieved by dilution, dispersion, and volatilization of the previously impacted soils.
- Considering that the previous samples that were above NMOCD RALs were not substantial, it must be the natural rainfall and movement of that water, following the same release path that did naturally attenuate the previously observed contaminants.
- NMOCD approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment is warranted at this time.

12.2 Final Closure

Upon termination of the supplemental investigation the area of the release has been closed by confirmation sampling to demonstrate the absences of contaminants above the NMOCD RALs.

12.3 Final Report

Upon completion of supplemental investigation activities, this final report summarizes all actions taken to mitigate environmental damage related to the release and has been provided to NMOCD for approval.

APPENDIX A – Exhibits

Exhibit 1 – Topographic Map

Exhibit 2 – Site Diagram

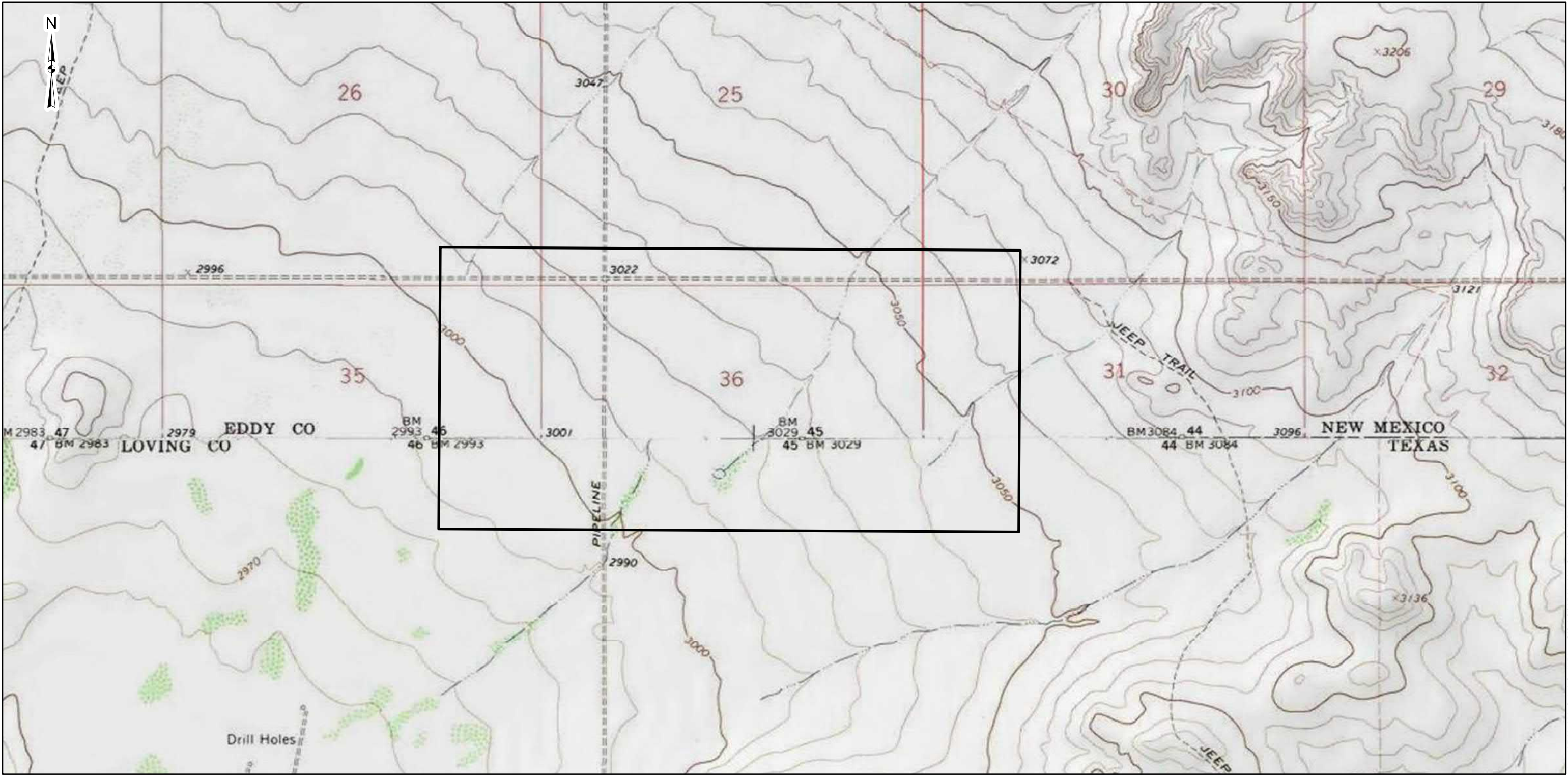
Exhibit 3 – Soil Contaminant Concentration Map

Exhibit 4 – EM Survey Map (7/12/2019)

Exhibit 5 – EM Survey Map (2/11/2020)

Exhibit 6 – Supplemental Soil Concentration Map

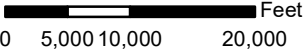
Exhibit 7 – NMOE POD Location Map



Soil Delineation

Site Boundary

Notes:
-Exhibit is for general location only, is not indended for construction purposes, and should not be used separately from original report.



Fractional Scale: 1:19,375

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Project No.:	AR197123
Date:	Jun 2019
Drawn By:	SW
Reviewed By:	ELL

5827 50th St. Suite 1

Lubbock, TX 79424

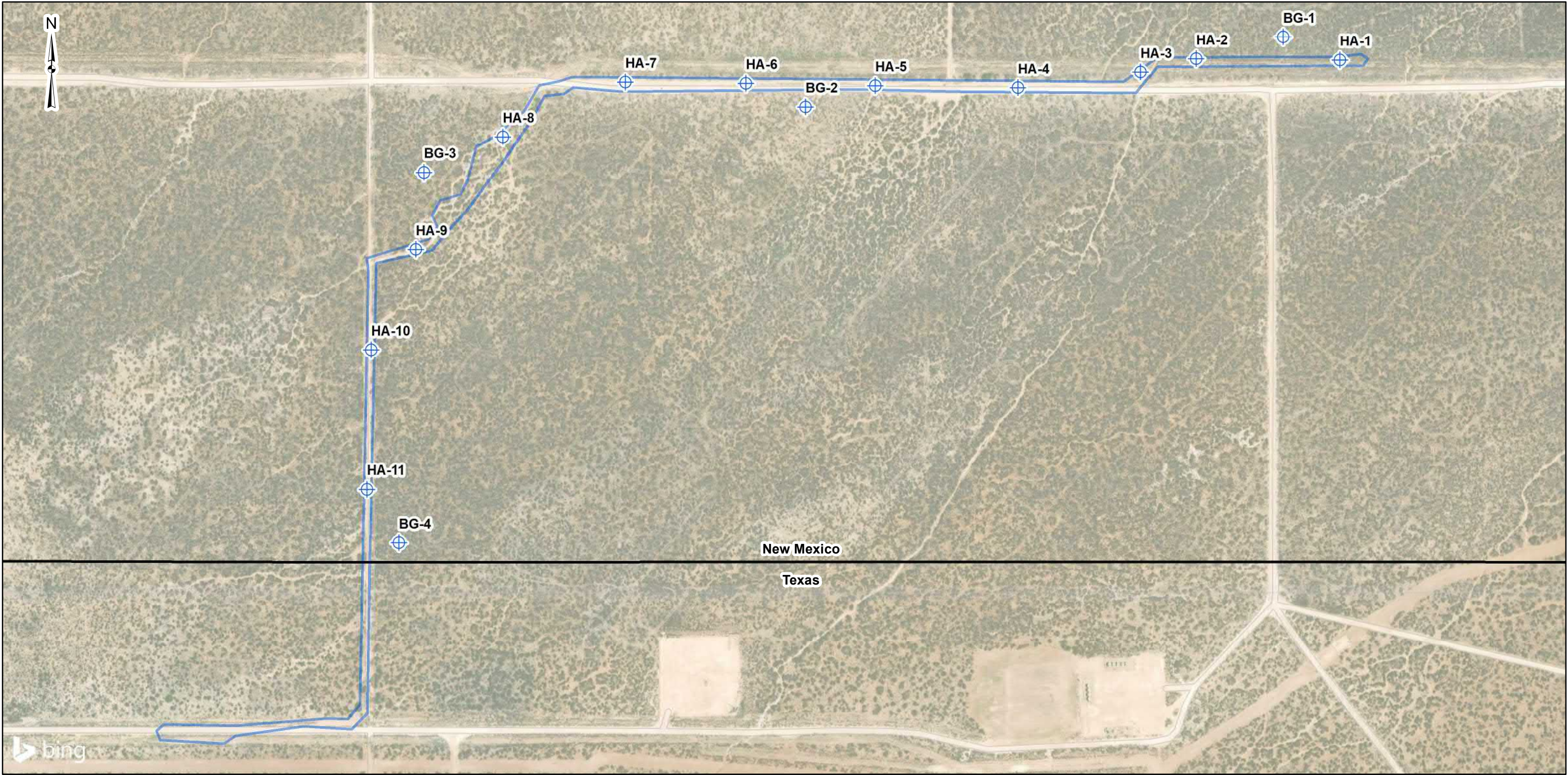
PH. (806) 300-0104

terracon.com

Topographic Map
Solaris - Stella Blue Eddy County, New Mexico Unit M, Section 30, Township 26 South, Range 31 East GPS: 32.005069°, -103.839061°

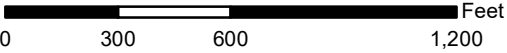
Exhibit
1

C:\Users\jswagner\Desktop\GIS Midland Projects\AR197123 SolarisStellaBlue GIS LSI\AR197123 SolarisStellaBlue Ex1_Topo.mxd



- Soil Delineation**
- Soil Boring (HA, BG)
 - Affected Area
 - New Mexico - Texas Border

Notes:
-Exhibit is for general location only, is not intended for construction purposes, and should not be used separately from original report.



Fractional Scale: 1:6,124

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

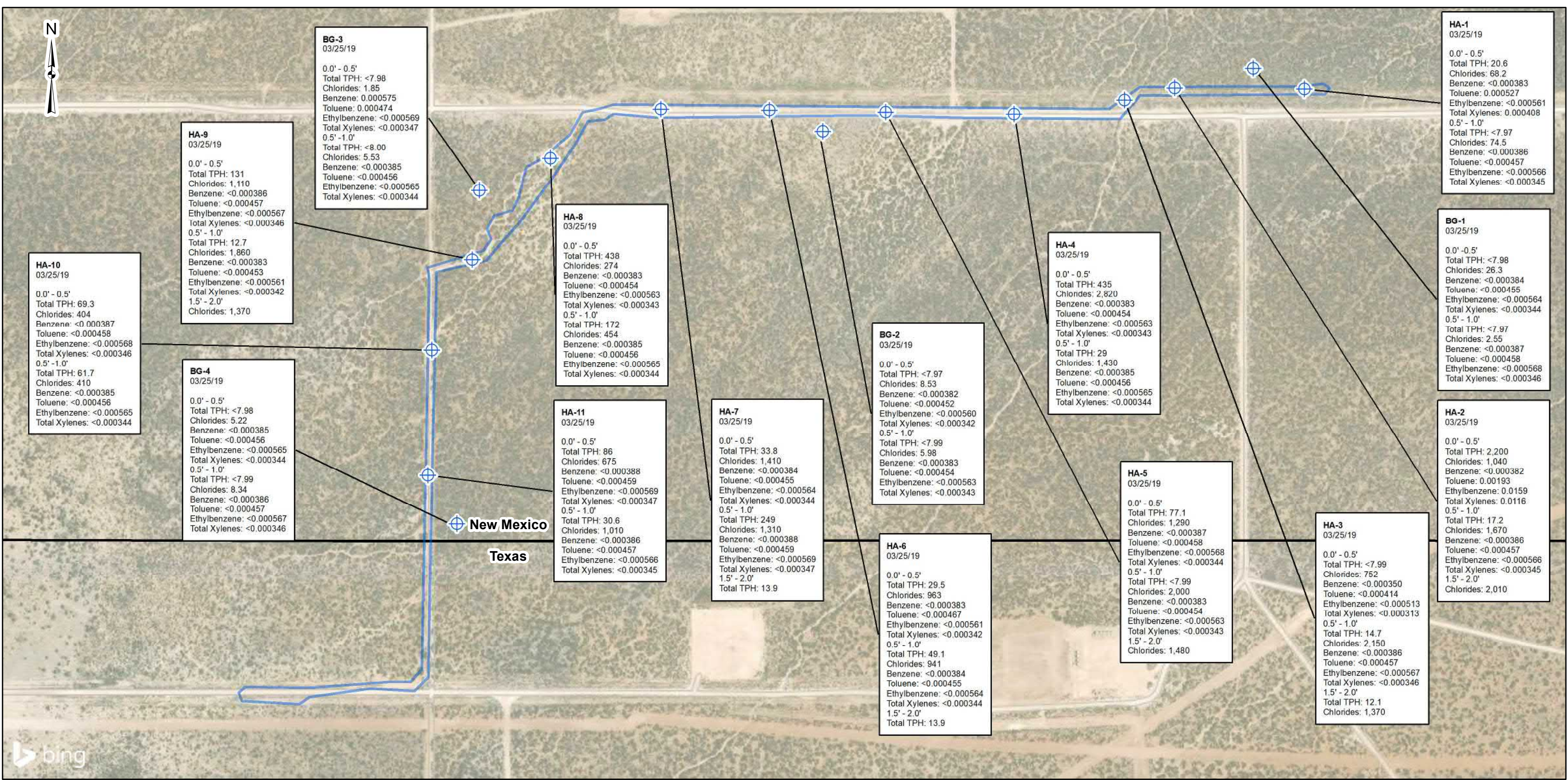
Project No.:	AR197123	
Date:	Jun 2019	
Drawn By:	SW	
Reviewed By:	ELL	

5827 50th St. Suite 1 Lubbock, TX 79424
PH. (806) 300-0104 terracon.com

Site Diagram
Solaris - Stella Blue Eddy County, New Mexico Unit M, Section 30, Township 26 South, Range 31 East GPS: 32.005069°, -103.839061°

Exhibit
2

C:\Users\swagner\Desktop\GIS Midland Projects\GIS\AR197123 SolarisStellaBlue\GIS\AR197123 SolarisStellaBlue Ex2 SiteDiagram.mxd



Soil Delineation

⊕ Soil Boring (HA, BG)

□ Affected Area

— New Mexico - Texas Border

New Mexico - Oil Conservation Division (NMOCD) Criteria:

- Total TPH - 2,500 mg/kg
- Benzene - 10 mg/kg
- Total BTEX - 120 mg/kg
- Chloride: 20,000 mg/kg
- **Bold** concentrations exceeded the applicable NMOCD criteria.
- Exhibit is for general location only, is not intended for construction purposes, and should not be used separately from original report.
- Sample depths reported in feet below grade surface (bgs).

Project No.:	AR197123
Date:	Jun 2019
Drawn By:	SW
Reviewed By:	ELL

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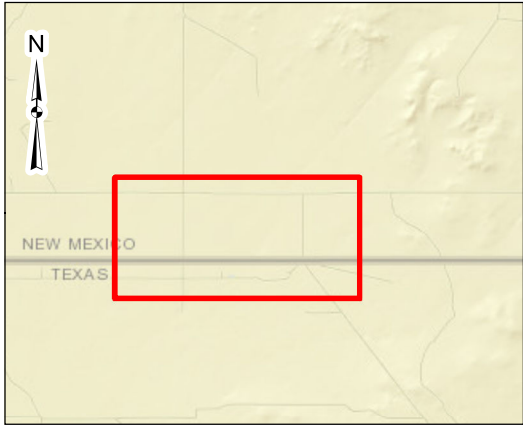
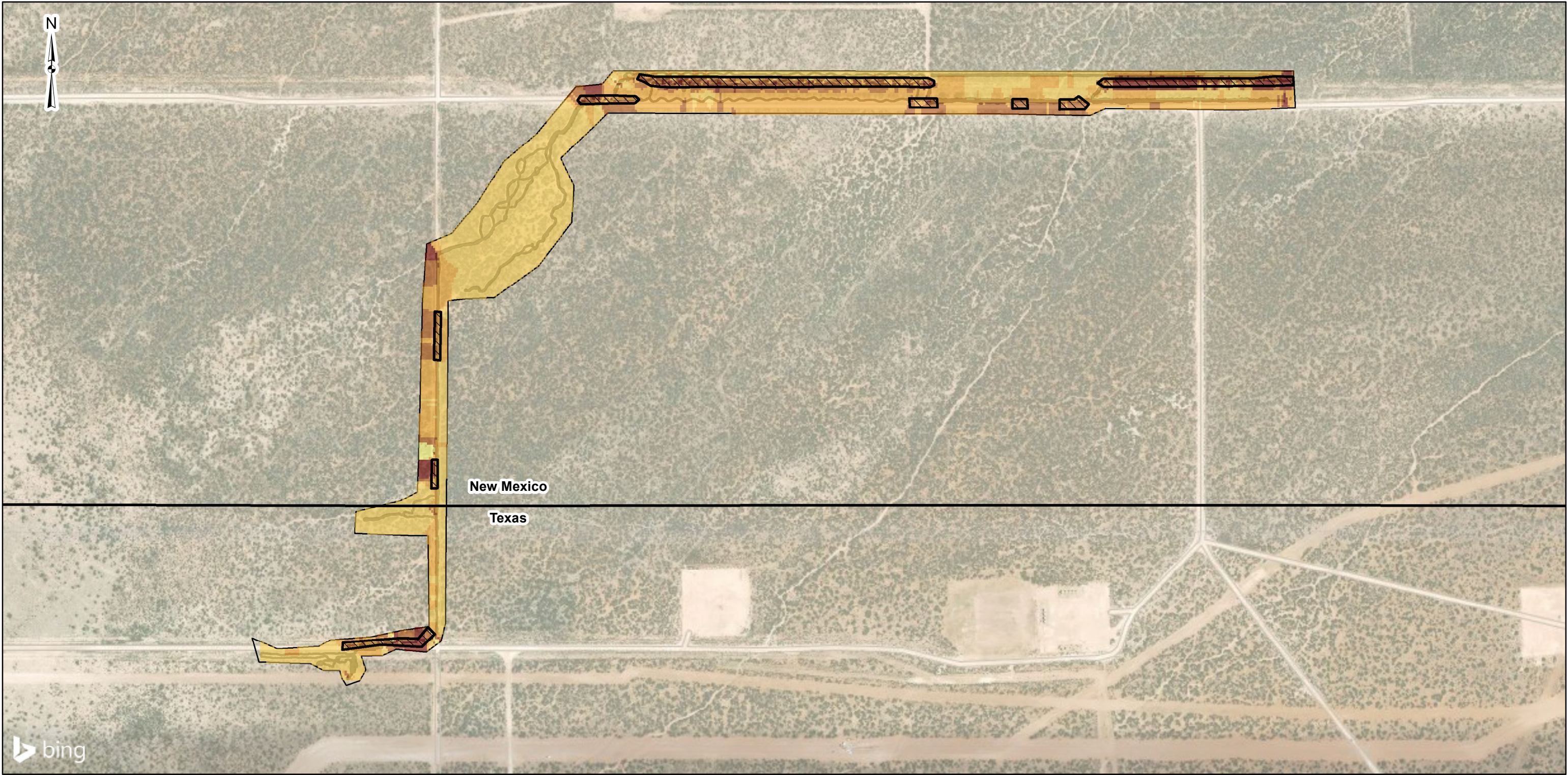
0 5,000 10,000 20,000 Feet

Fractional Scale: 1:6,800

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Soil Contaminant Concentration Map
Solaris - Stella Blue Eddy County, New Mexico Unit M, Section 30, Township 26 South, Range 31 East GPS: 32.005069°, -103.839061°

Exhibit
3



Soil Delineation

— Electromagnetic (EM) Survey Grid

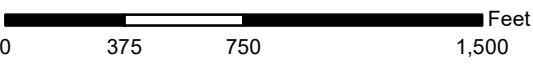
High Conductivity Anomaly

Apparent Conductivity (mS/m)

	50 - 80 - High
	35 - 50 - Moderate
	20 - 35 - Low
	0 - 20 - Background
	-30 - 0 - Negative

Notes:

- Exhibit is for general location only, is not intended for construction purposes, and should not be used separately from original report.
- High Conductivity Anomalies are interpreted where apparent conductivity values range between 50 to 80 mS/m and anomaly underlies EM survey grid line.
- In-phase anomalies are interpreted where polarity reversals occurred.



Fractional Scale: 1:7,243

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Project No.:	AR197123
Date:	Feb 2020
Drawn By:	SW
Reviewed By:	ELL

5827 50th St. Suite 1

Lubbock, TX 79424

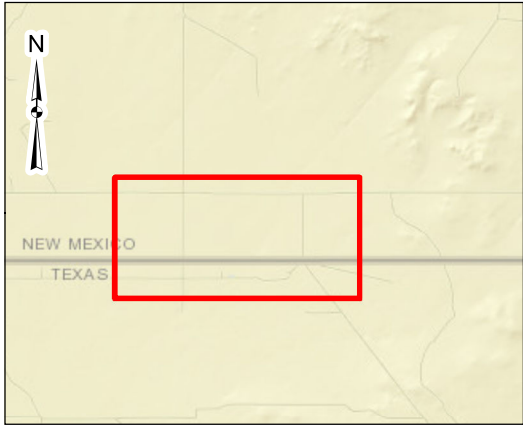
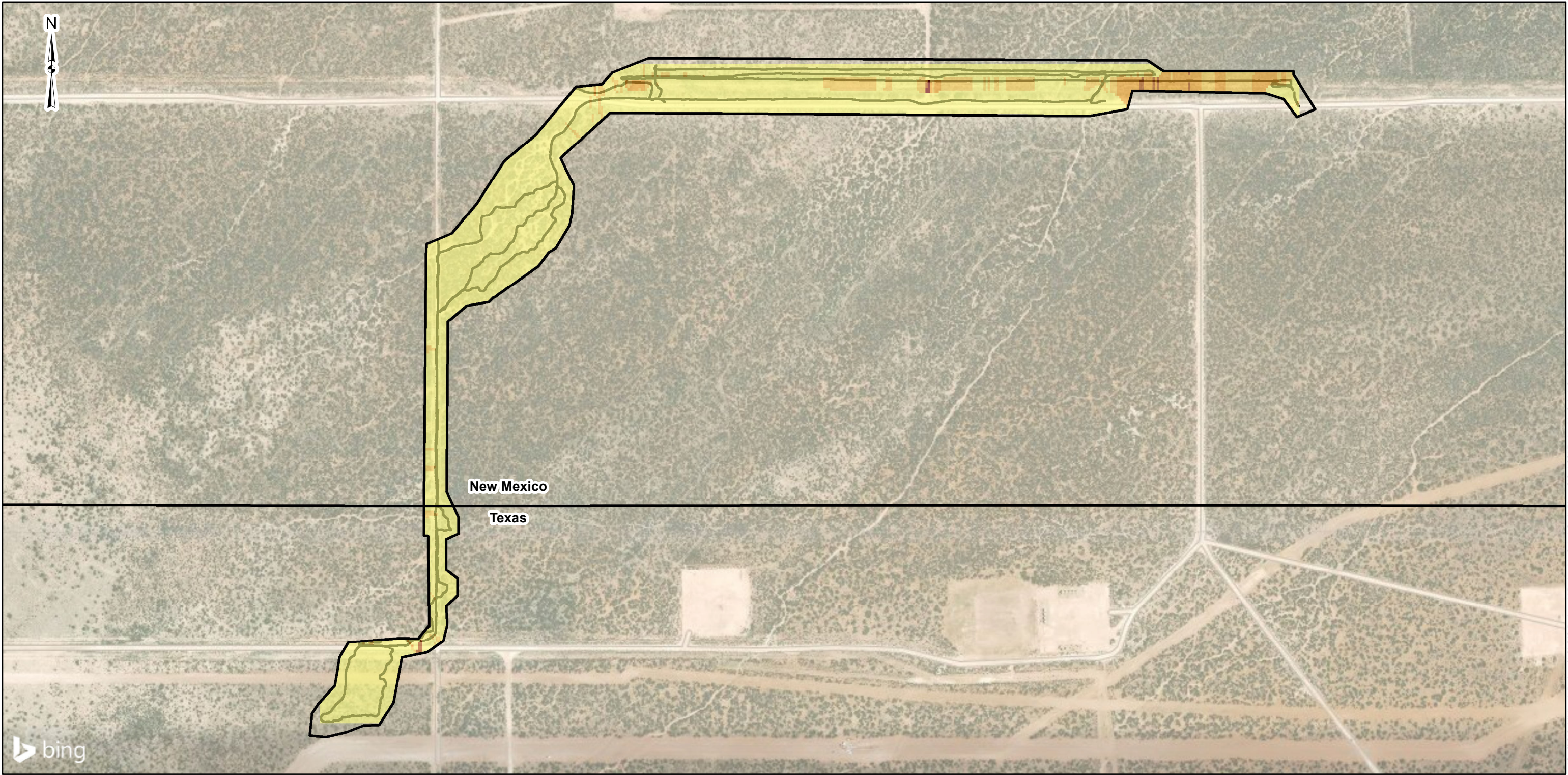
PH. (806) 300-0104

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EM Survey - 07/12/19
Solaris - Stella Blue Eddy County, New Mexico Unit M, Section 30, Township 26 South, Range 31 East GPS: 32.005069°, -103.839061°

Exhibit
4

C:\Users\jwagner\OneDrive - Terracon Consultants Inc\Desktop\Stuff\GIS Midland Projects\LSI GIS Projects\AR197123 SolarisStellaBlue Ex4A Data.mxd



Soil Delineation

— Electromagnetic (EM) Survey Grid

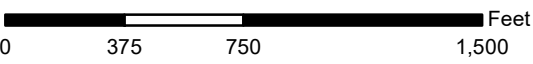
High Conductivity Anomaly

Apparent Conductivity (mS/m)

	50 - 80 - High
	35 - 50 - Moderate
	20 - 35 - Low
	0 - 20 - Background
	-30 - 0 - Negative

Notes:

- Exhibit is for general location only, is not intended for construction purposes, and should not be used separately from original report.
- High Conductivity Anomalies are interpreted where apparent conductivity values range between 50 to 80 mS/m and anomaly underlies EM survey grid line.
- In-phase anomalies are interpreted where polarity reversals occurred.



Fractional Scale: 1:7,243

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Project No.:	AR197123
Date:	Feb 2020
Drawn By:	SW
Reviewed By:	ELL

5827 50th St. Suite 1

Lubbock, TX 79424

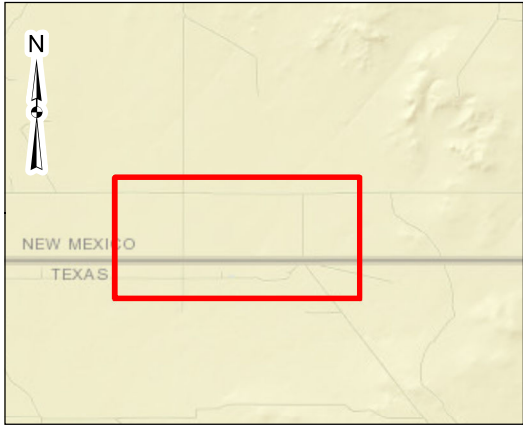
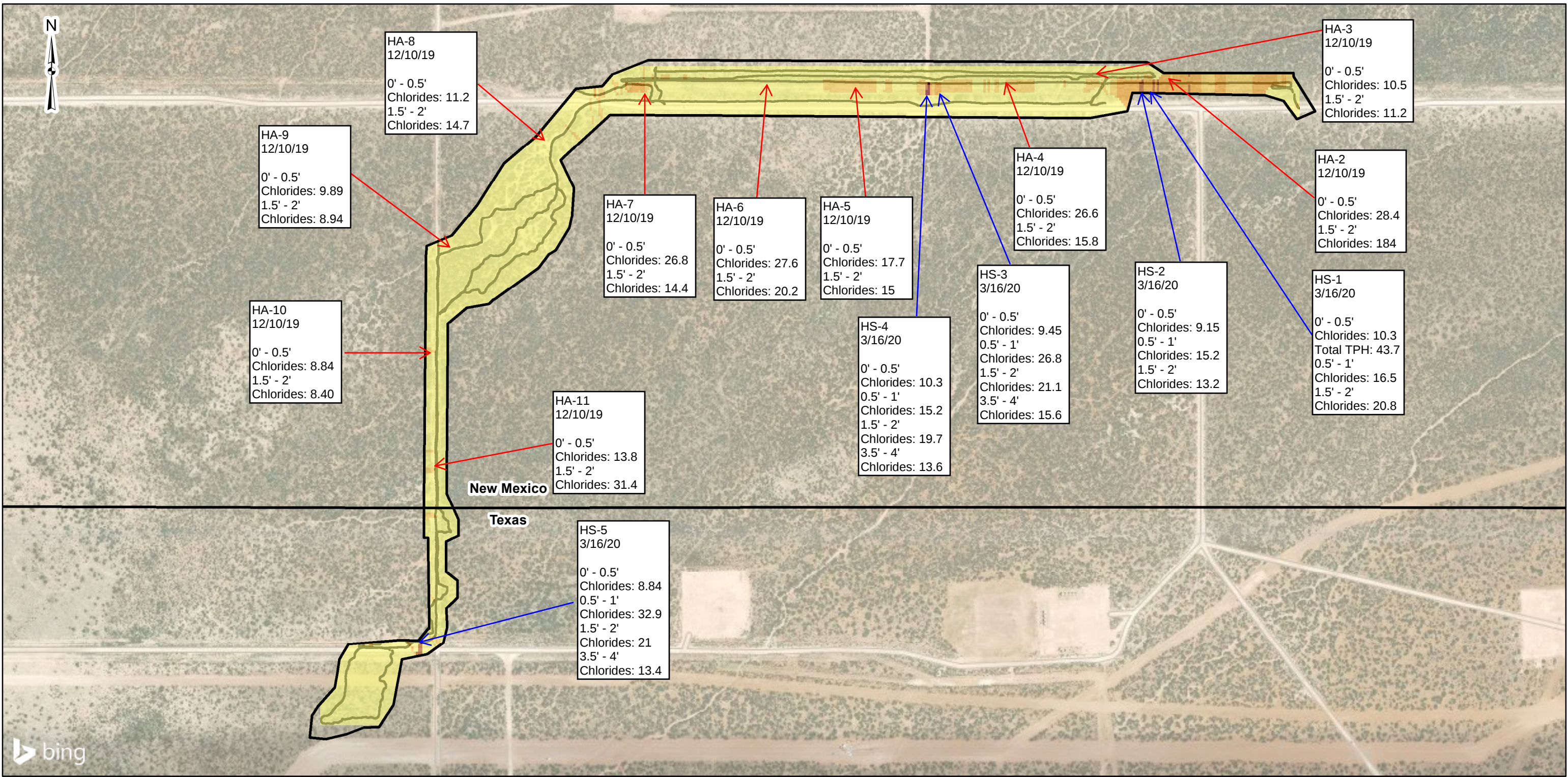
PH. (806) 300-0104

terracon.com

EM Survey - 02/11/20
Solaris - Stella Blue Eddy County, New Mexico Unit M, Section 30, Township 26 South, Range 31 East GPS: 32.005069°, -103.839061°

Exhibit
5

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Soil Delineation

- Electromagnetic (EM) Survey Grid
- High Conductivity Anomaly

Apparent Conductivity (mS/m)

- 50 - 80 - High
- 35 - 50 - Moderate
- 20 - 35 - Low
- 0 - 20 - Background
- 30 - 0 - Negative

Notes:

- Exhibit is for general location only, is not intended for construction purposes, and should not be used separately from original report.
- High Conductivity Anomalies are interpreted where apparent conductivity values range between 50 to 80 mS/m and anomaly underlies EM survey grid line.
- In-phase anomalies are interpreted where polarity reversals occurred.

New Mexico - Oil Conservation Division (NMOCD) Criteria:

- Total TPH - 100 mg/kg (EPA method 8015M)
- Chloride - 600 mg/kg (EPA method 300)

Project No.:
AR197123

Date:
April 2020

Drawn By:
JG

Reviewed By:
ELL

Terracon

5827 50th St. Suite 1 Lubbock, TX 79424

PH. (806) 300-0104 terracon.com

0 375 750 1,500 Feet

Fractional Scale: 1:7,243

DATA SOURCES:
Bing Maps - Aerial Imagery, World Street Map

Supplemental Soil Concentration Map

Solaris - Stella Blue
Eddy County, New Mexico
Unit M, Section 30, Township 26 South,
Range 31 East
GPS: 32.005069°, -103.839061°

Exhibit

6

C:\Users\jwagner\OneDrive - Terracon Consultants Inc\Desktop\Stuff\GIS Midland Projects\LSI GIS Projects\AR197123 SolarisStellaBlue Ex4B Data.mxd



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 02165				24	26S	30E	610036	3544121* 
Driller License:	421	Driller Company:			GLENN'S WATER WELL SERVICE				
Driller Name:	CORKY GLENN								
Drill Start Date:	05/02/1988	Drill Finish Date:			05/02/1988		Plug Date:		
Log File Date:	05/05/1988	PCW Rev Date:				Source:			Shallow
Pump Type:		Pipe Discharge Size:				Estimated Yield:			75 GPM
Casing Size:	6.63	Depth Well:			440 feet		Depth Water:		180 feet
Water Bearing Stratifications:				Top	Bottom	Description			
				318	432	Other/Unknown			
Casing Perforations:				Top	Bottom				
				296	440				

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/30/19 10:33 AM

POINT OF DIVERSION SUMMARY

APPENDIX B – Tables

Table 1 – Soil Sample Analytical Data Summary

Table 2 – Supplemental Soil Sample Analytical Data Summary

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
New Mexico Release Margin Samples									
HA-1	0 - 0.5'	Grab	03/25/19	Benzene - <0.000383 Toluene - 0.000527 Ethylbenzene - <0.000561 Total Xylenes - 0.000408 Total BTEX - 0.000935	68.2	<7.98	20.6	<8.10	20.6
HA-1	0.5' - 1'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000566 Total Xylenes - <0.000345 Total BTEX - <0.000345	74.5	<7.97	<8.10	<8.10	<7.97
HA-2	0 - 0.5'	Grab	03/25/19	Benzene - <0.000382 Toluene - 0.00193 Ethylbenzene - 0.0159 Total Xylenes - 0.0116 Total BTEX - 0.0294	1,040	55.7	1,990	158	2,200
HA-2	0.5' - 1'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000566 Total Xylenes - <0.000345 Total BTEX - <0.000345	1,670	<7.99	17.2	<8.11	17.2
HA-2	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	2,010	NA	NA	NA	NA
HA-3	0 - 0.5'	Grab	03/25/19	Benzene - <0.000350 Toluene - <0.000414 Ethylbenzene - <0.000513 Total Xylenes - <0.000313 Total BTEX - <0.000313	752	<7.99	<8.11	<8.11	<7.99
HA-3	0.5' - 1'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000567 Total Xylenes - <0.000346 Total BTEX - <0.000346	2,150	<7.98	14.7	<8.10	14.7
HA-3	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	1,370	<7.98	12.1	<8.10	12.1
HA-4	0 - 0.5'	Grab	03/25/19	Benzene - <0.000383 Toluene - <0.000454 Ethylbenzene - <0.000563 Total Xylenes - <0.000343 Total BTEX - <0.000343	2,820	<7.99	387	47.8	435
HA-4	0.5' - 1'	Grab	03/25/19	Benzene - <0.000385 Toluene - <0.000456 Ethylbenzene - <0.000565 Total Xylenes - <0.000344 Total BTEX - <0.000344	1,430	<8.00	29.0	<8.13	29.0
HA-5	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	1,480	NA	NA	NA	NA
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100

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/ORO)

* = 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 = No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
HA-6	0 - 0.5'	Grab	03/25/19	Benzene - <0.000383 Toluene - 0.000467 Ethylbenzene - <0.000561 Total Xylenes - <0.000342 Total BTEX - 0.000467	963	<7.97	29.5	<8.10	29.5
HA-6	0.5' - 1'	Grab	03/25/19	Benzene - <0.000384 Toluene - <0.000455 Ethylbenzene - <0.000564 Total Xylenes - <0.000344 Total BTEX - <0.000344	941	<7.99	49.1	<8.11	49.1
HA-6	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	NA	<7.99	11.2	<8.12	11.2
HA-7	0 - 0.5'	Grab	03/25/19	Benzene - <0.000384 Toluene - <0.000455 Ethylbenzene - <0.000564 Total Xylenes - <0.000344 Total BTEX - <0.000344	1,410	<7.99	33.8	<8.12	33.8
HA-7	0.5' - 1'	Grab	03/25/19	Benzene - <0.000388 Toluene - <0.000459 Ethylbenzene - <0.000569 Total Xylenes - <0.000347 Total BTEX - <0.000347	1,310	<7.97	223	26.4	249
HA-7	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	NA	<8.00	13.9	<8.13	13.9
HA-8	0 - 0.5'	Grab	03/25/19	Benzene - <0.000383 Toluene - <0.000454 Ethylbenzene - <0.000563 Total Xylenes - <0.000343 Total BTEX - <0.000343	274	<7.98	390	48.1	438
HA-8	0.5' - 1'	Grab	03/25/19	Benzene - <0.000385 Toluene - <0.000456 Ethylbenzene - <0.000565 Total Xylenes - <0.000344 Total BTEX - <0.000344	454	<7.99	154	17.6	172
HA-9	0 - 0.5'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000567 Total Xylenes - <0.000346 Total BTEX - <0.000346	1,110	<7.99	119	12.4	131
HA-9	0.5' - 1'	Grab	03/25/19	Benzene - <0.000383 Toluene - <0.000453 Ethylbenzene - <0.000561 Total Xylenes - <0.000342 Total BTEX - <0.000342	1,860	<7.98	12.7	<8.10	12.7
HA-9	1.5' - 2'	Grab	03/25/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	1,370	NA	NA	NA	NA
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 120	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/ORO)

* = 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= No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS - BTEX¹, Chloride², and TPH³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	MRO	TOTAL
HA-10	0 - 0.5'	Grab	03/25/19	Benzene - <0.000387 Toluene - <0.000458 Ethylbenzene - <0.000568 Total Xylenes - <0.000346 Total BTEX - <0.000346	404	<7.99	69.3	<8.11	69.3
HA-10	0.5' - 1'	Grab	03/25/19	Benzene - <0.000385 Toluene - <0.000456 Ethylbenzene - <0.000565 Total Xylenes - <0.000344 Total BTEX - <0.000344	410	<7.99	61.7	<8.11	61.7
HA-11	0 - 0.5'	Grab	03/25/19	Benzene - <0.000388 Toluene - <0.000459 Ethylbenzene - <0.000569 Total Xylenes - <0.000347 Total BTEX - <0.000347	675	<8.00	77.8	8.15	86.0
HA-11	0.5' - 1'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000566 Total Xylenes - <0.000345 r <0.000345	1,010	<7.99	30.6	<8.11	30.6
New Mexico Background Samples									
BG-1	0 - .5'	Grab	03/25/19	Benzene - <0.000384 Toluene - <0.000455 Ethylbenzene - <0.000564 Total Xylenes - <0.000344 Total BTEX - <0.000344	26.3	<7.98	<8.10	<8.10	<7.98
BG-1	0.5' - 1'	Grab	03/25/19	Benzene - <0.000387 Toluene - <0.000458 Ethylbenzene - <0.000568 Total Xylenes - <0.000346 Total BTEX - <0.000346	2.55	<7.97	<8.10	<8.10	<7.97
BG-2	0 - .5'	Grab	03/25/19	Benzene - <0.000382 Toluene - <0.000452 Ethylbenzene - <0.000560 Total Xylenes - <0.000342 Total BTEX - <0.000342	8.53	<7.97	<8.10	<8.10	<7.97
BG-2	.5' - 1'	Grab	03/25/19	Benzene - <0.000383 Toluene - <0.000454 Ethylbenzene - <0.000563 Total Xylenes - <0.000343 Total BTEX - <0.000343	5.98	<7.99	<8.12	<8.12	<7.99
BG-3	0 - .5'	Grab	03/25/19	Benzene - 0.000575 Toluene - 0.000474 Ethylbenzene - <0.000569 Total Xylenes - <0.000347 Total BTEX - 0.00105	1.85	<7.98	<8.10	<8.10	<7.98
BG-3	.5' - 1'	Grab	03/25/19	Benzene - <0.000385 Toluene - <0.000456 Ethylbenzene - <0.000565 Total Xylenes - <0.000344 Total BTEX - <0.000344	5.53	<8.00	<8.13	<8.13	<8.00
BG-4	0 - .5'	Grab	03/25/19	Benzene - <0.000385 Toluene - <0.000456 Ethylbenzene - <0.000565 Total Xylenes - <0.000344 Total BTEX - <0.000344	5.22	<7.98	<8.10	<8.10	<7.98
BG-4	.5' - 1'	Grab	03/25/19	Benzene - <0.000386 Toluene - <0.000457 Ethylbenzene - <0.000567 Total Xylenes - <0.000346 Total BTEX - <0.000346	8.34	<7.99	<8.12	<8.12	<7.99
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 120	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/ORO)

* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMCD - N, 8/14/2018

< = Constituent not detected above the indicated laboratory SDL

NA = Not Analyzed

N/A= No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 2 SUPPLEMENTAL SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margins Supplemental Samples									
HA-2	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	28.4	<0.273	<7.47	<7.47	<0.273
HA-2	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	184	<0.270	<7.43	<7.43	<0.270
HA-3	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	10.5	<0.271	<7.49	<7.49	<0.271
HA-3	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	11.2	<0.272	<7.44	<7.44	<0.272
HA-4	0' - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	26.6	<0.273	<7.49	<7.49	<0.273
HA-4	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	15.8	<0.262	<7.54	<7.54	<0.262
HA-5	0' - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	17.7	<0.273	<7.46	<7.46	<0.273
HA-5	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	15	<0.265	<7.46	<7.46	<0.265
HA-6	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	27.6	<0.277	<7.49	<7.49	<0.277
HA-6	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	20.2	<0.274	<7.43	<7.43	<0.274
HA-7	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	26.8	<0.266	<7.45	<7.45	<0.266
HA-7	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	14.4	<0.269	<7.45	<7.45	<0.269
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100

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/ORO)

* = 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 = No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 2 SUPPLEMENTAL SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
Release Margins Supplemental Samples									
HA-8	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	11.2	<0.266	<7.53	<7.53	<0.266
HA-8	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	14.7	<0.274	<7.53	<7.53	<0.274
HA-9	0' - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	9.89	<0.270	<7.44	<7.44	<0.270
HA-9	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	8.94	<0.268	<7.53	<7.53	<0.268
HA-10	0' - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	8.84	<0.270	<7.53	<7.53	<0.270
HA-10	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	8.40	<0.273	<7.43	<7.43	<0.273
HA-11	0 - 0.5'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	13.8	<0.266	<7.53	<7.53	<0.266
HA-11	1.5' - 2'	Grab	12/10/19	Benzene - NA Toluene - NA Ethylbenzene - NA Total Xylenes - NA Total BTEX - NA	31.4	<0.271	<7.49	<7.49	<0.271
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 120	20,000	1,000	N/A	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/ORO)

* = 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 = No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 2 SUPPLEMENTAL SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
EM Survey Dependant Sampling									
HS-1	0 - 0.5'	Grab	03/16/20	Benzene - <0.000209 Toluene - <0.00101 Ethylbenzene - <0.000338 Total Xylenes - <0.000440 Total BTEX - <0.000209	10.3	<0.272	43.7	<7.41	43.7
	0.5' - 1'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.00100 Ethylbenzene - <0.000336 Total Xylenes - <0.000438 Total BTEX - <0.000207	16.5	<0.247	<7.45	<7.45	<0.247
	1.5 - 2'	Grab	03/16/20	Benzene - <0.000205 Toluene - <0.000990 Ethylbenzene - <0.000332 Total Xylenes - <0.000432 Total BTEX - <0.000205	20.8	<0.242	<7.49	<7.49	<0.242
HS-2	0 - 0.5'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.00100 Ethylbenzene - <0.000336 Total Xylenes - <0.000438 Total BTEX - <0.000207	9.15	<0.246	<7.44	<7.44	<0.246
	0.5' - 1'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.00100 Ethylbenzene - <0.000336 Total Xylenes - <0.000438 Total BTEX - <0.000207	15.2	<0.257	<7.54	<7.54	<0.257
	1.5 - 2'	Grab	03/16/20	Benzene - <0.000208 Toluene - <0.00100 Ethylbenzene - <0.000337 Total Xylenes - <0.000438 Total BTEX - <0.000208	13.2	<0.259	<7.51	<7.51	<0.259
HA-3	0' - 0.5'	Grab	03/16/20	Benzene - <0.000205 Toluene - <0.000990 Ethylbenzene - <0.000332 Total Xylenes - <0.000432 Total BTEX - <0.000205	9.45	<0.265	<7.52	<7.52	<0.265
	0.5' - 1'	Grab	03/16/20	Benzene - <0.000205 Toluene - <0.000990 Ethylbenzene - <0.000332 Total Xylenes - <0.000432 Total BTEX - <0.000205	26.8	<0.245	<7.52	<7.52	<0.245
	1.5 - 2'	Grab	03/16/20	Benzene - <0.000208 Toluene - <0.00100 Ethylbenzene - <0.000337 Total Xylenes - <0.000438 Total BTEX - <0.000208	21.1	<0.255	<7.50	<7.50	<0.255
	3.5' - 4'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.000998 Ethylbenzene - <0.000335 Total Xylenes - <0.000436 Total BTEX - <0.000207	15.6	<0.257	<7.48	<7.48	<0.257
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100

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/ORO)

* = 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 = No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

TABLE 2 SUPPLEMENTAL SOIL SAMPLE ANALYTICAL RESULTS - BTEX ¹ , Chloride ² , and TPH ³ Stella Blue Terracon Project No. AR197123									
Sample I.D.	Sample Depth (bgs)	Sample Type	Sample Date	BTEX (mg/kg)	Chloride (mg/kg)	TPH (8015M) (mg/kg)			
						GRO	DRO	ORO	TOTAL
EM Survey Dependant Sampling									
HS-4	0 - 0.5'	Grab	03/16/20	Benzene - <0.000206 Toluene - <0.000994 Ethylbenzene - <0.000334 Total Xylenes - <0.000434 Total BTEX - <0.000206	10.3	<0.265	NA	NA	<0.265
	0.5' - 1'	Grab	03/16/20	Benzene - <0.000208 Toluene - <0.00101 Ethylbenzene - <0.000338 Total Xylenes - <0.000439 Total BTEX - <0.000208	15.2	<0.269	<7.47	<7.47	<0.269
	1.5 - 2'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.00100 Ethylbenzene - <0.000336 Total Xylenes - <0.000438 Total BTEX - <0.000207	19.7	<0.250	<7.56	<7.56	<0.250
	3.5 - 4'	Grab	03/16/20	Benzene - <0.000206 Toluene - <0.000996 Ethylbenzene - <0.000334 Total Xylenes - <0.000435 Total BTEX - <0.000206	13.6	<0.270	<7.55	<7.55	<0.270
HA-5	0' - 0.5'	Grab	03/16/20	Benzene - <0.000206 Toluene - <0.000994 Ethylbenzene - <0.000334 Total Xylenes - <0.000434 Total BTEX - <0.000206	8.84	<0.261	<7.42	<7.42	<0.261
	0.5' - 1'	Grab	03/16/20	Benzene - <0.000206 Toluene - <0.000994 Ethylbenzene - <0.000334 Total Xylenes - <0.000434 Total BTEX - <0.000206	32.9	<0.236	<7.47	<7.47	<0.236
	1.5 - 2'	Grab	03/16/20	Benzene - <0.000205 Toluene - <0.000990 Ethylbenzene - <0.000332 Total Xylenes - <0.000432 Total BTEX - <0.000205	21	<0.248	<7.44	<7.44	<0.248
	3.5' - 4'	Grab	03/16/20	Benzene - <0.000207 Toluene - <0.000998 Ethylbenzene - <0.000335 Total Xylenes - <0.000436 Total BTEX - <0.000207	13.4	<0.268	<7.44	<7.44	<0.268
New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards*				Benzene - 10 Toluene - N/A Ethylbenzene - N/A Total Xylenes - N/A Total BTEX - 50	600	N/A			100

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/ORO)

* = NMOCD Remediation and Delineation Standards are proposed in 19.15.29.12 NMAC - N, 8/14/2018

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NA = Not Analyzed

N/A= No Applicable reporting standards

Bold and highlighted denotes concentrations that exceed the New Mexico Oil Conservation Division (NMOCD) Remediation and Delineation Standards.

APPENDIX C

Photographic Log – 04/2/2020

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 1: View of release origin, east. 3/21/2019 / **TIME:** 2:05PM / **GPS:** 32.0066, -103.8266



PHOTO 2: View of impact on pipeline, facing east. 3/21/2019 / **TIME:** 2:01PM / **GPS:** 32.0067, -103.8292

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 3: View of release going to bar ditch, facing south. 3/21/2019 / **TIME:** 2:01PM / **GPS:** 32.0067, -103.8292



PHOTO 4: View of release in ditch, facing east. 3/21/2019 / **TIME:** 1:13PM / **GPS:** 32.0063, -103.8376

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 5: View of release in ditch, facing west. 3/21/2019 / **TIME:** 1:57PM / **GPS:** 32.0062, -103.8323



PHOTO 6: View of release crossing lease road, facing west. 3/21/2019 / **TIME:** 1:13PM / **GPS:** 32.0063, -103.8376

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 7: View of release in eroded area, facing southeast. 3/21/2019 / **TIME:** 1:18PM / **GPS:** 32.0047, -103.8393



PHOTO 8: View of release in eroded lease road, facing north. 3/21/2019 / **TIME:** 1:44PM / **GPS:** 32.0039, -103.8405

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 9: View of release following eroded lease road, facing south. 3/21/2019 / **TIME:** 1:25PM / **GPS:** 32.0005, -103.8405



PHOTO 10: View of release end of eroded lease road, facing southwest. 3/21/2019 / **TIME:** 1:28PM / **GPS:** 31.9986, -103.8405

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 11: View of release end crossing last lease road, facing west. 3/21/2019 / **TIME:** 1:30PM / **GPS:** 31.9984, -103.8419



PHOTO 12: View of HA-1, facing east. 3/25/2019 / **TIME:** 2:15PM / **GPS:** 32.0065, -103.8267

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 13: View of HA-2, facing west. 3/25/2019 / **TIME:** 2:26PM / **GPS:** 32.0066, -103.8281



PHOTO 14: View of HA-3, facing north. 3/25/2019 / **TIME:** 2:34PM / **GPS:** 32.0064, -103.8239

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 15: View of HA-4, facing east. 3/25/2019 / **TIME:** 2:48PM / **GPS:** 32.0063, -103.8315



PHOTO 16: View of HA-6, facing east. 3/25/2019 / **TIME:** 3:01PM / **GPS:** 32.0063, -103.8339

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 17: View of HA-7, facing east. 3/25/2019 / **TIME:** 3:10PM / **GPS:** 32.0063, -103.8354



PHOTO 18: View of HA-8, facing southwest. 3/25/2019 / **TIME:** 3:24PM / **GPS:** 32.0055, -103.8387

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 19: View of HA-9, facing west. 3/25/2019 / **TIME:** 3:33PM / **GPS:** 32.0042, -103.8401



PHOTO 20: View of HA-10, facing south. 3/25/2019 / **TIME:** 3:53PM / **GPS:** 32.0030, -103.8405

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 21: View of HA-11, facing south. 3/25/2019 / **TIME:** 4:00PM / **GPS:** 32.0013, -103.8406



PHOTO 22: View of HA-5, facing northeast. 12/10/2019 / **TIME:** 12:50PM / **GPS:** 31.9986, -103.8405

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 23: View of HA-11, facing north. 12/10/2019 / **TIME:** 12:55PM / **GPS:** 32.0005, -103.8405



PHOTO 24: View of HA-10, facing north. 12/10/2019 / **TIME:** 1:00PM / **GPS:** 32.0030, -103.8405

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 25: View of HA-9, facing north. 12/10/2019 / **TIME:** 1:15PM / **GPS:** 32.0042, -103.8401



PHOTO 26: View of HA-9, facing east. 12/10/2019 / **TIME:** 1:30PM / **GPS:** 32.0042, -103.8401

Stella Blue Solaris Release ■ Eddy County, New Mexico / Loving County, Texas
April 2, 2020 ■ Terracon Project No. AR197123

Terracon



PHOTO 27: View of HS-4, facing south. 12/25/2019 / **TIME:** 2:00PM / **GPS:** 32.0066, -103.8292

APPENDIX D

Certified Laboratory Analytical Report and Chain of Custody



Analytical Report 618907

for

Terracon-Lubbock

Project Manager: John Fergerson

Stella Blue

AR197123

04.09.2019

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



04.09.2019

Project Manager: **John Fergerson**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **618907**

Stella Blue

Project Address:

John Fergerson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618907. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 618907 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Debbie Simmons'. The signature is fluid and cursive, with a horizontal line drawn underneath it.

Debbie Simmons

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-1 (0-.5)	S	03.25.2019 14:00	0 - .5 ft	618907-001
HA-1 (.5-1)	S	03.25.2019 14:02	.5 - 1 ft	618907-002
HA-2 (0-.5)	S	03.25.2019 14:20	0 - .5 ft	618907-005
HA-2 (.5-1)	S	03.25.2019 14:22	.5 - 1 ft	618907-006
HA-2 (1.5-2)	S	03.25.2019 14:24	1.5 - .2 ft	618907-007
HA-3 (0-.5)	S	03.25.2019 14:30	0 - .5 ft	618907-009
HA-3 (.5-1)	S	03.25.2019 14:32	.5 - 1 ft	618907-010
HA-3 (1.5-2)	S	03.25.2019 14:34	1.5 - 2 ft	618907-011
HA-4 (0-.5)	S	03.25.2019 14:40	0 - .5 ft	618907-013
HA-4 (.5-1)	S	03.25.2019 14:42	.5 - 1 ft	618907-014
HA-5 (0-.5)	S	03.25.2019 14:50	0 - .5 ft	618907-018
HA-5 (.5-1)	S	03.25.2019 14:52	.5 - 1 ft	618907-019
HA-5 (1.5-2)	S	03.25.2019 14:54	1.5 - 2 ft	618907-020
HA-6 (0-.5)	S	03.25.2019 15:00	0 - .5 ft	618907-022
HA-6 (.5-1)	S	03.25.2019 15:02	.5 - 1 ft	618907-023
HA-6 (1.5-2)	S	03.25.2019 15:04	1.5 - 3 ft	618907-024
HA-7 (0-.5)	S	03.25.2019 15:10	0 - .5 ft	618907-025
HA-7 (.5-1)	S	03.25.2019 15:12	.5 - 1 ft	618907-026
HA-7 (1.5-2)	S	03.25.2019 15:14	1.5 - 2 ft	618907-027
HA-8 (0-.5)	S	03.25.2019 15:20	0 - .5 ft	618907-029
HA-8 (.5-1)	S	03.25.2019 15:22	.5 - 1 ft	618907-030
HA-9 (0-.5)	S	03.25.2019 15:30	0 - .5 ft	618907-031
HA-9 (.5-1)	S	03.25.2019 15:32	.5 - 1 ft	618907-032
HA-9 (1.5-2)	S	03.25.2019 15:34	1.5 - 2 ft	618907-033
HA-10 (0-.5)	S	03.25.2019 15:40	0 - .5 ft	618907-035
HA-10 (.5-1)	S	03.25.2019 15:42	.5 - .1 ft	618907-036
HA-11 (0-.5)	S	03.25.2019 15:50	0 - .5 ft	618907-039
HA-11 (.5-1)	S	03.25.2019 15:52	.5 - 1 ft	618907-040
HA-1 (1.5-2)	S	03.25.2019 14:04	1.5 - 2 ft	Not Analyzed
HA-1 (3-3.5)	S	03.25.2019 14:06	3 - 3.5 ft	Not Analyzed
HA-2 (3-3.5)	S	03.25.2019 14:26	3 - 3.5 ft	Not Analyzed
HA-3 (3-3.5)	S	03.25.2019 14:36	3 - 3.5 ft	Not Analyzed
HA-4 (1.5-2)	S	03.25.2019 14:44	1.5 - 2 ft	Not Analyzed
HA-4 (3-3.5)	S	03.25.2019 14:46	3 - 3.5 ft	Not Analyzed
HA-4 (4-4.5)	S	03.25.2019 14:48	4 - 4.5 ft	Not Analyzed
HA-5 (3-3.5)	S	03.25.2019 14:56	3 - 3.5 ft	Not Analyzed
HA-7 (3-3.5)	S	03.25.2019 15:16	3 - 3.5 ft	Not Analyzed
HA-9 (3-3.5)	S	03.25.2019 15:36	3 - 3.5 ft	Not Analyzed
HA-10 (1.5-2)	S	03.25.2019 15:44	1.5 - 2 ft	Not Analyzed
HA-10 (3-3.5)	S	03.25.2019 15:46	3 - .3.5 ft	Not Analyzed

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Stella Blue**Project ID: AR197123
Work Order Number(s): 618907Report Date: 04.09.2019
Date Received: 03.26.2019

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

Sample receipt non conformances and comments:

04/02/2019: per Joseph Guesnier, additional analyses request for this report on a 2 Day TAT.

HA-2 (1.5-2) - Chlorides
HA-3 (1.5-2) - Chlorides and TPH
HA-5 (1.5-2) - Chlorides
HA-6 (1.5-2) - TPH
HA-7 (1.5-2) - TPH
HA-9 (1.5-2) - Chlorides

Report revised 4/9/19 to include these results.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083672 BTEX by EPA 8021B

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

Samples affected are: 618907-009,618907-002.

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3083673 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-1 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-001

Date Collected: 03.25.2019 14:00

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083498

Date Prep: 03.26.2019 15:35

Prep seq: 7674371

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	68.2	4.97	0.853	mg/kg	03.27.2019 10:39		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.27.2019 10:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.6	15.0	8.10	mg/kg	03.27.2019 10:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.27.2019 10:16	U	1
Total TPH	PHC635	20.6		7.98	mg/kg	03.27.2019 10:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 12:30	U	1
Toluene	108-88-3	0.000527	0.00199	0.000453	mg/kg	03.27.2019 12:30	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	03.27.2019 12:30	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 12:30	U	1
o-Xylene	95-47-6	0.000408	0.00199	0.000342	mg/kg	03.27.2019 12:30	J	1
Total Xylenes	1330-20-7	0.000408		0.000342	mg/kg	03.27.2019 12:30	J	
Total BTEX		0.000935		0.000342	mg/kg	03.27.2019 12:30	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	114	70 - 130	%		
4-Bromofluorobenzene	114	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-1 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-002

Date Collected: 03.25.2019 14:02

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	74.5	4.95	0.850	mg/kg	03.26.2019 19:34		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	03.26.2019 18:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	14.9	8.10	mg/kg	03.26.2019 18:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	03.26.2019 18:34	U	1
Total TPH	PHC635	<7.97		7.97	mg/kg	03.26.2019 18:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	92	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	03.27.2019 12:49	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	03.27.2019 12:49	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	03.27.2019 12:49	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	03.27.2019 12:49	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	03.27.2019 12:49	U	1
Total Xylenes	1330-20-7	<0.000345		0.000345	mg/kg	03.27.2019 12:49	U	
Total BTEX		<0.000345		0.000345	mg/kg	03.27.2019 12:49	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	107	70 - 130	%		
4-Bromofluorobenzene	153	70 - 130	%		**



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-2 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-005

Date Collected: 03.25.2019 14:20

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083498

Date Prep: 03.26.2019 15:35

Prep seq: 7674371

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1040	24.9	4.27	mg/kg	03.26.2019 19:28		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	55.7	15.0	8.00	mg/kg	03.26.2019 18:53		1
Diesel Range Organics (DRO)	C10C28DRO	1990	15.0	8.13	mg/kg	03.26.2019 18:53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	158	15.0	8.13	mg/kg	03.26.2019 18:53		1
Total TPH	PHC635	2200		8.00	mg/kg	03.26.2019 18:53		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	120	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	03.27.2019 15:21	U	1
Toluene	108-88-3	0.00193	0.00198	0.000452	mg/kg	03.27.2019 15:21	J	1
Ethylbenzene	100-41-4	0.0159	0.00198	0.000560	mg/kg	03.27.2019 15:21		1
m,p-Xylenes	179601-23-1	0.00121	0.00397	0.00101	mg/kg	03.27.2019 15:21	J	1
o-Xylene	95-47-6	0.0104	0.00198	0.000342	mg/kg	03.27.2019 15:21		1
Total Xylenes	1330-20-7	0.0116		0.000342	mg/kg	03.27.2019 15:21		
Total BTEX		0.0294		0.000342	mg/kg	03.27.2019 15:21		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	74	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-2 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-006

Date Collected: 03.25.2019 14:22

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083498

Date Prep: 03.26.2019 15:35

Prep seq: 7674371

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1670	25.0	4.29	mg/kg	03.27.2019 08:42		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 19:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.2	15.0	8.11	mg/kg	03.26.2019 19:12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.26.2019 19:12	U	1
Total TPH	PHC635	17.2		7.99	mg/kg	03.26.2019 19:12		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	03.27.2019 13:08	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	03.27.2019 13:08	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	03.27.2019 13:08	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	03.27.2019 13:08	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	03.27.2019 13:08	U	1
Total Xylenes	1330-20-7	<0.000345		0.000345	mg/kg	03.27.2019 13:08	U	
Total BTEX		<0.000345		0.000345	mg/kg	03.27.2019 13:08	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		

**Certificate of Analytical Results****618907****Terracon-Lubbock, Lubbock, TX****Stella Blue**Sample Id: **HA-2 (1.5-2)**

Matrix: Soil

Sample Depth: 1.5 - .2 ft

Lab Sample Id: 618907-007

Date Collected: 03.25.2019 14:24

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3084794

Date Prep: 04.04.2019 08:30

Prep seq: 7675004

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2010	25.2	4.32	mg/kg	04.04.2019 12:20		5



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-3 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-009

Date Collected: 03.25.2019 14:30

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083498

Date Prep: 03.26.2019 15:35

Prep seq: 7674371

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	752	5.00	0.858	mg/kg	03.27.2019 08:49		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 19:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	03.26.2019 19:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.26.2019 19:31	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	03.26.2019 19:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000350	0.00182	0.000350	mg/kg	03.27.2019 13:27	U	1
Toluene	108-88-3	<0.000414	0.00182	0.000414	mg/kg	03.27.2019 13:27	U	1
Ethylbenzene	100-41-4	<0.000513	0.00182	0.000513	mg/kg	03.27.2019 13:27	U	1
m,p-Xylenes	179601-23-1	<0.000921	0.00363	0.000921	mg/kg	03.27.2019 13:27	U	1
o-Xylene	95-47-6	<0.000313	0.00182	0.000313	mg/kg	03.27.2019 13:27	U	1
Total Xylenes	1330-20-7	<0.000313		0.000313	mg/kg	03.27.2019 13:27	U	
Total BTEX		<0.000313		0.000313	mg/kg	03.27.2019 13:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	70 - 130	%		
4-Bromofluorobenzene	134	70 - 130	%		**



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-3 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-010

Date Collected: 03.25.2019 14:32

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2150	25.0	4.28	mg/kg	03.26.2019 17:46		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.26.2019 19:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	14.7	15.0	8.10	mg/kg	03.26.2019 19:50	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.26.2019 19:50	U	1
Total TPH	PHC635	14.7		7.98	mg/kg	03.26.2019 19:50	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	03.27.2019 13:46	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	03.27.2019 13:46	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	03.27.2019 13:46	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 13:46	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 13:46	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 13:46	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 13:46	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Sample Depth: 1.5 - 2 ft

Lab Sample Id: 618907-011

Date Collected: 03.25.2019 14:34

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3084794

Date Prep: 04.04.2019 08:30

Prep seq: 7675004

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1370	25.0	4.28	mg/kg	04.04.2019 12:26		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3084906

Date Prep: 04.05.2019 17:00

Prep seq: 7675253

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	04.06.2019 08:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.1	15.0	8.10	mg/kg	04.06.2019 08:57	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	04.06.2019 08:57	U	1
Total TPH	PHC635	12.1		7.98	mg/kg	04.06.2019 08:57	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	89	70 - 135	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-4 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-013

Date Collected: 03.25.2019 14:40

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2820	24.8	4.25	mg/kg	03.26.2019 17:56		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 20:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	387	15.0	8.12	mg/kg	03.26.2019 20:09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	47.8	15.0	8.12	mg/kg	03.26.2019 20:09		1
Total TPH	PHC635	435		7.99	mg/kg	03.26.2019 20:09		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 14:05	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	03.27.2019 14:05	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.27.2019 14:05	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 14:05	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	03.27.2019 14:05	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	03.27.2019 14:05	U	
Total BTEX		<0.000343		0.000343	mg/kg	03.27.2019 14:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-4 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-014

Date Collected: 03.25.2019 14:42

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1430	24.9	4.27	mg/kg	03.26.2019 18:06		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.26.2019 20:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	29.0	15.0	8.13	mg/kg	03.26.2019 20:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.26.2019 20:28	U	1
Total TPH	PHC635	29.0		8.00	mg/kg	03.26.2019 20:28		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	03.27.2019 14:24	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	03.27.2019 14:24	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	03.27.2019 14:24	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	03.27.2019 14:24	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 14:24	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 14:24	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 14:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-018

Date Collected: 03.25.2019 14:50

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1290	24.9	4.27	mg/kg	03.26.2019 18:16		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.26.2019 20:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	68.3	15.0	8.10	mg/kg	03.26.2019 20:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	8.81	15.0	8.10	mg/kg	03.26.2019 20:47	J	1
Total TPH	PHC635	77.1		7.98	mg/kg	03.26.2019 20:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	03.27.2019 14:43	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	03.27.2019 14:43	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	03.27.2019 14:43	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 14:43	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 14:43	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 14:43	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 14:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-5 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-019

Date Collected: 03.25.2019 14:52

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2000	24.8	4.26	mg/kg	03.26.2019 18:45		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 21:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.11	15.0	8.11	mg/kg	03.26.2019 21:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.26.2019 21:07	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	03.26.2019 21:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 15:02	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	03.27.2019 15:02	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.27.2019 15:02	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 15:02	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	03.27.2019 15:02	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	03.27.2019 15:02	U	
Total BTEX		<0.000343		0.000343	mg/kg	03.27.2019 15:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Sample Depth: 1.5 - 2 ft

Lab Sample Id: 618907-020

Date Collected: 03.25.2019 14:54

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3084794

Date Prep: 04.04.2019 08:30

Prep seq: 7675004

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1480	24.8	4.26	mg/kg	04.04.2019 12:32		5



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-6 (0-.5)

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-022

Date Collected: 03.25.2019 15:00

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	963	4.95	0.850	mg/kg	03.26.2019 18:55		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	03.26.2019 22:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	29.5	14.9	8.10	mg/kg	03.26.2019 22:04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	03.26.2019 22:04	U	1
Total TPH	PHC635	29.5		7.97	mg/kg	03.26.2019 22:04		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 16:35	U	1
Toluene	108-88-3	0.000467	0.00199	0.000453	mg/kg	03.27.2019 16:35	J	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	03.27.2019 16:35	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 16:35	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	03.27.2019 16:35	U	1
Total Xylenes	1330-20-7	<0.000342		0.000342	mg/kg	03.27.2019 16:35	U	
Total BTEX		0.000467		0.000342	mg/kg	03.27.2019 16:35	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	119	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-6 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-023

Date Collected: 03.25.2019 15:02

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	941	4.95	0.850	mg/kg	03.26.2019 19:05		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 22:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	49.1	15.0	8.11	mg/kg	03.26.2019 22:23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.26.2019 22:23	U	1
Total TPH	PHC635	49.1		7.99	mg/kg	03.26.2019 22:23		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	03.27.2019 16:54	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	03.27.2019 16:54	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	03.27.2019 16:54	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	03.27.2019 16:54	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 16:54	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 16:54	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 16:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	121	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-6 (1.5-2)

Matrix: Soil

Sample Depth: 1.5 - 3 ft

Lab Sample Id: 618907-024

Date Collected: 03.25.2019 15:04

Date Received: 03.26.2019 12:18

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3084906

Date Prep: 04.05.2019 17:00

Prep seq: 7675253

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	04.06.2019 09:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	11.2	15.0	8.12	mg/kg	04.06.2019 09:58	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	04.06.2019 09:58	U	1
Total TPH	PHC635	11.2		7.99	mg/kg	04.06.2019 09:58	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	91	70 - 135	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-7 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-025

Date Collected: 03.25.2019 15:10

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1410	24.8	4.25	mg/kg	03.26.2019 19:14		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 22:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	33.8	15.0	8.12	mg/kg	03.26.2019 22:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	03.26.2019 22:42	U	1
Total TPH	PHC635	33.8		7.99	mg/kg	03.26.2019 22:42		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	03.27.2019 17:13	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	03.27.2019 17:13	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	03.27.2019 17:13	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	03.27.2019 17:13	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 17:13	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 17:13	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 17:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	118	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-7 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-026

Date Collected: 03.25.2019 15:12

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1310	4.95	0.850	mg/kg	03.26.2019 19:24		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	03.26.2019 23:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	223	14.9	8.10	mg/kg	03.26.2019 23:01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	26.4	14.9	8.10	mg/kg	03.26.2019 23:01		1
Total TPH	PHC635	249		7.97	mg/kg	03.26.2019 23:01		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	03.27.2019 17:32	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	03.27.2019 17:32	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	03.27.2019 17:32	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	03.27.2019 17:32	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	03.27.2019 17:32	U	1
Total Xylenes	1330-20-7	<0.000347		0.000347	mg/kg	03.27.2019 17:32	U	
Total BTEX		<0.000347		0.000347	mg/kg	03.27.2019 17:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	122	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-7 (1.5-2)

Matrix: Soil

Sample Depth: 1.5 - 2 ft

Lab Sample Id: 618907-027

Date Collected: 03.25.2019 15:14

Date Received: 03.26.2019 12:18

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3084906

Date Prep: 04.05.2019 17:00

Prep seq: 7675253

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	04.06.2019 10:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	13.9	15.0	8.13	mg/kg	04.06.2019 10:19	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	04.06.2019 10:19	U	1
Total TPH	PHC635	13.9		8.00	mg/kg	04.06.2019 10:19	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	87	70 - 135	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-8 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-029

Date Collected: 03.25.2019 15:20

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	274	4.99	0.857	mg/kg	03.26.2019 20:03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.26.2019 23:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	390	15.0	8.10	mg/kg	03.26.2019 23:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	48.1	15.0	8.10	mg/kg	03.26.2019 23:20		1
Total TPH	PHC635	438		7.98	mg/kg	03.26.2019 23:20		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 17:51	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	03.27.2019 17:51	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.27.2019 17:51	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 17:51	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	03.27.2019 17:51	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	03.27.2019 17:51	U	
Total BTEX		<0.000343		0.000343	mg/kg	03.27.2019 17:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-8 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-030

Date Collected: 03.25.2019 15:22

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	454	4.97	0.853	mg/kg	03.26.2019 20:13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 23:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	154	15.0	8.12	mg/kg	03.26.2019 23:39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	17.6	15.0	8.12	mg/kg	03.26.2019 23:39		1
Total TPH	PHC635	172		7.99	mg/kg	03.26.2019 23:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	03.27.2019 18:10	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	03.27.2019 18:10	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	03.27.2019 18:10	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	03.27.2019 18:10	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 18:10	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 18:10	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 18:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	125	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-9 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-031

Date Collected: 03.25.2019 15:30

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1110	5.03	0.864	mg/kg	03.26.2019 22:01		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.26.2019 23:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	119	15.0	8.12	mg/kg	03.26.2019 23:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	12.4	15.0	8.12	mg/kg	03.26.2019 23:58	J	1
Total TPH	PHC635	131		7.99	mg/kg	03.26.2019 23:58		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	86	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	03.27.2019 18:29	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	03.27.2019 18:29	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	03.27.2019 18:29	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 18:29	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 18:29	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 18:29	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 18:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	125	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-9 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-032

Date Collected: 03.25.2019 15:32

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1860	25.3	4.34	mg/kg	03.26.2019 22:11		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.27.2019 00:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	12.7	15.0	8.10	mg/kg	03.27.2019 00:17	J	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.27.2019 00:17	U	1
Total TPH	PHC635	12.7		7.98	mg/kg	03.27.2019 00:17	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 18:48	U	1
Toluene	108-88-3	<0.000453	0.00199	0.000453	mg/kg	03.27.2019 18:48	U	1
Ethylbenzene	100-41-4	<0.000561	0.00199	0.000561	mg/kg	03.27.2019 18:48	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 18:48	U	1
o-Xylene	95-47-6	<0.000342	0.00199	0.000342	mg/kg	03.27.2019 18:48	U	1
Total Xylenes	1330-20-7	<0.000342		0.000342	mg/kg	03.27.2019 18:48	U	
Total BTEX		<0.000342		0.000342	mg/kg	03.27.2019 18:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	117	70 - 130	%		
4-Bromofluorobenzene	124	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX**Stella Blue**Sample Id: **HA-9 (1.5-2)**

Matrix: Soil

Sample Depth: 1.5 - 2 ft

Lab Sample Id: 618907-033

Date Collected: 03.25.2019 15:34

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3084794

Date Prep: 04.04.2019 08:30

Prep seq: 7675004

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1370	25.0	4.28	mg/kg	04.04.2019 12:38		5



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-10 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-035

Date Collected: 03.25.2019 15:40

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	404	4.98	0.855	mg/kg	03.26.2019 22:20		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.27.2019 00:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	69.3	15.0	8.11	mg/kg	03.27.2019 00:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.27.2019 00:37	U	1
Total TPH	PHC635	69.3		7.99	mg/kg	03.27.2019 00:37		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	03.27.2019 19:07	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	03.27.2019 19:07	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	03.27.2019 19:07	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 19:07	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 19:07	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 19:07	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 19:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	115	70 - 130	%		
4-Bromofluorobenzene	125	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-10 (.5-1)**

Matrix: Soil

Sample Depth: .5 - .1 ft

Lab Sample Id: 618907-036

Date Collected: 03.25.2019 15:42

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	410	4.95	0.850	mg/kg	03.26.2019 22:30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.27.2019 00:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	61.7	15.0	8.11	mg/kg	03.27.2019 00:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.27.2019 00:56	U	1
Total TPH	PHC635	61.7		7.99	mg/kg	03.27.2019 00:56		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	91	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	03.27.2019 19:26	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	03.27.2019 19:26	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	03.27.2019 19:26	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	03.27.2019 19:26	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 19:26	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 19:26	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 19:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	113	70 - 130	%		
4-Bromofluorobenzene	127	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-11 (0-.5)

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618907-039

Date Collected: 03.25.2019 15:50

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	675	5.01	0.860	mg/kg	03.26.2019 22:40		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.27.2019 05:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	77.8	15.0	8.13	mg/kg	03.27.2019 05:46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	8.15	15.0	8.13	mg/kg	03.27.2019 05:46	J	1
Total TPH	PHC635	86.0		8.00	mg/kg	03.27.2019 05:46		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000388	0.00202	0.000388	mg/kg	03.27.2019 13:13	U	1
Toluene	108-88-3	<0.000459	0.00202	0.000459	mg/kg	03.27.2019 13:13	U	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	03.27.2019 13:13	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	03.27.2019 13:13	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	03.27.2019 13:13	U	1
Total Xylenes	1330-20-7	<0.000347		0.000347	mg/kg	03.27.2019 13:13	U	
Total BTEX		<0.000347		0.000347	mg/kg	03.27.2019 13:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	99	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-11 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618907-040

Date Collected: 03.25.2019 15:52

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1010	24.8	4.26	mg/kg	03.26.2019 22:50		5

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.27.2019 06:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	30.6	15.0	8.11	mg/kg	03.27.2019 06:05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.11	15.0	8.11	mg/kg	03.27.2019 06:05	U	1
Total TPH	PHC635	30.6		7.99	mg/kg	03.27.2019 06:05		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	85	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00200	0.000386	mg/kg	03.27.2019 13:32	U	1
Toluene	108-88-3	<0.000457	0.00200	0.000457	mg/kg	03.27.2019 13:32	U	1
Ethylbenzene	100-41-4	<0.000566	0.00200	0.000566	mg/kg	03.27.2019 13:32	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00401	0.00102	mg/kg	03.27.2019 13:32	U	1
o-Xylene	95-47-6	<0.000345	0.00200	0.000345	mg/kg	03.27.2019 13:32	U	1
Total Xylenes	1330-20-7	<0.000345		0.000345	mg/kg	03.27.2019 13:32	U	
Total BTEX		<0.000345		0.000345	mg/kg	03.27.2019 13:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	98	70 - 130	%		
4-Bromofluorobenzene	116	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: 7674371-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674371-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083498

Date Prep: 03.26.2019 15:35

Prep seq: 7674371

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.26.2019 16:07	U	1

Sample Id: 7674372-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674372-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083523

Date Prep: 03.26.2019 16:10

Prep seq: 7674372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.26.2019 16:48	U	1

Sample Id: 7674390-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674390-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083539

Date Prep: 03.26.2019 14:00

Prep seq: 7674390

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.26.2019 16:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	03.26.2019 16:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.26.2019 16:40	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	03.26.2019 16:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	98	70 - 135	%		
o-Terphenyl	99	70 - 135	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **7674391-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674391-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.27.2019 01:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	03.27.2019 01:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.27.2019 01:34	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	03.27.2019 01:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Sample Id: **7674447-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674447-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083672

Date Prep: 03.27.2019 08:30

Prep seq: 7674447

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 12:12	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	03.27.2019 12:12	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.27.2019 12:12	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 12:12	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	03.27.2019 12:12	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	70 - 130	%		
4-Bromofluorobenzene	108	70 - 130	%		



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **7674448-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674448-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	03.27.2019 12:54	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	03.27.2019 12:54	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	03.27.2019 12:54	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 12:54	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 12:54	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	70 - 130	%		
4-Bromofluorobenzene	107	70 - 130	%		

Sample Id: **7675004-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7675004-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3084794

Date Prep: 04.04.2019 08:30

Prep seq: 7675004

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	04.04.2019 10:40	U	1



Certificate of Analytical Results

618907

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: 7675253-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7675253-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3084906

Date Prep: 04.05.2019 17:00

Prep seq: 7675253

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	04.06.2019 04:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	04.06.2019 04:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	04.06.2019 04:12	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	04.06.2019 04:12	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	94	70 - 135	%		
o-Terphenyl	94	70 - 135	%		



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618907

Project ID: AR197123

Lab Batch #: 3083672

Sample: 7674447-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 10:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0323	0.0300	108	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3083672

Sample: 7674447-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 10:57

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0325	0.0300	108	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3083672

Sample: 618907-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 11:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0336	0.0300	112	70-130	
4-Bromofluorobenzene	0.0328	0.0300	109	70-130	

Lab Batch #: 3083672

Sample: 618907-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 11:35

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	70-130	
4-Bromofluorobenzene	0.0328	0.0300	109	70-130	

Lab Batch #: 3083672

Sample: 7674447-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 12:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0348	0.0300	116	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618907

Project ID: AR197123

Lab Batch #: 3083673

Sample: 618907-039 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 12:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0365	0.0300	122	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 12:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 23:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0358	0.0300	119	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 23:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3083673

Sample: 618907-039 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 23:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0373	0.0300	124	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618907

Project ID: AR197123

Lab Batch #: 3083539

Sample: 7674390-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.26.2019 16:40

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.8	100	98	70-135	
o-Terphenyl	49.6	50.0	99	70-135	

Lab Batch #: 3083539

Sample: 7674390-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.26.2019 16:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

Lab Batch #: 3083539

Sample: 7674390-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.26.2019 17:18

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 3083539

Sample: 618907-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.26.2019 17:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	99.7	105	70-135	
o-Terphenyl	45.5	49.9	91	70-135	

Lab Batch #: 3083539

Sample: 618907-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.26.2019 18:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	99.9	113	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618907

Project ID: AR197123

Lab Batch #: 3083540

Sample: 7674391-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 01:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.5	100	88	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 3083540

Sample: 7674391-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 01:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3083540

Sample: 7674391-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 02:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3083540

Sample: 618909-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 02:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	43.5	49.9	87	70-135	

Lab Batch #: 3083540

Sample: 618909-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 03:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	44.6	49.9	89	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618907

Project ID: AR197123

Lab Batch #: 3084906

Sample: 7675253-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04.06.2019 04:12

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	100	94	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 3084906

Sample: 7675253-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04.06.2019 04:33

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	57.8	50.0	116	70-135	

Lab Batch #: 3084906

Sample: 7675253-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04.06.2019 04:53

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	60.9	50.0	122	70-135	

Lab Batch #: 3084906

Sample: 619598-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04.06.2019 05:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.8	117	70-135	
o-Terphenyl	56.0	49.9	112	70-135	

Lab Batch #: 3084906

Sample: 619598-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04.06.2019 05:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Analyst: SCM

Date Prepared: 03.27.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083672

Sample: 7674447-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000381	0.0990	0.128	129	0.0990	0.128	129	0	70-130	35	
Toluene	<0.000451	0.0990	0.126	127	0.0990	0.125	126	1	70-130	35	
Ethylbenzene	<0.000559	0.0990	0.109	110	0.0990	0.107	108	2	70-130	35	
m,p-Xylenes	<0.00100	0.198	0.215	109	0.198	0.213	108	1	70-130	35	
o-Xylene	<0.000341	0.0990	0.107	108	0.0990	0.106	107	1	70-130	35	

Analyst: SCM

Date Prepared: 03.27.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083673

Sample: 7674448-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000384	0.0998	0.109	109	0.0994	0.116	117	6	70-130	35	
Toluene	<0.000455	0.0998	0.109	109	0.0994	0.115	116	5	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.117	117	0.0994	0.123	124	5	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.230	115	0.199	0.241	121	5	70-130	35	
o-Xylene	<0.000344	0.0998	0.117	117	0.0994	0.123	124	5	70-130	35	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Analyst: CHE

Date Prepared: 03.26.2019

Date Analyzed: 03.26.2019

Lab Batch ID: 3083498

Sample: 7674371-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	243	97	250	235	94	3	90-110	20	

Analyst: CHE

Date Prepared: 03.26.2019

Date Analyzed: 03.26.2019

Lab Batch ID: 3083523

Sample: 7674372-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	251	100	250	252	101	0	90-110	20	

Analyst: CHE

Date Prepared: 04.04.2019

Date Analyzed: 04.04.2019

Lab Batch ID: 3084794

Sample: 7675004-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	251	100	250	262	105	4	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Analyst: ARM

Date Prepared: 03.26.2019

Date Analyzed: 03.26.2019

Lab Batch ID: 3083539

Sample: 7674390-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	950	95	1000	895	90	6	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1000	995	100	5	70-135	20	

Analyst: ARM

Date Prepared: 03.26.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083540

Sample: 7674391-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	898	90	1000	937	94	4	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	992	99	1000	1040	104	5	70-135	20	

Analyst: ARM

Date Prepared: 04.05.2019

Date Analyzed: 04.06.2019

Lab Batch ID: 3084906

Sample: 7675253-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	933	93	1000	987	99	6	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1000	1070	107	6	70-135	20	

Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 \times (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 \times (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Lab Batch ID: 3083672

QC- Sample ID: 618907-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.27.2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000388	0.101	0.113	112	0.0998	0.122	122	8	70-130	35	
Toluene	0.000527	0.101	0.106	104	0.0998	0.115	115	8	70-130	35	
Ethylbenzene	<0.000569	0.101	0.0843	83	0.0998	0.0949	95	12	70-130	35	
m,p-Xylenes	<0.00102	0.202	0.167	83	0.200	0.186	93	11	70-130	35	
o-Xylene	0.000408	0.101	0.0840	83	0.0998	0.0931	93	10	70-130	35	

Lab Batch ID: 3083673

QC- Sample ID: 618907-039 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.27.2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000383	0.0996	0.122	122	0.100	0.113	113	8	70-130	35	
Toluene	<0.000454	0.0996	0.118	118	0.100	0.109	109	8	70-130	35	
Ethylbenzene	<0.000563	0.0996	0.123	123	0.100	0.110	110	11	70-130	35	
m,p-Xylenes	<0.00101	0.199	0.237	119	0.200	0.214	107	10	70-130	35	
o-Xylene	<0.000343	0.0996	0.122	122	0.100	0.110	110	10	70-130	35	

Matrix Spike Percent Recovery $[D] = 100 \cdot (C-A)/B$
 Relative Percent Difference $RPD = 200 \cdot |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \cdot (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Lab Batch ID: 3083498

QC- Sample ID: 618896-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	24.0	250	278	102	250	286	105	3	90-110	20	

Lab Batch ID: 3083498

QC- Sample ID: 618896-012 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	18.6	250	268	100	250	255	95	5	90-110	20	

Lab Batch ID: 3083523

QC- Sample ID: 618896-017 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.37	252	264	104	252	264	104	0	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Lab Batch ID: 3083523

QC- Sample ID: 618907-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	74.5	248	331	103	248	332	104	0	90-110	20	

Lab Batch ID: 3084794

QC- Sample ID: 619249-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04.04.2019

Date Prepared: 04.04.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	56.5	250	340	113	250	346	116	2	90-110	20	X

Lab Batch ID: 3084794

QC- Sample ID: 619567-023 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04.04.2019

Date Prepared: 04.04.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	109	248	408	121	248	389	113	5	90-110	20	X

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618907

Project ID: AR197123

Lab Batch ID: 3083539

QC- Sample ID: 618907-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	848	85	999	856	86	1	70-135	20	
Diesel Range Organics (DRO)	20.6	997	938	92	999	943	92	1	70-135	20	

Lab Batch ID: 3083540

QC- Sample ID: 618909-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.26.2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	824	83	998	845	85	3	70-135	20	
Diesel Range Organics (DRO)	<8.10	997	931	93	998	957	96	3	70-135	20	

Lab Batch ID: 3084906

QC- Sample ID: 619598-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 04.06.2019

Date Prepared: 04.05.2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	919	92	1000	916	92	0	70-135	20	
Diesel Range Organics (DRO)	8.12	998	992	99	1000	1010	101	2	70-135	20	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Terracon

6189907

CHAIN OF CUSTODY RECORD

Office Location

Lubbock

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Project Manager

John Ferguson

Phone:

Contact:

SRS #:

Sampler's Name

Joseph Guesnier

Sampler's Signature

Project Number

AR197123

Project Name

Stella Blue

Matrix

Identifying Marks of Sample(s)

Start Depth

End Depth

2 oz Glass

4 oz Glass

No. Type of Containers

Chloride (EPA Method 300)

TPH Extended 8015

BTEX (EPA Method 8021B)

Hold

Lab Sample ID

Page 1 of 3

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Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	No. Type of Containers	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
3/25/2019	2:00	X		HA-1 (0-5)	0'	5'	X			X	X	X		
3/25/2019	2:02	X		HA-1 (5-1)	5'	1'	X			X	X	X		
3/25/2019	2:04	X		HA-1 (1.5-2)	1.5'	2'	X						X	
3/25/2019	2:06	X		HA-1 (3-3.5)	3'	3.5'	X							
3/25/2019	2:20	X		HA-2 (0-5)	0'	5'	X			X	X	X		
3/25/2019	2:22	X		HA-2 (5-1)	5'	1'	X			X	X	X		
3/25/2019	2:24	X		HA-2 (1.5-2)	1.5'	2'	X			X			X	
3/25/2019	2:26	X		HA-2 (3-3.5)	3'	3.5'	X						X	
3/25/2019	2:30	X		HA-3 (0-5)	0'	5'	X			X	X	X		
3/25/2019	2:32	X		HA-3 (5-1)	5'	1'	X			X	X	X		
3/25/2019	2:34	X		HA-3 (1.5-2)	1.5'	2'	X						X	
3/25/2019	2:36	X		HA-3 (3-3.5)	3'	3.5'	X						X	
3/25/2019	2:40	X		HA-4 (0-5)	0'	5'	X			X	X	X		
3/25/2019	2:42	X		HA-4 (5-1)	5'	1'	X			X	X	X		
3/25/2019	2:44	X		HA-4 (1.5-2)	1.5'	2'	X						X	
3/25/2019	2:46	X		HA-4 (3-3.5)	3'	3.5'	X			X			X	
3/25/2019	2:48	X		HA-4 (4.5-5)	4.5'	5'	X			X			X	

TURNAROUND TIME

Normal

48-Hour Rush

24-Hour Rush

TRRP Laboratory Review Checklist

Yes

No

NOTES: Client: Solaris

e-mail results to:

kcwilliams@terracon.com

kristina.kohl@terracon.com

jguesnier@terracon.com

0.3162

Relinquished by (Signature)	Date: 3-26-19	Time: 12:18	Received by (Signature)	Date: 3-26-19	Time: 12:16
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:

Matrix	WV - Westwater	W - Water	S - Soil	L - Liquid	A - Air Bag	C - Charcoal tube	S - Sludge
Container	VOL - 40 ml Gal	A/G - Amber Glass 1L	250 ml - Glass wide mouth	P/O - Plastic or other			

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

Responsive ■ Resourceful ■ Reliable

Terracon

10199107

CHAIN OF CUSTODY RECORD

Office Location Lubbock

Phone: _____

Project Manager John Ferguson
Sample's Name Joseph Guesnier

Contact: _____

SRS #: _____
Sample's Signature _____Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

ANALYSIS REQUESTED

LAB USE ONLY
DUE DATE: _____TEMP OF COOLER
WHEN RECEIVED (°C)Page 2 of 3

Project Number		Project Name		Identifying Marks of Sample(s)		Start Depth		End Depth		No. Type of Containers		Chloride (EPA Method 300)		TPH Extended 8015		BTEX (EPA Method 8021B)		Hold		Lab Sample ID	
Matrix	Date	Time	Comp	Grab																	
S	3/25/2019	2:50	X		HA-5 (0-5)	0'	5'	X				X	X	X							
S	3/25/2019	2:52	X		HA-5 (5-1)	5'	1'	X				X	X	X							
S	3/25/2019	2:54	X		HA-5 (1.5-2)	1.5'	2'	X													
S	3/25/2019	2:56	X		HA-5 (3-3.5)	3'	3.5'	X													
S	3/25/2019	3:00	X		HA-6 (0-5)	0'	5'	X				X	X	X							
S	3/25/2019	3:02	X		HA-6 (5-1)	5'	1'	X				X	X	X							
S	3/25/2019	3:04	X		HA-6 (1.5-2)	1.5'	2'	X				X	X	X							
S	3/25/2019	3:10	X		HA-7 (0-5)	0'	5'	X				X	X	X							
S	3/25/2019	3:12	X		HA-7 (5-1)	5'	1'	X				X	X	X							
S	3/25/2019	3:14	X		HA-7 (1.5-2)	1.5'	2'	X				X	X	X							
S	3/25/2019	3:16	X		HA-7 (3-3.5)	3'	3.5'	X													
S	3/25/2019	3:20	X		HA-8 (0-5)	0'	5'	X				X	X	X							
S	3/25/2019	3:22	X		HA-8 (5-1)	5'	1'	X				X	X	X							
S	3/25/2019	3:30	X		HA-9 (0-5)	0'	5'	X				X	X	X							
S	3/25/2019	3:32	X		HA-9 (5-1)	5'	1'	X				X	X	X							
S	3/25/2019	3:34	X		HA-9 (1.5-2)	1.5'	2'	X				X	X	X							
S	3/25/2019	3:36	X		HA-9 (3-3.5)	3'	3.5'	X				X	X	X							

Normal

48-Hour Rush

24-Hour Rush

TRRP Laboratory Review Checklist

Yes

No

NOTES: Client: Solaris

e-mail results to:

kwilliams@terracon.com
kristina.kohl@terracon.com
jrguesnier@terracon.com

0-310.2

Matrix: WW-Wastewater VOA - 40 ml cell W - Water A/G - Amber Glass 1L S - Soil 250 ml - Glass wide mouth L - Liquid A - Air Bag C - Chemical tube SL - Sludge

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

Responsive ■ Resourceful ■ Reliable

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 03.26.2019 12.18.00 PM

Work Order #: 618907

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

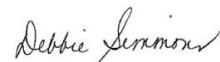
Checklist completed by:



Brianna Teel

Date: 03.26.2019

Checklist reviewed by:



Debbie Simmons

Date: 03.28.2019



Analytical Report 618909

for

Terracon-Lubbock

Project Manager: John Fergerson

Stella Blue

AR197123

03.28.2019

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



03.28.2019

Project Manager: **John Fergerson**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **618909**

Stella Blue

Project Address:

John Fergerson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618909. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 618909 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Debbie Simmons'.

Debbie Simmons

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 618909****Terracon-Lubbock, Lubbock, TX**

Stella Blue

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG-1 (0-.5)	S	03.25.2019 14:10	0 - .5 ft	618909-001
BG-1 (.5-1)	S	03.25.2019 14:12	.5 - 1 ft	618909-002
BG-2 (0-.5)	S	03.25.2019 14:50	0 - .5 ft	618909-004
BG-2 (.5-1)	S	03.25.2019 14:52	.5 - .1 ft	618909-005
BG-3 (0-.5)	S	03.25.2019 15:30	0 - .5 ft	618909-008
BG-3 (.5-1)	S	03.25.2019 15:32	.5 - 1 ft	618909-009
BG-4 (0-.5)	S	03.25.2019 16:00	0 - .5 ft	618909-012
BG-4 (.5-1)	S	03.25.2019 16:02	.5 - 1 ft	618909-013
BG-1 (1.5-2)	S	03.25.2019 14:14	1.5 - 2 ft	Not Analyzed
BG-2 (1.5-2)	S	03.25.2019 14:54	1.5 - 2 ft	Not Analyzed
BG-2 (3-3.5)	S	03.25.2019 14:56	3 - 3.5 ft	Not Analyzed
BG-3 (1.5-2)	S	03.25.2019 15:34	1.5 - 2 ft	Not Analyzed
BG-3 (3-3.5)	S	03.25.2019 15:36	3 - 3.5 ft	Not Analyzed
BG-4 (1.5-2)	S	03.25.2019 16:04	1.5 - 2 ft	Not Analyzed

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Stella Blue**Project ID: AR197123
Work Order Number(s): 618909Report Date: 03.28.2019
Date Received: 03.26.2019

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

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3083504 Chloride by EPA 300

Lab Sample ID 618909-002 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: 618909-001, -002, -004, -005, -008, -009.

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

Batch: LBA-3083673 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: BG-1 (0-.5)

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618909-001

Date Collected: 03.25.2019 14:10

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	26.3	4.99	0.857	mg/kg	03.26.2019 20:24		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.27.2019 02:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	15.0	8.10	mg/kg	03.27.2019 02:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.27.2019 02:33	U	1
Total TPH	PHC635	<7.98		7.98	mg/kg	03.27.2019 02:33	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	89	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000384	0.00200	0.000384	mg/kg	03.27.2019 13:51	U	1
Toluene	108-88-3	<0.000455	0.00200	0.000455	mg/kg	03.27.2019 13:51	U	1
Ethylbenzene	100-41-4	<0.000564	0.00200	0.000564	mg/kg	03.27.2019 13:51	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00399	0.00101	mg/kg	03.27.2019 13:51	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 13:51	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 13:51	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 13:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	124	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **BG-1 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618909-002

Date Collected: 03.25.2019 14:12

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2.55	4.98	0.855	mg/kg	03.26.2019 20:29	JX	1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	03.27.2019 03:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	14.9	8.10	mg/kg	03.27.2019 03:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	03.27.2019 03:31	U	1
Total TPH	PHC635	<7.97		7.97	mg/kg	03.27.2019 03:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	86	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000387	0.00201	0.000387	mg/kg	03.27.2019 14:10	U	1
Toluene	108-88-3	<0.000458	0.00201	0.000458	mg/kg	03.27.2019 14:10	U	1
Ethylbenzene	100-41-4	<0.000568	0.00201	0.000568	mg/kg	03.27.2019 14:10	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 14:10	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 14:10	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 14:10	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 14:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: BG-2 (0-.5)

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618909-004

Date Collected: 03.25.2019 14:50

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.53	5.01	0.860	mg/kg	03.26.2019 20:46		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.97	14.9	7.97	mg/kg	03.27.2019 03:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	14.9	8.10	mg/kg	03.27.2019 03:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	14.9	8.10	mg/kg	03.27.2019 03:50	U	1
Total TPH	PHC635	<7.97		7.97	mg/kg	03.27.2019 03:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	82	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000382	0.00198	0.000382	mg/kg	03.27.2019 14:29	U	1
Toluene	108-88-3	<0.000452	0.00198	0.000452	mg/kg	03.27.2019 14:29	U	1
Ethylbenzene	100-41-4	<0.000560	0.00198	0.000560	mg/kg	03.27.2019 14:29	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00397	0.00101	mg/kg	03.27.2019 14:29	U	1
o-Xylene	95-47-6	<0.000342	0.00198	0.000342	mg/kg	03.27.2019 14:29	U	1
Total Xylenes	1330-20-7	<0.000342		0.000342	mg/kg	03.27.2019 14:29	U	
Total BTEX		<0.000342		0.000342	mg/kg	03.27.2019 14:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	125	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **BG-2 (.5-1)**

Matrix: Soil

Sample Depth: .5 - .1 ft

Lab Sample Id: 618909-005

Date Collected: 03.25.2019 14:52

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	5.98	4.96	0.852	mg/kg	03.26.2019 20:52		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.27.2019 04:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.12	15.0	8.12	mg/kg	03.27.2019 04:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	03.27.2019 04:09	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	03.27.2019 04:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	82	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000383	0.00199	0.000383	mg/kg	03.27.2019 14:48	U	1
Toluene	108-88-3	<0.000454	0.00199	0.000454	mg/kg	03.27.2019 14:48	U	1
Ethylbenzene	100-41-4	<0.000563	0.00199	0.000563	mg/kg	03.27.2019 14:48	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00398	0.00101	mg/kg	03.27.2019 14:48	U	1
o-Xylene	95-47-6	<0.000343	0.00199	0.000343	mg/kg	03.27.2019 14:48	U	1
Total Xylenes	1330-20-7	<0.000343		0.000343	mg/kg	03.27.2019 14:48	U	
Total BTEX		<0.000343		0.000343	mg/kg	03.27.2019 14:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	125	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX
Stella Blue

Sample Id: **BG-3 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618909-008

Date Collected: 03.25.2019 15:30

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1.85	5.03	0.864	mg/kg	03.26.2019 21:09	J	1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.27.2019 04:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	15.0	8.10	mg/kg	03.27.2019 04:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.27.2019 04:29	U	1
Total TPH	PHC635	<7.98		7.98	mg/kg	03.27.2019 04:29	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	87	70 - 135	%		
o-Terphenyl	88	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.000575	0.00202	0.000388	mg/kg	03.27.2019 15:07	J	1
Toluene	108-88-3	0.000474	0.00202	0.000459	mg/kg	03.27.2019 15:07	J	1
Ethylbenzene	100-41-4	<0.000569	0.00202	0.000569	mg/kg	03.27.2019 15:07	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00403	0.00102	mg/kg	03.27.2019 15:07	U	1
o-Xylene	95-47-6	<0.000347	0.00202	0.000347	mg/kg	03.27.2019 15:07	U	1
Total Xylenes	1330-20-7	<0.000347		0.000347	mg/kg	03.27.2019 15:07	U	
Total BTEX		0.00105		0.000347	mg/kg	03.27.2019 15:07	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	100	70 - 130	%		
4-Bromofluorobenzene	120	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: BG-3 (.5-1)

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618909-009

Date Collected: 03.25.2019 15:32

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	5.53	5.00	0.858	mg/kg	03.26.2019 21:15		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.27.2019 04:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	03.27.2019 04:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.27.2019 04:48	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	03.27.2019 04:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	83	70 - 135	%		
o-Terphenyl	83	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	03.27.2019 15:26	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	03.27.2019 15:26	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	03.27.2019 15:26	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	03.27.2019 15:26	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 15:26	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 15:26	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 15:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX
Stella Blue

Sample Id: **BG-4 (0-.5)**

Matrix: Soil

Sample Depth: 0 - .5 ft

Lab Sample Id: 618909-012

Date Collected: 03.25.2019 16:00

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083707

Date Prep: 03.27.2019 16:00

Prep seq: 7674466

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	5.22	4.95	0.850	mg/kg	03.28.2019 00:35		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.98	15.0	7.98	mg/kg	03.27.2019 05:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.10	15.0	8.10	mg/kg	03.27.2019 05:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.10	15.0	8.10	mg/kg	03.27.2019 05:07	U	1
Total TPH	PHC635	<7.98		7.98	mg/kg	03.27.2019 05:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	85	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000385	0.00200	0.000385	mg/kg	03.27.2019 15:45	U	1
Toluene	108-88-3	<0.000456	0.00200	0.000456	mg/kg	03.27.2019 15:45	U	1
Ethylbenzene	100-41-4	<0.000565	0.00200	0.000565	mg/kg	03.27.2019 15:45	U	1
m,p-Xylenes	179601-23-1	<0.00101	0.00400	0.00101	mg/kg	03.27.2019 15:45	U	1
o-Xylene	95-47-6	<0.000344	0.00200	0.000344	mg/kg	03.27.2019 15:45	U	1
Total Xylenes	1330-20-7	<0.000344		0.000344	mg/kg	03.27.2019 15:45	U	
Total BTEX		<0.000344		0.000344	mg/kg	03.27.2019 15:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	123	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **BG-4 (.5-1)**

Matrix: Soil

Sample Depth: .5 - 1 ft

Lab Sample Id: 618909-013

Date Collected: 03.25.2019 16:02

Date Received: 03.26.2019 12:18

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083707

Date Prep: 03.27.2019 16:00

Prep seq: 7674466

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.34	4.99	0.857	mg/kg	03.28.2019 01:01		1

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<7.99	15.0	7.99	mg/kg	03.27.2019 05:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.12	15.0	8.12	mg/kg	03.27.2019 05:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.12	15.0	8.12	mg/kg	03.27.2019 05:27	U	1
Total TPH	PHC635	<7.99		7.99	mg/kg	03.27.2019 05:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	84	70 - 135	%		
o-Terphenyl	82	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	03.27.2019 16:04	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	03.27.2019 16:04	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	03.27.2019 16:04	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 16:04	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 16:04	U	1
Total Xylenes	1330-20-7	<0.000346		0.000346	mg/kg	03.27.2019 16:04	U	
Total BTEX		<0.000346		0.000346	mg/kg	03.27.2019 16:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	101	70 - 130	%		
4-Bromofluorobenzene	127	70 - 130	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: 7674373-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674373-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083504

Date Prep: 03.26.2019 16:50

Prep seq: 7674373

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.26.2019 18:53	U	1

Sample Id: 7674391-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674391-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH by SW8015 Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 3083540

Date Prep: 03.26.2019 16:00

Prep seq: 7674391

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Gasoline Range Hydrocarbons (GRO)	PHC610	<8.00	15.0	8.00	mg/kg	03.27.2019 01:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<8.13	15.0	8.13	mg/kg	03.27.2019 01:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<8.13	15.0	8.13	mg/kg	03.27.2019 01:34	U	1
Total TPH	PHC635	<8.00		8.00	mg/kg	03.27.2019 01:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	88	70 - 135	%		
o-Terphenyl	90	70 - 135	%		



Certificate of Analytical Results

618909

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **7674448-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674448-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: SCM

% Moist:

Tech: SCM

Seq Number: 3083673

Date Prep: 03.27.2019 09:00

Prep seq: 7674448

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	<0.000386	0.00201	0.000386	mg/kg	03.27.2019 12:54	U	1
Toluene	108-88-3	<0.000457	0.00201	0.000457	mg/kg	03.27.2019 12:54	U	1
Ethylbenzene	100-41-4	<0.000567	0.00201	0.000567	mg/kg	03.27.2019 12:54	U	1
m,p-Xylenes	179601-23-1	<0.00102	0.00402	0.00102	mg/kg	03.27.2019 12:54	U	1
o-Xylene	95-47-6	<0.000346	0.00201	0.000346	mg/kg	03.27.2019 12:54	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	70 - 130	%		
4-Bromofluorobenzene	107	70 - 130	%		

Sample Id: **7674466-1-BLK**

Matrix: Solid

Sample Depth:

Lab Sample Id: 7674466-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: CHE

% Moist:

Tech: CHE

Seq Number: 3083707

Date Prep: 03.27.2019 16:00

Prep seq: 7674466

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.858	5.00	0.858	mg/kg	03.27.2019 22:28	U	1



Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618909

Project ID: AR197123

Lab Batch #: 3083673

Sample: 618907-039 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 12:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0365	0.0300	122	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 12:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0280	0.0300	93	70-130	
4-Bromofluorobenzene	0.0322	0.0300	107	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 23:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0358	0.0300	119	70-130	

Lab Batch #: 3083673

Sample: 7674448-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 23:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0356	0.0300	119	70-130	

Lab Batch #: 3083673

Sample: 618907-039 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 23:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0312	0.0300	104	70-130	
4-Bromofluorobenzene	0.0373	0.0300	124	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Stella Blue

Work Orders : 618909

Project ID: AR197123

Lab Batch #: 3083540

Sample: 7674391-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 01:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.5	100	88	70-135	
o-Terphenyl	44.9	50.0	90	70-135	

Lab Batch #: 3083540

Sample: 7674391-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 01:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	122	100	122	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3083540

Sample: 7674391-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 03.27.2019 02:13

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	100	114	70-135	
o-Terphenyl	52.0	50.0	104	70-135	

Lab Batch #: 3083540

Sample: 618909-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 02:52

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	43.5	49.9	87	70-135	

Lab Batch #: 3083540

Sample: 618909-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 03.27.2019 03:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	44.6	49.9	89	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries

Project Name: Stella Blue

Work Order #: 618909

Project ID: AR197123

Analyst: SCM

Date Prepared: 03.27.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083673

Sample: 7674448-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000384	0.0998	0.109	109	0.0994	0.116	117	6	70-130	35	
Toluene	<0.000455	0.0998	0.109	109	0.0994	0.115	116	5	70-130	35	
Ethylbenzene	<0.000564	0.0998	0.117	117	0.0994	0.123	124	5	70-130	35	
m,p-Xylenes	<0.00101	0.200	0.230	115	0.199	0.241	121	5	70-130	35	
o-Xylene	<0.000344	0.0998	0.117	117	0.0994	0.123	124	5	70-130	35	

Analyst: CHE

Date Prepared: 03.26.2019

Date Analyzed: 03.26.2019

Lab Batch ID: 3083504

Sample: 7674373-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	239	96	250	239	96	0	90-110	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries

Project Name: Stella Blue

Work Order #: 618909

Project ID: AR197123

Analyst: CHE

Date Prepared: 03.27.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083707

Sample: 7674466-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.858	250	255	102	250	257	103	1	90-110	20	

Analyst: ARM

Date Prepared: 03.26.2019

Date Analyzed: 03.27.2019

Lab Batch ID: 3083540

Sample: 7674391-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	898	90	1000	937	94	4	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	992	99	1000	1040	104	5	70-135	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618909

Project ID: AR197123

Lab Batch ID: 3083673

QC- Sample ID: 618907-039 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.27.2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000383	0.0996	0.122	122	0.100	0.113	113	8	70-130	35	
Toluene	<0.000454	0.0996	0.118	118	0.100	0.109	109	8	70-130	35	
Ethylbenzene	<0.000563	0.0996	0.123	123	0.100	0.110	110	11	70-130	35	
m,p-Xylenes	<0.00101	0.199	0.237	119	0.200	0.214	107	10	70-130	35	
o-Xylene	<0.000343	0.0996	0.122	122	0.100	0.110	110	10	70-130	35	

Lab Batch ID: 3083504

QC- Sample ID: 618636-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	24.2	250	275	100	250	277	101	1	90-110	20	

Lab Batch ID: 3083504

QC- Sample ID: 618909-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.26.2019

Date Prepared: 03.26.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.55	249	279	111	249	279	111	0	90-110	20	X

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries

Project Name: Stella Blue

Work Order #: 618909

Project ID: AR197123

Lab Batch ID: 3083707

QC- Sample ID: 618909-012 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.28.2019

Date Prepared: 03.27.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	5.22	248	265	105	248	245	97	8	90-110	20	

Lab Batch ID: 3083707

QC- Sample ID: 619079-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.27.2019

Analyst: CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	15.0	250	263	99	250	266	100	1	90-110	20	

Lab Batch ID: 3083540

QC- Sample ID: 618909-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 03.27.2019

Date Prepared: 03.26.2019

Analyst: ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	824	83	998	845	85	3	70-135	20	
Diesel Range Organics (DRO)	<8.10	997	931	93	998	957	96	3	70-135	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Terracon

Laboratory: Xenco

Address: 6701 Aberdeen
Lubbock, Texas 79424

CHAIN OF CUSTODY RECORD

Office Location: Lubbock

Project Manager: John Ferguson
Sampler's Name: Joseph GuesnierPhone: _____
Contact: _____
SRS #: _____
Sampler's Signature: _____

Project Number: AR197123

Project Name: Stella Blue

No. Type of Containers

Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	2 oz Glass	4 oz Glass	Chloride (EPA Method 300)	TPH Extended 8015	BTEX (EPA Method 8021B)	Hold	Lab Sample ID
--------	------	------	------	------	--------------------------------	-------------	-----------	------------	------------	---------------------------	-------------------	-------------------------	------	---------------

S	3/25/2019	2:10		X	BG-1 (0-5)	0'	5'	X		X	X	X		
S	3/25/2019	2:12		X	BG-1 (5-1)	5'	1'	X		X	X	X		
S	3/25/2019	2:14		X	BG-1 (1.5-2)	1.5'	2'	X		X			X	
S	3/25/2019	2:50		X	BG-2 (0-5)	0'	5'	X		X	X	X		
S	3/25/2019	2:52		X	BG-2 (5-1)	5'	1'	X		X	X	X		
S	3/25/2019	2:54		X	BG-2 (1.5-2)	1.5'	2'	X		X		X		
S	3/25/2019	2:56		X	BG-2 (3-3.5)	3'	3.5'	X					X	
S	3/25/2019	3:30		X	BG-3 (0-5)	0'	5'	X		X	X	X		
S	3/25/2019	3:32		X	BG-3 (5-1)	5'	1'	X		X	X	X		
S	3/25/2019	3:34		X	BG-3 (1.5-2)	1.5'	2'	X				X		
S	3/25/2019	3:36		X	BG-3 (3-3.5)	3'	3.5'	X				X		
S	3/25/2019	4:00		X	BG-4 (0-5)	0'	5'	X		X	X	X		
S	3/25/2019	4:02		X	BG-4 (5-1)	5'	1'	X		X	X	X		
S	3/25/2019	4:04		X	BG-4 (1.5-2)	1.5'	2'	X				X		

TURNAROUND TIME	☐ Normal	☒ 48-Hour Rush	☐ 24-Hour Rush	TRRP Laboratory Review Checklist	☐ Yes	☐ No
-----------------	---------------------------------	--	---------------------------------------	----------------------------------	------------------------------	-----------------------------

Reinquisitioned by (Signature)	Date: 3-26-19	Time: 12:18	Received by (Signature)	Date: 3/24/19	Time: 12:18	NOTES: Client: Solaris
--------------------------------	---------------	-------------	-------------------------	---------------	-------------	------------------------

Reinquisitioned by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:	e-mail results to:
--------------------------------	-------	-------	-------------------------	-------	-------	--------------------

Reinquisitioned by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:	kwilliams@terracon.com
--------------------------------	-------	-------	-------------------------	-------	-------	------------------------

Matrix	WW-Wastewater	W-Water	S-Soil	L-Liquid	A-Air Bag	C-Charcoal Tube	SA-Slug
--------	---------------	---------	--------	----------	-----------	-----------------	---------

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

Responsive ■ Resourceful ■ Reliable

kristina.kohl@terracon.com
jrguesnier@terracon.com

0.3/0.2

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 03.26.2019 12.18.00 PM

Work Order #: 618909

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

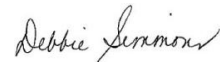
Checklist completed by:



Brianna Teel

Date: 03.26.2019

Checklist reviewed by:



Debbie Simmons

Date: 03.28.2019

Analytical Report 646239

for Terracon-Lubbock

Project Manager: Joseph Guesnier

Stella Blue Incident

AR197123

20-DEC-19

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



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20-DEC-19

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **646239**

Stella Blue Incident

Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 646239. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 646239 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HA-2(0-0.5)	S	12-10-19 14:00		646239-001
HA-2(1.5-2)	S	12-10-19 14:05		646239-002
HA-3(0-0.5)	S	12-10-19 14:10		646239-003
HA-3(1.5-2)	S	12-10-19 14:15		646239-004
HA-4(0-0.5)	S	12-10-19 14:20		646239-005
HA-4(1.5-2)	S	12-10-19 14:25		646239-006
HA-5(0-0.5)	S	12-10-19 14:30		646239-007
HA-5(1.5-2)	S	12-10-19 14:35		646239-008
HA-6(0-0.5)	S	12-10-19 14:40		646239-009
HA-6(1.5-2)	S	12-10-19 14:45		646239-010
HA7-(0-0.5)	S	12-10-19 14:50		646239-011
HA-7(1.5-2)	S	12-10-19 14:55		646239-012
HA-8(0-0.5)	S	12-10-19 15:00		646239-013
HA-8(1.5-2)	S	12-10-19 15:05		646239-014
HA-9(0-0.5)	S	12-10-19 15:10		646239-015
HA-9(1.5-2)	S	12-10-19 15:15		646239-016
HA-10(0-0.5)	S	12-10-19 15:20		646239-017
HA-10(1.5-2)	S	12-10-19 15:25		646239-018
HA-11(0-0.5)	S	12-10-19 15:30		646239-019
HA-11(1.5-2)	S	12-10-19 15:35		646239-020

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Stella Blue Incident**Project ID: AR197123
Work Order Number(s): 646239Report Date: 20-DEC-19
Date Received: 12/12/2019

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

Sample receipt non conformances and comments:

Lab Sample ID 646239-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). TPH-GRO recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646239-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

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

Surrogate 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7692938-1-BLK, 646239-003, 646239-004, 646239-005, 646239-006, 646239-016, 646239-008, 646239-010, 646239-012, 646239-014, 646239-015, 646239-001, 646239-007.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111219 TPH GRO by EPA 8015 Mod.

Lab Sample ID 646239-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). TPH-GRO recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646239-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020.

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

Surrogate 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7692938-1-BLK, 646239-003, 646239-004, 646239-005, 646239-006, 646239-016, 646239-008, 646239-010, 646239-012, 646239-014, 646239-015, 646239-001, 646239-007.



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-2(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-001

Date Collected: 12.10.19 14.00

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	28.4	9.92	0.351	mg/kg	12.16.19 18:19		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	12.14.19 06:46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	12.14.19 06:46	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	91	65 - 144	%		
n-Triacontane	99	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.273	4.03	0.273	mg/kg	12.19.19 20:01	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	72	76 - 123	%		**
a,a,a-Trifluorotoluene	76	69 - 120	%		



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-2(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-002

Date Collected: 12.10.19 14.05

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	184	9.98	0.353	mg/kg	12.16.19 18:31		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.43	24.8	7.43	mg/kg	12.14.19 09:12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.43	24.8	7.43	mg/kg	12.14.19 09:12	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	100	65 - 144	%		
n-Triacontane	107	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.270	3.98	0.270	mg/kg	12.19.19 20:25	UX	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	77	76 - 123	%		
a,a,a-Trifluorotoluene	87	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-3(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-003

Date Collected: 12.10.19 14.10

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	10.5	10.0	0.354	mg/kg	12.16.19 18:43		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	12.14.19 09:50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	12.14.19 09:50	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	94	65 - 144	%		
n-Triacontane	103	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.271	4.00	0.271	mg/kg	12.19.19 20:49	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	73	76 - 123	%		**
a,a,a-Trifluorotoluene	81	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-3(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-004

Date Collected: 12.10.19 14.15

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	11.2	9.98	0.353	mg/kg	12.16.19 19:19		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	12.14.19 10:26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	12.14.19 10:26	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	102	65 - 144	%		
n-Triacontane	110	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.272	4.02	0.272	mg/kg	12.19.19 21:13	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	73	76 - 123	%		**
a,a,a-Trifluorotoluene	77	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-4(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-005

Date Collected: 12.10.19 14.20

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	26.6	10.1	0.358	mg/kg	12.16.19 20:20		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	12.14.19 11:00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	12.14.19 11:00	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	101	65 - 144	%		
n-Triacontane	109	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.273	4.03	0.273	mg/kg	12.19.19 21:38	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	70	76 - 123	%		**
a,a,a-Trifluorotoluene	80	69 - 120	%		



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-4(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-006

Date Collected: 12.10.19 14.25

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	15.8	10.0	0.355	mg/kg	12.16.19 20:32		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.54	25.2	7.54	mg/kg	12.14.19 11:37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.54	25.2	7.54	mg/kg	12.14.19 11:37	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	99	65 - 144	%		
n-Triacontane	111	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.262	3.87	0.262	mg/kg	12.19.19 22:02	U	19

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	72	76 - 123	%		**
a,a,a-Trifluorotoluene	79	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-5(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-007

Date Collected: 12.10.19 14.30

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	17.7	9.94	0.352	mg/kg	12.16.19 20:44		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	12.14.19 12:11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	12.14.19 12:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	95	65 - 144	%		
n-Triacontane	104	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.273	4.02	0.273	mg/kg	12.19.19 22:27	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	70	76 - 123	%		**
a,a,a-Trifluorotoluene	75	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-5(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-008

Date Collected: 12.10.19 14.35

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	15.0	10.0	0.354	mg/kg	12.16.19 20:56		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	12.14.19 12:46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	12.14.19 12:46	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	99	65 - 144	%		
n-Triacontane	108	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	12.19.19 22:51	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	72	76 - 123	%		**
a,a,a-Trifluorotoluene	80	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-6(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-009

Date Collected: 12.10.19 14.40

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	27.6	9.84	0.348	mg/kg	12.16.19 21:08		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	12.14.19 13:21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	12.14.19 13:21	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	96	65 - 144	%		
n-Triacontane	107	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.277	4.08	0.277	mg/kg	12.19.19 23:15	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	76	76 - 123	%		
a,a,a-Trifluorotoluene	84	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-6(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-010

Date Collected: 12.10.19 14.45

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	20.2	10.1	0.358	mg/kg	12.16.19 21:20		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.43	24.8	7.43	mg/kg	12.14.19 13:58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.43	24.8	7.43	mg/kg	12.14.19 13:58	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	99	65 - 144	%		
n-Triacontane	108	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.274	4.05	0.274	mg/kg	12.19.19 23:39	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	75	76 - 123	%		**
a,a,a-Trifluorotoluene	84	69 - 120	%		



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA7-(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-011

Date Collected: 12.10.19 14.50

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	26.8	10.1	0.356	mg/kg	12.16.19 21:32		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	12.14.19 14:34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	12.14.19 14:34	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	100	65 - 144	%		
n-Triacontane	108	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.266	3.92	0.266	mg/kg	12.20.19 01:15	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	77	76 - 123	%		
a,a,a-Trifluorotoluene	87	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-7(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-012

Date Collected: 12.10.19 14.55

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	14.4	10.0	0.355	mg/kg	12.16.19 21:44		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	12.14.19 15:13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	12.14.19 15:13	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	100	65 - 144	%		
n-Triacontane	109	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.269	3.97	0.269	mg/kg	12.20.19 01:39	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	75	76 - 123	%		**
a,a,a-Trifluorotoluene	87	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-8(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-013

Date Collected: 12.10.19 15.00

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	11.2	9.90	0.350	mg/kg	12.16.19 21:56		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.14.19 15:48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.14.19 15:48	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	97	65 - 144	%		
n-Triacontane	106	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.266	3.92	0.266	mg/kg	12.20.19 02:04	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	79	76 - 123	%		
a,a,a-Trifluorotoluene	88	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-8(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-014

Date Collected: 12.10.19 15.05

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	14.7	9.98	0.353	mg/kg	12.16.19 22:32		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.14.19 16:26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.14.19 16:26	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	94	65 - 144	%		
n-Triacontane	104	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.274	4.04	0.274	mg/kg	12.20.19 02:28	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	69	76 - 123	%		**
a,a,a-Trifluorotoluene	74	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-9(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-015

Date Collected: 12.10.19 15.10

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	9.89	9.94	0.352	mg/kg	12.16.19 22:44	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	12.14.19 17:04	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	12.14.19 17:04	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	100	65 - 144	%		
n-Triacontane	109	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.270	3.98	0.270	mg/kg	12.20.19 02:52	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	65	76 - 123	%		**
a,a,a-Trifluorotoluene	73	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-9(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-016

Date Collected: 12.10.19 15.15

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.94	9.92	0.351	mg/kg	12.16.19 22:56	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.14.19 17:42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.14.19 17:42	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	102	65 - 144	%		
n-Triacontane	111	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.268	3.95	0.268	mg/kg	12.20.19 03:16	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	67	76 - 123	%		**
a,a,a-Trifluorotoluene	74	69 - 120	%		



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-10(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-017

Date Collected: 12.10.19 15.20

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.84	9.98	0.353	mg/kg	12.16.19 23:08	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.14.19 18:20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.14.19 18:20	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	103	65 - 144	%		
n-Triacontane	111	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.270	3.98	0.270	mg/kg	12.20.19 03:41	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	78	76 - 123	%		
a,a,a-Trifluorotoluene	86	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-10(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-018

Date Collected: 12.10.19 15.25

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	8.40	10.0	0.355	mg/kg	12.16.19 23:20	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.43	24.8	7.43	mg/kg	12.14.19 18:54	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.43	24.8	7.43	mg/kg	12.14.19 18:54	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	103	65 - 144	%		
n-Triacontane	111	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.273	4.02	0.273	mg/kg	12.20.19 04:05	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	83	76 - 123	%		
a,a,a-Trifluorotoluene	97	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-11(0-0.5)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-019

Date Collected: 12.10.19 15.30

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	13.8	10.0	0.355	mg/kg	12.16.19 23:32		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	12.14.19 19:33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	12.14.19 19:33	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	99	65 - 144	%		
n-Triacontane	109	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.266	3.93	0.266	mg/kg	12.20.19 04:29	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	86	76 - 123	%		
a,a,a-Trifluorotoluene	98	69 - 120	%		



Certificate of Analytical Results

646239

Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: HA-11(1.5-2)

Matrix: Soil

Sample Depth:

Lab Sample Id: 646239-020

Date Collected: 12.10.19 15.35

Date Received: 12.12.19 17.00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	31.4	10.1	0.356	mg/kg	12.16.19 23:44		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	12.14.19 20:08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	12.14.19 20:08	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	95	65 - 144	%		
n-Triacontane	105	46 - 152	%		

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.271	4.00	0.271	mg/kg	12.20.19 04:52	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	87	76 - 123	%		
a,a,a-Trifluorotoluene	95	69 - 120	%		



Certificate of Analytical Results

646239



Terracon-Lubbock, Lubbock, TX

Stella Blue Incident

Sample Id: 7692508-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7692508-1-BLK

Date Collected:

Date Received:

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Analyst: JYM

% Moist:

Tech: JYM

Seq Number: 3110698

Date Prep: 12.16.19 12.15

Subcontractor: SUB: T104704215-19-30

Prep seq: 7692508

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	<0.354	10.0	0.354	mg/kg	12.16.19 17:43	U	1

Sample Id: 7692784-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7692784-1-BLK

Date Collected:

Date Received:

Analytical Method: DRO-ORO By SW8015B

Prep Method: 8015

Analyst: MIT

% Moist:

Tech: MIT

Seq Number: 3111062

Date Prep: 12.13.19 14.00

Prep seq: 7692784

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	12.14.19 06:11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	12.14.19 06:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
Tricosane	96	65 - 144	%		
n-Triacontane	104	46 - 152	%		

Sample Id: 7692938-1-BLK

Matrix: Solid

Sample Depth:

Lab Sample Id: 7692938-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: 5030B

Analyst: MIT

% Moist:

Tech: JGR

Seq Number: 3111219

Date Prep: 12.19.19 11.00

Prep seq: 7692938

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
TPH-GRO	8006-61-9	<0.271	4.00	0.271	mg/kg	12.19.19 19:37	U	20

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
4-Bromofluorobenzene	71	76 - 123	%		**
a,a,a-Trifluorotoluene	71	69 - 120	%		



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries**Project Name: Stella Blue Incident****Work Orders** 646239,**Project ID:** AR197123**Lab Batch #:** 3111062**Sample:** 7692784-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/14/19 03:48**SURROGATE RECOVERY STUDY**

DRO-ORO By SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Tricosane	10.0	10.0	100	65-144	
n-Triacontane	10.4	10.0	104	46-152	

Lab Batch #: 3111062**Sample:** 7692784-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/14/19 04:23**SURROGATE RECOVERY STUDY**

DRO-ORO By SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Tricosane	10.5	10.0	105	65-144	
n-Triacontane	10.5	10.0	105	46-152	

Lab Batch #: 3111062**Sample:** 7692784-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/14/19 06:11**SURROGATE RECOVERY STUDY**

DRO-ORO By SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Tricosane	9.61	10.0	96	65-144	
n-Triacontane	10.4	10.0	104	46-152	

Lab Batch #: 3111062**Sample:** 646239-001 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 12/14/19 07:22**SURROGATE RECOVERY STUDY**

DRO-ORO By SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Tricosane	9.62	10.0	96	65-144	
n-Triacontane	10.1	10.0	101	46-152	

Lab Batch #: 3111062**Sample:** 646239-001 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 12/14/19 08:00**SURROGATE RECOVERY STUDY**

DRO-ORO By SW8015B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
Tricosane	9.25	10.1	92	65-144	
n-Triacontane	10.0	10.1	99	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries**Project Name: Stella Blue Incident****Work Orders** 646239,**Project ID:** AR197123**Lab Batch #:** 3111219**Sample:** 7692938-1-BKS / BKS**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/19/19 17:56**SURROGATE RECOVERY STUDY**

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.115	0.100	115	76-123	
a,a,a-Trifluorotoluene	1.59	2.00	80	69-120	

Lab Batch #: 3111219**Sample:** 7692938-1-BSD / BSD**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/19/19 18:24**SURROGATE RECOVERY STUDY**

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.111	0.100	111	76-123	
a,a,a-Trifluorotoluene	1.56	2.00	78	69-120	

Lab Batch #: 3111219**Sample:** 7692938-1-BLK / BLK**Batch:** 1 **Matrix:** Solid**Units:** mg/kg**Date Analyzed:** 12/19/19 19:37**SURROGATE RECOVERY STUDY**

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0712	0.100	71	76-123	**
a,a,a-Trifluorotoluene	1.41	2.00	71	69-120	

Lab Batch #: 3111219**Sample:** 646239-002 S / MS**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 12/20/19 00:03**SURROGATE RECOVERY STUDY**

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.120	0.100	120	76-123	
a,a,a-Trifluorotoluene	1.89	2.00	95	69-120	

Lab Batch #: 3111219**Sample:** 646239-002 SD / MSD**Batch:** 1 **Matrix:** Soil**Units:** mg/kg**Date Analyzed:** 12/20/19 00:27**SURROGATE RECOVERY STUDY**

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.115	0.100	115	76-123	
a,a,a-Trifluorotoluene	1.55	2.00	78	69-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries



Project Name: Stella Blue Incident

Work Order #: 646239

Project ID: AR197123

Analyst: JYM

Date Prepared: 12/16/2019

Date Analyzed: 12/16/2019

Lab Batch ID: 3110698

Sample: 7692508-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.354	100	107	107	100	107	107	0	80-120	20	

Analyst: MIT

Date Prepared: 12/13/2019

Date Analyzed: 12/14/2019

Lab Batch ID: 3111062

Sample: 7692784-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Diesel Range Organics (DRO)	<7.48	100	89.4	89	100	106	106	17	63-139	20	

Analyst: MIT

Date Prepared: 12/19/2019

Date Analyzed: 12/19/2019

Lab Batch ID: 3111219

Sample: 7692938-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
TPH-GRO	<0.271	20.0	22.5	113	20.0	20.2	101	11	35-129	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] = $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries



Project Name: Stella Blue Incident

Work Order #: 646239

Project ID: AR197123

Lab Batch ID: 3110698

QC- Sample ID: 646239-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/16/2019

Date Prepared: 12/16/2019

Analyst: JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	10.5	100	108	98	100	107	97	1	80-120	20	

Lab Batch ID: 3110698

QC- Sample ID: 646239-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/16/2019

Date Prepared: 12/16/2019

Analyst: JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	11.2	100	108	97	99.8	108	97	0	80-120	20	

Lab Batch ID: 3111062

QC- Sample ID: 646239-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/14/2019

Date Prepared: 12/13/2019

Analyst: MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Diesel Range Organics (DRO)	<7.49	100	108	108	101	108	107	0	63-139	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
 N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: Stella Blue Incident

Work Order #: 646239

Project ID: AR197123

Lab Batch ID: 3111219

QC- Sample ID: 646239-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 12/20/2019

Date Prepared: 12/19/2019

Analyst: MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO	<0.271	20.0	25.1	126	20.0	28.3	142	12	35-129	20	X

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
 Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY RECORD

Office Location Lubbock

Project Manager Joseph Guesnier

Sampler's Name Bryant McBrayer

Project Number AR197123

Laboratory: Xenco
Address: 6701 Aberdeen
Lubbock, Texas 79424

Phone: _____

Contact: Joseph Guesnier (806-544-9276)

SRS #: _____

Sampler's Signature _____

LAB USE ONLY
DUE DATE: 12/10/2019

TEMP OF COOLER
WHEN RECEIVED (°C): 1.8

Page 1 of 36

ANALYSIS REQUESTED

BTEX (EPA Method 8021B) ☒ TPH Extended 8015 ☒ Chloride (EPA Method 300) ☒ Hold ☐

Matrix	Date	Time	Project Name		Identifying Marks of Sample(s)	No. Type of Containers				Lab Sample ID
			AR197123	Stella Blue Incident		2 oz Glass	4 oz Glass	5035 kit	40 ml VOA	
S	12/10/2019	14:00	X		HA-2 (0-0.5)		X			1
S	12/10/2019	14:05	X		HA-2 (1.5-2)		X			2
S	12/10/2019	14:10	X		HA-3 (0-0.5)		X			3
S	12/10/2019	14:15	X		HA-3 (1.5-2)		X			4
S	12/10/2019	14:20	X		HA-4 (0-0.5)		X			5
S	12/10/2019	14:25	X		HA-4 (1.5-2)		X			6
S	12/10/2019	14:30	X		HA-5 (0-0.5)		X			7
S	12/10/2019	14:35	X		HA-5 (1.5-2)		X			8
S	12/10/2019	14:40	X		HA-6 (0-0.5)		X			9
S	12/10/2019	14:45	X		HA-6 (1.5-2)		X			10
S	12/10/2019	14:50	X		HA-7 (0-0.5)		X			11
S	12/10/2019	14:55	X		HA-7 (1.5-2)		X			12
S	12/10/2019	15:00	X		HA-8 (0-0.5)		X			13
S	12/10/2019	15:05	X		HA-8 (1.5-2)		X			14
S	12/10/2019	15:10	X		HA-9 (0-0.5)		X			15
S	12/10/2019	15:15	X		HA-9 (1.5-2)		X			16

TURNAROUND TIME

Relinquished by (Signature) _____ Date: 12-12-19 Time: 5:26

Relinquished by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____

Relinquished by (Signature) _____ Date: _____ Time: _____

TRRP Laboratory Review Checklist

Normal ☒ 48-Hour Rush ☐ 24-Hour Rush ☐

Received by (Signature) _____ Date: 12/19/19 Time: 1:00

Received by (Signature) _____ Date: _____ Time: _____

Received by (Signature) _____ Date: _____ Time: _____

Received by (Signature) _____ Date: _____ Time: _____

Matrix Container WW-Wastewater VOA - 40 ml vial

W - Water A/G - Amber Glass 1L

S - Soil 250 ml - Glass wide mouth

L - Liquid P/O - Plastic or other

C - Charcoal tube S - Sludge

Notes:

bryant.mcbrayer@terracon.com

erin.loyd@terracon.com

irguesnier@terracon.com

1.8

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

Responsive ■ Resourceful ■ Reliable

Final 1.000

Inter-Office Shipment

IOS Number : **54330**

Date/Time: 12.13.2019

Created by: Ashley Derstine

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 777246519753

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
646239-001	S	HA-2(0-0.5)	12.10.2019 14:00	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-002	S	HA-2(1.5-2)	12.10.2019 14:05	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-003	S	HA-3(0-0.5)	12.10.2019 14:10	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-004	S	HA-3(1.5-2)	12.10.2019 14:15	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-005	S	HA-4(0-0.5)	12.10.2019 14:20	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-006	S	HA-4(1.5-2)	12.10.2019 14:25	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-007	S	HA-5(0-0.5)	12.10.2019 14:30	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-008	S	HA-5(1.5-2)	12.10.2019 14:35	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-009	S	HA-6(0-0.5)	12.10.2019 14:40	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-010	S	HA-6(1.5-2)	12.10.2019 14:45	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-011	S	HA7-(0-0.5)	12.10.2019 14:50	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-012	S	HA-7(1.5-2)	12.10.2019 14:55	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-013	S	HA-8(0-0.5)	12.10.2019 15:00	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-014	S	HA-8(1.5-2)	12.10.2019 15:05	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-015	S	HA-9(0-0.5)	12.10.2019 15:10	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-016	S	HA-9(1.5-2)	12.10.2019 15:15	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-017	S	HA-10(0-0.5)	12.10.2019 15:20	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-018	S	HA-10(1.5-2)	12.10.2019 15:25	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-019	S	HA-11(0-0.5)	12.10.2019 15:30	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	
646239-020	S	HA-11(1.5-2)	12.10.2019 15:35	E300_CL	Chloride by EPA 300	12.18.2019	06.07.2020	JKR	CL	

Inter-Office Shipment

IOS Number : 54330

Date/Time: 12.13.2019 Created by: Ashley Derstine
Lab# From: **Lubbock** Delivery Priority:
Lab# To: **Houston** Air Bill No.: 777246519753

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

Inter Office Shipment or Sample Comments:

Relinquished By:



Ashley Derstine

Date Relinquished: 12.13.2019

Received By:



Ashly Kowalski

Date Received: 12.14.2019

Cooler Temperature: 1.8



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 54330

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Ashley Derstine

Date Sent: 12.13.2019 11.42 AM

Received By: Ashly Kowalski

Date Received: 12.14.2019 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 *Custody Seals Signed and dated for Containers/coolers	N/A
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Ashly Kowalski

Date: 12.14.2019



Client: Terracon-Lubbock

Date/ Time Received: 12/12/2019 05:00:00 PM

Work Order #: 646239

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R4

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.8
#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
#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:

Ashley Derstine

Date: 12/13/2019

Checklist reviewed by:

Jessica Kramer

Date: 12/13/2019



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

Draft

<i>Analysis Requested</i>	<i>Lab Id:</i>	656398-001	656398-002	656398-003	656398-004	656398-005	656398-006
	<i>Field Id:</i>	HS-1 (0-0.5)	HS-1 (0.5-1)	HS-1 (1.5-2)	HS-2 (0-0.5)	HS-2 (0.5-1)	HS-2 (1.5-2)
	<i>Depth:</i>	0-0.5 ft	0.5-1 ft	1.5-2 ft	0-0.5 ft	0.5-1 ft	1.5-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-16-20 13:21	Mar-16-20 13:26	Mar-16-20 13:33	Mar-16-20 14:03	Mar-16-20 14:06	Mar-16-20 14:16
BTEX by SW 8260C SUB: T104704215-19-30	<i>Extracted:</i>	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00
	<i>Analyzed:</i>	Mar-24-20 16:17	Mar-24-20 16:35	Mar-24-20 16:53	Mar-24-20 17:12	Mar-24-20 17:30	Mar-24-20 17:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000209 0.00101	<0.000207 0.00100	<0.000205 0.000990	<0.000207 0.00100	<0.000207 0.00100	<0.000208 0.00100
Toluene		<0.00101 0.00504	<0.00100 0.00501	<0.000990 0.00495	<0.00100 0.00501	<0.00100 0.00501	<0.00100 0.00502
Ethylbenzene		<0.000338 0.00101	<0.000336 0.00100	<0.000332 0.000990	<0.000336 0.00100	<0.000336 0.00100	<0.000337 0.00100
m,p-Xylenes		<0.000440 0.00202	<0.000438 0.00200	<0.000432 0.00198	<0.000438 0.00200	<0.000438 0.00200	<0.000438 0.00201
o-Xylene		<0.000993 0.00101	<0.000987 0.00100	<0.000975 0.000990	<0.000987 0.00100	<0.000987 0.00100	<0.000989 0.00100
Total Xylenes		<0.000440 0.00101	<0.000438 0.00100	<0.000432 0.000990	<0.000438 0.00100	<0.000438 0.00100	<0.000438 0.00100
Total BTEX		<0.000209 0.00101	<0.000207 0.00100	<0.000205 0.000990	<0.000207 0.00100	<0.000207 0.00100	<0.000208 0.00100
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04
	<i>Analyzed:</i>	Mar-23-20 17:03	Mar-23-20 17:40	Mar-23-20 17:52	Mar-23-20 18:04	Mar-23-20 18:16	Mar-23-20 18:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.3 9.98	16.5 10.1	20.8 9.96	9.15 J 9.84	15.2 10.2	13.2 10.1
DRO-ORO By SW8015B	<i>Extracted:</i>	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15
	<i>Analyzed:</i>	Mar-24-20 04:00	Mar-24-20 04:42	Mar-24-20 05:24	Mar-24-20 06:06	Mar-24-20 06:47	Mar-24-20 07:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)		43.7 24.8	<7.45 24.9	<7.49 25.0	<7.44 24.9	<7.54 25.2	<7.51 25.1
Oil Range Hydrocarbons (ORO)		<7.41 24.8	<7.45 24.9	<7.49 25.0	<7.44 24.9	<7.54 25.2	<7.51 25.1
TPH GRO by EPA 8015 Mod.	<i>Extracted:</i>	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30
	<i>Analyzed:</i>	Mar-25-20 19:03	Mar-25-20 20:40	Mar-25-20 21:04	Mar-25-20 21:28	Mar-25-20 21:52	Mar-25-20 22:16
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH-GRO		<0.272 4.01	<0.247 3.64	<0.242 3.57	<0.246 3.64	<0.257 3.80	<0.259 3.82

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Johnny Grindstaff
Project Manager



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

Draft

<i>Analysis Requested</i>	<i>Lab Id:</i>	656398-007	656398-008	656398-009	656398-010	656398-011	656398-012
	<i>Field Id:</i>	HS-3 (0-0.5)	HS-3 (0.5-1)	HS-3 (1.5-2)	HS-3 (3.5-4)	HS-4 (0-0.5)	HS-4 (0.5-1)
	<i>Depth:</i>	0-0.5 ft	0.5-1 ft	1.5-2 ft	3.5-4 ft	0-0.5 ft	0.5-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-16-20 14:25	Mar-16-20 14:29	Mar-16-20 14:35	Mar-16-20 14:44	Mar-16-20 14:50	Mar-16-20 14:54
BTEX by SW 8260C SUB: T104704215-19-30	<i>Extracted:</i>	Mar-24-20 11:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00
	<i>Analyzed:</i>	Mar-24-20 18:08	Mar-24-20 22:43	Mar-24-20 23:02	Mar-24-20 23:20	Mar-24-20 23:38	Mar-24-20 23:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000205 0.000990	<0.000205 0.000990	<0.000208 0.00100	<0.000207 0.000998	<0.000206 0.000994	<0.000208 0.00101
Toluene		<0.000990 0.00495	<0.000990 0.00495	<0.00100 0.00502	<0.000998 0.00499	<0.000994 0.00497	<0.00101 0.00503
Ethylbenzene		<0.000332 0.000990	<0.000332 0.000990	<0.000337 0.00100	<0.000335 0.000998	<0.000334 0.000994	<0.000338 0.00101
m,p-Xylenes		<0.000432 0.00198	<0.000432 0.00198	<0.000438 0.00201	<0.000436 0.00200	<0.000434 0.00199	<0.000439 0.00201
o-Xylene		<0.000975 0.000990	<0.000975 0.000990	<0.000989 0.00100	<0.000983 0.000998	<0.000979 0.000994	<0.000991 0.00101
Total Xylenes		<0.000432 0.000990	<0.000432 0.000990	<0.000438 0.00100	<0.000436 0.000998	<0.000434 0.000994	<0.000439 0.00101
Total BTEX		<0.000205 0.000990	<0.000205 0.000990	<0.000208 0.00100	<0.000207 0.000998	<0.000206 0.000994	<0.000208 0.00101
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04
	<i>Analyzed:</i>	Mar-23-20 19:05	Mar-23-20 19:18	Mar-23-20 19:30	Mar-23-20 19:42	Mar-23-20 19:54	Mar-23-20 20:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		9.45 J 10.0	26.8 9.96	21.1 10.1	15.6 9.84	10.3 9.96	15.2 10.1
DRO-ORO By SW8015B	<i>Extracted:</i>	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15		Mar-23-20 11:15
	<i>Analyzed:</i>	Mar-24-20 08:08	Mar-24-20 08:49	Mar-24-20 09:28	Mar-24-20 10:08		Mar-24-20 11:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		mg/kg RL
Diesel Range Organics (DRO)		<7.52 25.1	<7.52 25.1	<7.50 25.1	<7.48 25.0		<7.47 25.0
Oil Range Hydrocarbons (ORO)		<7.52 25.1	<7.52 25.1	<7.50 25.1	<7.48 25.0		<7.47 25.0
TPH GRO by EPA 8015 Mod.	<i>Extracted:</i>	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30
	<i>Analyzed:</i>	Mar-25-20 22:40	Mar-25-20 23:04	Mar-25-20 23:28	Mar-25-20 23:52	Mar-26-20 01:29	Mar-26-20 01:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH-GRO		<0.265 3.91	<0.245 3.61	<0.255 3.76	<0.257 3.80	<0.265 3.91	<0.269 3.98

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Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Johnny Grindstaff
Project Manager



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

Draft

<i>Analysis Requested</i>	<i>Lab Id:</i>	656398-013	656398-014	656398-015	656398-016	656398-017	656398-018
	<i>Field Id:</i>	HS-4 (1.5-2)	HS-4 (3.5-4)	TXCS-1 (0-0.5)	TXCS-1 (0.5-1)	HS-5 (0-0.5)	HS-5 (0.5-1)
	<i>Depth:</i>	1.5-2 ft	3.5-4 ft	0-0.5 ft	0.5-1 ft	0-0.5 ft	0.5-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-16-20 15:00	Mar-16-20 15:07	Mar-16-20 15:39	Mar-16-20 15:52	Mar-16-20 16:04	Mar-16-20 16:09
BTEX by SW 8260C SUB: T104704215-19-30	<i>Extracted:</i>	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00
	<i>Analyzed:</i>	Mar-25-20 00:16	Mar-25-20 00:34	Mar-25-20 00:53	Mar-25-20 01:11	Mar-25-20 01:30	Mar-25-20 01:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000207 0.00100	<0.000206 0.000996	<0.000207 0.00100	<0.000206 0.000996	<0.000206 0.000994	<0.000206 0.000994
Toluene		<0.00100 0.00501	<0.000996 0.00498	<0.00100 0.00501	<0.000996 0.00498	<0.000994 0.00497	<0.000994 0.00497
Ethylbenzene		<0.000336 0.00100	<0.000334 0.000996	<0.000336 0.00100	<0.000334 0.000996	<0.000334 0.000994	<0.000334 0.000994
m,p-Xylenes		<0.000438 0.00200	<0.000435 0.00199	<0.000438 0.00200	<0.000435 0.00199	<0.000434 0.00199	<0.000434 0.00199
o-Xylene		<0.000987 0.00100	<0.000981 0.000996	<0.000987 0.00100	<0.000981 0.000996	<0.000979 0.000994	<0.000979 0.000994
Total Xylenes		<0.000438 0.00100	<0.000435 0.000996	<0.000438 0.00100	<0.000435 0.000996	<0.000434 0.000994	<0.000434 0.000994
Total BTEX		<0.000207 0.00100	<0.000206 0.000996	<0.000207 0.00100	<0.000206 0.000996	<0.000206 0.000994	<0.000206 0.000994
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 16:04
	<i>Analyzed:</i>	Mar-23-20 20:43	Mar-23-20 21:20	Mar-23-20 21:32	Mar-23-20 21:44	Mar-23-20 21:57	Mar-23-20 22:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		19.7 10.0	13.6 9.84	7.19 J 9.96	23.8 9.98	8.84 J 10.0	32.9 10.2
DRO-ORO By SW8015B	<i>Extracted:</i>	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 11:15	Mar-23-20 12:00
	<i>Analyzed:</i>	Mar-24-20 12:18	Mar-24-20 13:01	Mar-24-20 13:44	Mar-24-20 14:28	Mar-24-20 15:11	Mar-24-20 23:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)		<7.56 25.3	<7.55 25.2	<7.51 25.1	<7.52 25.1	<7.42 24.8	<7.47 25.0
Oil Range Hydrocarbons (ORO)		<7.56 25.3	<7.55 25.2	<7.51 25.1	<7.52 25.1	<7.42 24.8	<7.47 25.0
TPH GRO by EPA 8015 Mod.	<i>Extracted:</i>	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30
	<i>Analyzed:</i>	Mar-26-20 02:18	Mar-26-20 02:42	Mar-26-20 03:07	Mar-26-20 03:31	Mar-26-20 03:56	Mar-26-20 04:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH-GRO		<0.250 3.68	<0.270 3.98	<0.260 3.83	<0.260 3.83	<0.261 3.85	<0.236 3.48

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Version: 1.9%

Johnny Grindstaff
Project Manager



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

Draft

<i>Analysis Requested</i>	<i>Lab Id:</i>	656398-019	656398-020	656398-021	656398-022	656398-023	656398-024
	<i>Field Id:</i>	HS-5 (1.5-2)	HS-5 (3.5-4)	TXCS-2 (0-0.5)	TXCS-2 (0.5-1)	TXCS-2 (1.5-2)	TXCS-2 (3.5-4)
	<i>Depth:</i>	1.5-2 ft	3.5-4 ft	0-0.5 ft	0.5-1 ft	1.5-2 ft	3.5-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-16-20 16:17	Mar-16-20 16:22	Mar-16-20 16:32	Mar-16-20 16:37	Mar-16-20 16:44	Mar-16-20 17:19
BTEX by SW 8260C SUB: T104704215-19-30	<i>Extracted:</i>	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00	Mar-24-20 11:00
	<i>Analyzed:</i>	Mar-25-20 02:07	Mar-25-20 02:25	Mar-24-20 11:43	Mar-24-20 12:01	Mar-24-20 12:31	Mar-24-20 12:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000205 0.000990	<0.000207 0.000998	<0.000208 0.00100	<0.000206 0.000994	<0.000207 0.000998	<0.000205 0.000990
Toluene		<0.000990 0.00495	<0.000998 0.00499	<0.00100 0.00502	<0.000994 0.00497	<0.000998 0.00499	<0.000990 0.00495
Ethylbenzene		<0.000332 0.000990	<0.000335 0.000998	<0.000337 0.00100	<0.000334 0.000994	<0.000335 0.000998	<0.000332 0.000990
m,p-Xylenes		<0.000432 0.00198	<0.000436 0.00200	<0.000438 0.00201	<0.000434 0.00199	<0.000436 0.00200	<0.000432 0.00198
o-Xylene		<0.000975 0.000990	<0.000983 0.000998	<0.000989 0.00100	<0.000979 0.000994	<0.000983 0.000998	<0.000975 0.000990
Total Xylenes		<0.000432 0.000990	<0.000436 0.000998	<0.000438 0.00100	<0.000434 0.000994	<0.000436 0.000998	<0.000432 0.000990
Total BTEX		<0.000205 0.000990	<0.000207 0.000998	<0.000208 0.00100	<0.000206 0.000994	<0.000207 0.000998	<0.000205 0.000990
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	Mar-23-20 16:04	Mar-23-20 16:04	Mar-23-20 14:41	Mar-23-20 14:41	Mar-23-20 14:41	Mar-23-20 14:41
	<i>Analyzed:</i>	Mar-23-20 22:21	Mar-23-20 22:33	Mar-23-20 20:33	Mar-23-20 20:45	Mar-23-20 20:57	Mar-23-20 21:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		21.0 10.0	13.4 9.88	9.65 J 9.84	10.3 9.90	8.60 J 10.0	13.5 9.98
DRO-ORO By SW8015B	<i>Extracted:</i>	Mar-23-20 12:00	Mar-23-20 12:00	Mar-23-20 12:00	Mar-23-20 12:00	Mar-23-20 12:00	Mar-23-20 12:00
	<i>Analyzed:</i>	Mar-25-20 02:24	Mar-25-20 03:08	Mar-25-20 03:51	Mar-25-20 04:36	Mar-25-20 05:21	Mar-25-20 06:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)		<7.44 24.9	<7.44 24.9	<7.52 25.1	<7.49 25.1	<7.47 25.0	<7.44 24.9
Oil Range Hydrocarbons (ORO)		<7.44 24.9	<7.44 24.9	<7.52 25.1	<7.49 25.1	<7.47 25.0	<7.44 24.9
TPH GRO by EPA 8015 Mod.	<i>Extracted:</i>	Mar-25-20 11:30	Mar-25-20 11:30	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00
	<i>Analyzed:</i>	Mar-26-20 04:44	Mar-26-20 05:08	Mar-26-20 18:27	Mar-26-20 20:04	Mar-26-20 20:27	Mar-26-20 20:51
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH-GRO		<0.248 3.66	<0.268 3.95	<0.258 3.81	<0.250 3.68	<0.258 3.80	<0.234 3.45

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Johnny Grindstaff
Project Manager



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
Contact: Joseph Guesnier
Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
Report Date: 31-MAR-20
Project Manager: Jessica Kramer

Draft

<i>Analysis Requested</i>	<i>Lab Id:</i>	656398-025	656398-026	656398-027	656398-028	656398-029	656398-030
	<i>Field Id:</i>	HA-12 (0-0.5)	HA-12 (0.5-1)	HA-12 (1.5-2)	HA-13 (0-0.5)	HA-13 (0.5-1)	HA-13 (1.5-2)
	<i>Depth:</i>	0-0.5 ft	0.5-1 ft	1.5-2 ft	0-0.5 ft	0.5-1 ft	1.5-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-06-20 15:25	Feb-06-20 15:35	Feb-06-20 15:45	Feb-06-20 14:55	Feb-06-20 15:05	Feb-06-20 15:15
BTEX by SW 8260C SUB: T104704215-19-30	<i>Extracted:</i>	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00	Mar-24-20 16:00
	<i>Analyzed:</i>	Mar-25-20 02:44	Mar-25-20 03:03	Mar-25-20 03:21	Mar-25-20 03:40	Mar-25-20 03:58	Mar-25-20 04:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000207 0.00100	<0.000205 0.000992	<0.000207 0.00100	<0.000209 0.00101	<0.000207 0.00100	<0.000208 0.00100
Toluene		<0.00100 0.00501	<0.000992 0.00496	<0.00100 0.00501	<0.00101 0.00504	<0.00100 0.00501	<0.00100 0.00502
Ethylbenzene		<0.000336 0.00100	<0.000333 0.000992	<0.000336 0.00100	<0.000338 0.00101	<0.000336 0.00100	<0.000337 0.00100
m,p-Xylenes		<0.000438 0.00200	<0.000433 0.00198	<0.000438 0.00200	<0.000440 0.00202	<0.000438 0.00200	<0.000438 0.00201
o-Xylene		<0.000987 0.00100	<0.000977 0.000992	<0.000987 0.00100	<0.000993 0.00101	<0.000987 0.00100	<0.000989 0.00100
Total Xylenes		<0.000438 0.00100	<0.000433 0.000992	<0.000438 0.00100	<0.000440 0.00101	<0.000438 0.00100	<0.000438 0.00100
Total BTEX		<0.000207 0.00100	<0.000205 0.000992	<0.000207 0.00100	<0.000209 0.00101	<0.000207 0.00100	<0.000208 0.00100
Chloride by EPA 300 SUB: T104704215-19-30	<i>Extracted:</i>	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30	Mar-25-20 11:30
	<i>Analyzed:</i>	Mar-25-20 11:43	Mar-25-20 12:20	Mar-25-20 12:33	Mar-25-20 12:45	Mar-25-20 12:57	Mar-25-20 13:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7.98 JK 9.96	6.03 JK 10.0	11.4 K 9.96	22.7 K 9.84	16.2 K 10.0	12.3 K 9.88
DRO-ORO By SW8015B	<i>Extracted:</i>	Mar-24-20 10:10	Mar-24-20 10:10	Mar-24-20 10:10	Mar-24-20 10:10	Mar-24-20 10:10	Mar-24-20 10:10
	<i>Analyzed:</i>	Mar-26-20 21:06	Mar-27-20 14:15	Mar-27-20 00:32	Mar-27-20 01:15	Mar-27-20 11:49	Mar-27-20 12:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Diesel Range Organics (DRO)		13.1 JK 25.0	<7.45 24.9	<7.53 25.2	<7.46 24.9	<7.49 25.0	<7.51 25.1
Oil Range Hydrocarbons (ORO)		<7.48 25.0	<7.45 24.9	<7.53 25.2	<7.46 24.9	<7.49 25.0	<7.51 25.1
TPH GRO by EPA 8015 Mod.	<i>Extracted:</i>	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00	Mar-26-20 13:00
	<i>Analyzed:</i>	Mar-26-20 21:16	Mar-26-20 21:40	Mar-26-20 22:04	Mar-26-20 22:29	Mar-26-20 22:53	Mar-26-20 23:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
TPH-GRO		0.546 JK 3.56	<0.244 3.60	<0.268 3.96	<0.251 3.71	<0.259 3.82	<0.259 3.82

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Johnny Grindstaff
Project Manager



Certificate of Analysis Summary 656398

Terracon-Lubbock, Lubbock, TX

Project Name: Stella Blue

Project Id: AR197123
 Contact: Joseph Guesnier
 Project Location:

Date Received in Lab: Fri Mar-20-20 11:10 am
 Report Date: 31-MAR-20
 Project Manager: Jessica Kramer

Draft

Analysis Requested	Lab Id:	656398-031	656398-032				
	Field Id:	HA-14 (0-0.5)	HA-14 (0.5-1)				
	Depth:	0-0.5 ft	0.5-1 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Feb-06-20 14:39	Feb-06-20 14:45				
BTEX by SW 8260C SUB: T104704215-19-30	Extracted:	Mar-24-20 16:00	Mar-25-20 08:00				
	Analyzed:	Mar-25-20 04:36	Mar-25-20 12:23				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.000206 0.000994	<0.000208 0.00101				
Toluene		<0.000994 0.00497	<0.00101 0.00503				
Ethylbenzene		<0.000334 0.000994	<0.000338 0.00101				
m,p-Xylenes		<0.000434 0.00199	<0.000439 0.00201				
o-Xylene		<0.000979 0.000994	<0.000991 0.00101				
Total Xylenes		<0.000434 0.000994	<0.000439 0.00101				
Total BTEX		<0.000206 0.000994	<0.000208 0.00101				
Chloride by EPA 300 SUB: T104704215-19-30	Extracted:	Mar-25-20 11:30	Mar-25-20 11:30				
	Analyzed:	Mar-25-20 13:47	Mar-25-20 13:59				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		18.8 K 9.98	10.8 K 10.0				
DRO-ORO By SW8015B	Extracted:	Mar-24-20 10:10	Mar-24-20 10:10				
	Analyzed:	Mar-27-20 13:00	Mar-27-20 13:38				
	Units/RL:	mg/kg RL	mg/kg RL				
Diesel Range Organics (DRO)		<7.45 24.9	<7.51 25.1				
Oil Range Hydrocarbons (ORO)		<7.45 24.9	<7.51 25.1				
TPH GRO by EPA 8015 Mod.	Extracted:	Mar-26-20 13:00	Mar-26-20 13:00				
	Analyzed:	Mar-27-20 00:54	Mar-27-20 01:18				
	Units/RL:	mg/kg RL	mg/kg RL				
TPH-GRO		<0.253 3.74	<0.264 3.89				

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Johnny Grindstaff
Project Manager

Analytical Report 656398

for

Terracon-Lubbock

Project Manager: Joseph Guesnier

Stella Blue

AR197123

31-MAR-20

Collected By: Client



6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



31-MAR-20

Project Manager: **Joseph Guesnier**

Terracon-Lubbock

5827 50th st, Suite 1

Lubbock, TX 79424

Reference: XENCO Report No(s): **656398**

Stella Blue

Project Address:

Joseph Guesnier:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 656398. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 656398 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Johnny Grindstaff

Project Manager

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Sample Cross Reference 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
HS-1 (0-0.5)	S	03-16-20 13:21	0 - 0.5 ft	656398-001
HS-1 (0.5-1)	S	03-16-20 13:26	0.5 - 1 ft	656398-002
HS-1 (1.5-2)	S	03-16-20 13:33	1.5 - 2 ft	656398-003
HS-2 (0-0.5)	S	03-16-20 14:03	0 - 0.5 ft	656398-004
HS-2 (0.5-1)	S	03-16-20 14:06	0.5 - 1 ft	656398-005
HS-2 (1.5-2)	S	03-16-20 14:16	1.5 - 2 ft	656398-006
HS-3 (0-0.5)	S	03-16-20 14:25	0 - 0.5 ft	656398-007
HS-3 (0.5-1)	S	03-16-20 14:29	0.5 - 1 ft	656398-008
HS-3 (1.5-2)	S	03-16-20 14:35	1.5 - 2 ft	656398-009
HS-3 (3.5-4)	S	03-16-20 14:44	3.5 - 4 ft	656398-010
HS-4 (0-0.5)	S	03-16-20 14:50	0 - 0.5 ft	656398-011
HS-4 (0.5-1)	S	03-16-20 14:54	0.5 - 1 ft	656398-012
HS-4 (1.5-2)	S	03-16-20 15:00	1.5 - 2 ft	656398-013
HS-4 (3.5-4)	S	03-16-20 15:07	3.5 - 4 ft	656398-014
TXCS-1 (0-0.5)	S	03-16-20 15:39	0 - 0.5 ft	656398-015
TXCS-1 (0.5-1)	S	03-16-20 15:52	0.5 - 1 ft	656398-016
HS-5 (0-0.5)	S	03-16-20 16:04	0 - 0.5 ft	656398-017
HS-5 (0.5-1)	S	03-16-20 16:09	0.5 - 1 ft	656398-018
HS-5 (1.5-2)	S	03-16-20 16:17	1.5 - 2 ft	656398-019
HS-5 (3.5-4)	S	03-16-20 16:22	3.5 - 4 ft	656398-020
TXCS-2 (0-0.5)	S	03-16-20 16:32	0 - 0.5 ft	656398-021
TXCS-2 (0.5-1)	S	03-16-20 16:37	0.5 - 1 ft	656398-022
TXCS-2 (1.5-2)	S	03-16-20 16:44	1.5 - 2 ft	656398-023
TXCS-2 (3.5-4)	S	03-16-20 17:19	3.5 - 4 ft	656398-024
HA-12 (0-0.5)	S	02-06-20 15:25	0 - 0.5 ft	656398-025
HA-12 (0.5-1)	S	02-06-20 15:35	0.5 - 1 ft	656398-026
HA-12 (1.5-2)	S	02-06-20 15:45	1.5 - 2 ft	656398-027
HA-13 (0-0.5)	S	02-06-20 14:55	0 - 0.5 ft	656398-028
HA-13 (0.5-1)	S	02-06-20 15:05	0.5 - 1 ft	656398-029
HA-13 (1.5-2)	S	02-06-20 15:15	1.5 - 2 ft	656398-030
HA-14 (0-0.5)	S	02-06-20 14:39	0 - 0.5 ft	656398-031
HA-14 (0.5-1)	S	02-06-20 14:45	0.5 - 1 ft	656398-032

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Stella Blue**Project ID: AR197123
Work Order Number(s): 656398Report Date: 31-MAR-20
Date Received: 03/20/2020

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

Sample receipt non conformances and comments:**Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3120885 BTEX by SW 8260C

Ethylbenzene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 656398-032

Lab Sample ID 656398-032 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 656398-032.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3120961 DRO-ORO By SW8015B

Surrogate Tricosane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 656398-015,656398-009,656398-001.

Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 656398-017,656398-009,656398-010,656398-012,656398-013,656398-015,656398-003,656398-002,656398-001,656398-006.

Batch: LBA-3120963 DRO-ORO By SW8015B

Surrogate n-Triacontane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 656398-018,656398-024,656398-023.

**CASE NARRATIVE****Client Name: Terracon-Lubbock****Project Name: Stella Blue**Project ID: AR197123
Work Order Number(s): 656398Report Date: 31-MAR-20
Date Received: 03/20/2020

Batch: LBA-3120974 TPH GRO by EPA 8015 Mod.

Lab Sample ID 656398-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). TPH-GRO Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 656398-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020

Lab Control Spikes RPD within control limits; therefore the data was accepted.

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7699768-1-BKS, 7699768-1-BSD, 656398-001 S, 656398-001 SD.

Outlier/s are due to possible matrix interference.

Batch: LBA-3121109 TPH GRO by EPA 8015 Mod.

Surrogate 4-Bromofluorobenzene recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7699879-1-BKS, 7699879-1-BSD, 656398-021 S, 656398-021 SD.

Batch: LBA-3121335 DRO-ORO By SW8015B

Lab Sample ID 656398-025 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Oil Range Hydrocarbons (ORO) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 656398-025, -026, -027, -028, -029, -030, -031, -032.

Oil Range Hydrocarbons (ORO) recovered below QC limits in the Blank Spike and Duplicate indicating bias low results. Samples in the analytical batch are: 656398-025, -026, -027, -028, -029, -030, -031, -032.

Surrogate Tricosane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7700046-1-BKS, 656398-025, 656398-031.

Surrogate n-Triacontane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7700046-1-BKS, 7700046-1-BSD, 656398-025 S, 656398-025 SD, 656398-031, 656398-025.



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-001

Date Collected: 03.16.20 13.21

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.3	9.98	0.353	mg/kg	03.23.20 17.03		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	43.7	24.8	7.41	mg/kg	03.24.20 04.00		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.41	24.8	7.41	mg/kg	03.24.20 04.00	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	154	%	65-144	03.24.20 04.00	**
n-Triacontane	638-68-6	172	%	46-152	03.24.20 04.00	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000209	0.00101	0.000209	mg/kg	03.24.20 16.17	U	1
Toluene	108-88-3	<0.00101	0.00504	0.00101	mg/kg	03.24.20 16.17	U	1
Ethylbenzene	100-41-4	<0.000338	0.00101	0.000338	mg/kg	03.24.20 16.17	U	1
m,p-Xylenes	179601-23-1	<0.000440	0.00202	0.000440	mg/kg	03.24.20 16.17	U	1
o-Xylene	95-47-6	<0.000993	0.00101	0.000993	mg/kg	03.24.20 16.17	U	1
Total Xylenes	1330-20-7	<0.000440	0.00101	0.000440	mg/kg	03.24.20 16.17	U	1
Total BTEX		<0.000209	0.00101	0.000209	mg/kg	03.24.20 16.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	53-142	03.24.20 16.17	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 16.17	
Toluene-D8	2037-26-5	108	%	70-130	03.24.20 16.17	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-001

Date Collected: 03.16.20 13.21

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.272	4.01	0.272	mg/kg	03.25.20 19.03	UF	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	108	%	76-123	03.25.20 19.03			
a,a,a-Trifluorotoluene	98-08-8	106	%	69-120	03.25.20 19.03			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-1 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-002

Date Collected: 03.16.20 13.26

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.5	10.1	0.357	mg/kg	03.23.20 17.40		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	03.24.20 04.42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	03.24.20 04.42	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	141	%	65-144	03.24.20 04.42	
n-Triacontane	638-68-6	164	%	46-152	03.24.20 04.42	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.24.20 16.35	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.24.20 16.35	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.24.20 16.35	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.24.20 16.35	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.24.20 16.35	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 16.35	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.24.20 16.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	53-142	03.24.20 16.35	
1,2-Dichloroethane-D4	17060-07-0	111	%	53-150	03.24.20 16.35	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 16.35	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-1 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-002

Date Collected: 03.16.20 13.26

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.247	3.64	0.247	mg/kg	03.25.20 20.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	101	%	76-123	03.25.20 20.40			
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	03.25.20 20.40			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-1 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-003

Date Collected: 03.16.20 13.33

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.8	9.96	0.353	mg/kg	03.23.20 17.52		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	03.24.20 05.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	03.24.20 05.24	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	139	%	65-144	03.24.20 05.24	
n-Triacontane	638-68-6	163	%	46-152	03.24.20 05.24	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000990	0.000205	mg/kg	03.24.20 16.53	U	1
Toluene	108-88-3	<0.000990	0.00495	0.000990	mg/kg	03.24.20 16.53	U	1
Ethylbenzene	100-41-4	<0.000332	0.000990	0.000332	mg/kg	03.24.20 16.53	U	1
m,p-Xylenes	179601-23-1	<0.000432	0.00198	0.000432	mg/kg	03.24.20 16.53	U	1
o-Xylene	95-47-6	<0.000975	0.000990	0.000975	mg/kg	03.24.20 16.53	U	1
Total Xylenes	1330-20-7	<0.000432	0.000990	0.000432	mg/kg	03.24.20 16.53	U	1
Total BTEX		<0.000205	0.000990	0.000205	mg/kg	03.24.20 16.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.24.20 16.53	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 16.53	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 16.53	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-003

Date Collected: 03.16.20 13.33

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.242	3.57	0.242	mg/kg	03.25.20 21.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.25.20 21.04			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.25.20 21.04			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-004

Date Collected: 03.16.20 14.03

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.15	9.84	0.348	mg/kg	03.23.20 18.04	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	03.24.20 06.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	03.24.20 06.06	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	121	%	65-144	03.24.20 06.06	
n-Triacontane	638-68-6	147	%	46-152	03.24.20 06.06	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.24.20 17.12	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.24.20 17.12	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.24.20 17.12	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.24.20 17.12	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.24.20 17.12	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 17.12	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.24.20 17.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.24.20 17.12	
1,2-Dichloroethane-D4	17060-07-0	111	%	53-150	03.24.20 17.12	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 17.12	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-004

Date Collected: 03.16.20 14.03

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.246	3.64	0.246	mg/kg	03.25.20 21.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	100	%	76-123	03.25.20 21.28			
a,a,a-Trifluorotoluene	98-08-8	99	%	69-120	03.25.20 21.28			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-2 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-005

Date Collected: 03.16.20 14.06

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.2	10.2	0.360	mg/kg	03.23.20 18.16		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.54	25.2	7.54	mg/kg	03.24.20 06.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.54	25.2	7.54	mg/kg	03.24.20 06.47	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	124	%	65-144	03.24.20 06.47	
n-Triacontane	638-68-6	147	%	46-152	03.24.20 06.47	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.24.20 17.30	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.24.20 17.30	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.24.20 17.30	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.24.20 17.30	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.24.20 17.30	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 17.30	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.24.20 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.24.20 17.30	
1,2-Dichloroethane-D4	17060-07-0	112	%	53-150	03.24.20 17.30	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 17.30	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-2 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-005

Date Collected: 03.16.20 14.06

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.257	3.80	0.257	mg/kg	03.25.20 21.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	100	%	76-123	03.25.20 21.52			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.25.20 21.52			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-2 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-006

Date Collected: 03.16.20 14.16

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.2	10.1	0.356	mg/kg	03.23.20 18.53		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.24.20 07.29	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.24.20 07.29	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	138	%	65-144	03.24.20 07.29	
n-Triacontane	638-68-6	165	%	46-152	03.24.20 07.29	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00100	0.000208	mg/kg	03.24.20 17.49	U	1
Toluene	108-88-3	<0.00100	0.00502	0.00100	mg/kg	03.24.20 17.49	U	1
Ethylbenzene	100-41-4	<0.000337	0.00100	0.000337	mg/kg	03.24.20 17.49	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00201	0.000438	mg/kg	03.24.20 17.49	U	1
o-Xylene	95-47-6	<0.000989	0.00100	0.000989	mg/kg	03.24.20 17.49	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 17.49	U	1
Total BTEX		<0.000208	0.00100	0.000208	mg/kg	03.24.20 17.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	53-142	03.24.20 17.49	
1,2-Dichloroethane-D4	17060-07-0	112	%	53-150	03.24.20 17.49	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 17.49	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-006

Date Collected: 03.16.20 14.16

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	03.25.20 22.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.25.20 22.16			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.25.20 22.16			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-3 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-007

Date Collected: 03.16.20 14.25

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.45	10.0	0.355	mg/kg	03.23.20 19.05	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	03.24.20 08.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	03.24.20 08.08	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	115	%	65-144	03.24.20 08.08	
n-Triacontane	638-68-6	140	%	46-152	03.24.20 08.08	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000990	0.000205	mg/kg	03.24.20 18.08	U	1
Toluene	108-88-3	<0.000990	0.00495	0.000990	mg/kg	03.24.20 18.08	U	1
Ethylbenzene	100-41-4	<0.000332	0.000990	0.000332	mg/kg	03.24.20 18.08	U	1
m,p-Xylenes	179601-23-1	<0.000432	0.00198	0.000432	mg/kg	03.24.20 18.08	U	1
o-Xylene	95-47-6	<0.000975	0.000990	0.000975	mg/kg	03.24.20 18.08	U	1
Total Xylenes	1330-20-7	<0.000432	0.000990	0.000432	mg/kg	03.24.20 18.08	U	1
Total BTEX		<0.000205	0.000990	0.000205	mg/kg	03.24.20 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	53-142	03.24.20 18.08	
1,2-Dichloroethane-D4	17060-07-0	112	%	53-150	03.24.20 18.08	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 18.08	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-007

Date Collected: 03.16.20 14.25

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	03.25.20 22.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.25.20 22.40			
a,a,a-Trifluorotoluene	98-08-8	103	%	69-120	03.25.20 22.40			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-3 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-008

Date Collected: 03.16.20 14.29

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.8	9.96	0.353	mg/kg	03.23.20 19.18		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	03.24.20 08.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	03.24.20 08.49	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	126	%	65-144	03.24.20 08.49	
n-Triacontane	638-68-6	147	%	46-152	03.24.20 08.49	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000990	0.000205	mg/kg	03.24.20 22.43	U	1
Toluene	108-88-3	<0.000990	0.00495	0.000990	mg/kg	03.24.20 22.43	U	1
Ethylbenzene	100-41-4	<0.000332	0.000990	0.000332	mg/kg	03.24.20 22.43	U	1
m,p-Xylenes	179601-23-1	<0.000432	0.00198	0.000432	mg/kg	03.24.20 22.43	U	1
o-Xylene	95-47-6	<0.000975	0.000990	0.000975	mg/kg	03.24.20 22.43	U	1
Total Xylenes	1330-20-7	<0.000432	0.000990	0.000432	mg/kg	03.24.20 22.43	U	1
Total BTEX		<0.000205	0.000990	0.000205	mg/kg	03.24.20 22.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	53-142	03.24.20 22.43	
1,2-Dichloroethane-D4	17060-07-0	113	%	53-150	03.24.20 22.43	
Toluene-D8	2037-26-5	105	%	70-130	03.24.20 22.43	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-3 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-008

Date Collected: 03.16.20 14.29

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.245	3.61	0.245	mg/kg	03.25.20 23.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	104	%	76-123	03.25.20 23.04			
a,a,a-Trifluorotoluene	98-08-8	102	%	69-120	03.25.20 23.04			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-3 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-009

Date Collected: 03.16.20 14.35

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.1	10.1	0.357	mg/kg	03.23.20 19.30		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.50	25.1	7.50	mg/kg	03.24.20 09.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.50	25.1	7.50	mg/kg	03.24.20 09.28	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	151	%	65-144	03.24.20 09.28	**
n-Triacontane	638-68-6	178	%	46-152	03.24.20 09.28	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00100	0.000208	mg/kg	03.24.20 23.02	U	1
Toluene	108-88-3	<0.00100	0.00502	0.00100	mg/kg	03.24.20 23.02	U	1
Ethylbenzene	100-41-4	<0.000337	0.00100	0.000337	mg/kg	03.24.20 23.02	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00201	0.000438	mg/kg	03.24.20 23.02	U	1
o-Xylene	95-47-6	<0.000989	0.00100	0.000989	mg/kg	03.24.20 23.02	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 23.02	U	1
Total BTEX		<0.000208	0.00100	0.000208	mg/kg	03.24.20 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.24.20 23.02	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 23.02	
Toluene-D8	2037-26-5	104	%	70-130	03.24.20 23.02	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-009

Date Collected: 03.16.20 14.35

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.255	3.76	0.255	mg/kg	03.25.20 23.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.25.20 23.28			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.25.20 23.28			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-3 (3.5-4)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-010

Date Collected: 03.16.20 14.44

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.6	9.84	0.348	mg/kg	03.23.20 19.42		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.48	25.0	7.48	mg/kg	03.24.20 10.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	03.24.20 10.08	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	142	%	65-144	03.24.20 10.08	
n-Triacontane	638-68-6	169	%	46-152	03.24.20 10.08	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.000998	0.000207	mg/kg	03.24.20 23.20	U	1
Toluene	108-88-3	<0.000998	0.00499	0.000998	mg/kg	03.24.20 23.20	U	1
Ethylbenzene	100-41-4	<0.000335	0.000998	0.000335	mg/kg	03.24.20 23.20	U	1
m,p-Xylenes	179601-23-1	<0.000436	0.00200	0.000436	mg/kg	03.24.20 23.20	U	1
o-Xylene	95-47-6	<0.000983	0.000998	0.000983	mg/kg	03.24.20 23.20	U	1
Total Xylenes	1330-20-7	<0.000436	0.000998	0.000436	mg/kg	03.24.20 23.20	U	1
Total BTEX		<0.000207	0.000998	0.000207	mg/kg	03.24.20 23.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	53-142	03.24.20 23.20	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 23.20	
Toluene-D8	2037-26-5	104	%	70-130	03.24.20 23.20	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-3 (3.5-4)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-010

Date Collected: 03.16.20 14.44

Sample Depth: 3.5 - 4 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.257	3.80	0.257	mg/kg	03.25.20 23.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	98	%	76-123	03.25.20 23.52			
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	03.25.20 23.52			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-011

Date Collected: 03.16.20 14.50

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.3	9.96	0.353	mg/kg	03.23.20 19.54		1

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000994	0.000206	mg/kg	03.24.20 23.38	U	1
Toluene	108-88-3	<0.000994	0.00497	0.000994	mg/kg	03.24.20 23.38	U	1
Ethylbenzene	100-41-4	<0.000334	0.000994	0.000334	mg/kg	03.24.20 23.38	U	1
m,p-Xylenes	179601-23-1	<0.000434	0.00199	0.000434	mg/kg	03.24.20 23.38	U	1
o-Xylene	95-47-6	<0.000979	0.000994	0.000979	mg/kg	03.24.20 23.38	U	1
Total Xylenes	1330-20-7	<0.000434	0.000994	0.000434	mg/kg	03.24.20 23.38	U	1
Total BTEX		<0.000206	0.000994	0.000206	mg/kg	03.24.20 23.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	53-142	03.24.20 23.38	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 23.38	
Toluene-D8	2037-26-5	103	%	70-130	03.24.20 23.38	

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.265	3.91	0.265	mg/kg	03.26.20 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	76-123	03.26.20 01.29	
a,a,a-Trifluorotoluene	98-08-8	102	%	69-120	03.26.20 01.29	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-4 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-012

Date Collected: 03.16.20 14.54

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.2	10.1	0.357	mg/kg	03.23.20 20.31		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	03.24.20 11.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	03.24.20 11.33	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	127	%	65-144	03.24.20 11.33	
n-Triacontane	638-68-6	154	%	46-152	03.24.20 11.33	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00101	0.000208	mg/kg	03.24.20 23.57	U	1
Toluene	108-88-3	<0.00101	0.00503	0.00101	mg/kg	03.24.20 23.57	U	1
Ethylbenzene	100-41-4	<0.000338	0.00101	0.000338	mg/kg	03.24.20 23.57	U	1
m,p-Xylenes	179601-23-1	<0.000439	0.00201	0.000439	mg/kg	03.24.20 23.57	U	1
o-Xylene	95-47-6	<0.000991	0.00101	0.000991	mg/kg	03.24.20 23.57	U	1
Total Xylenes	1330-20-7	<0.000439	0.00101	0.000439	mg/kg	03.24.20 23.57	U	1
Total BTEX		<0.000208	0.00101	0.000208	mg/kg	03.24.20 23.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	53-142	03.24.20 23.57	
1,2-Dichloroethane-D4	17060-07-0	113	%	53-150	03.24.20 23.57	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 23.57	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-4 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-012

Date Collected: 03.16.20 14.54

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.269	3.98	0.269	mg/kg	03.26.20 01.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	107	%	76-123	03.26.20 01.54			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.26.20 01.54			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-4 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-013

Date Collected: 03.16.20 15.00

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.7	10.0	0.355	mg/kg	03.23.20 20.43		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.56	25.3	7.56	mg/kg	03.24.20 12.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.56	25.3	7.56	mg/kg	03.24.20 12.18	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	134	%	65-144	03.24.20 12.18	
n-Triacontane	638-68-6	161	%	46-152	03.24.20 12.18	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.25.20 00.16	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.25.20 00.16	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.25.20 00.16	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.25.20 00.16	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.25.20 00.16	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 00.16	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.25.20 00.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	106	%	53-142	03.25.20 00.16	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.25.20 00.16	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 00.16	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-013

Date Collected: 03.16.20 15.00

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.250	3.68	0.250	mg/kg	03.26.20 02.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	105	%	76-123	03.26.20 02.18			
a,a,a-Trifluorotoluene	98-08-8	101	%	69-120	03.26.20 02.18			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-4 (3.5-4)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-014

Date Collected: 03.16.20 15.07

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	9.84	0.348	mg/kg	03.23.20 21.20		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.55	25.2	7.55	mg/kg	03.24.20 13.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.55	25.2	7.55	mg/kg	03.24.20 13.01	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	121	%	65-144	03.24.20 13.01	
n-Triacontane	638-68-6	146	%	46-152	03.24.20 13.01	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000996	0.000206	mg/kg	03.25.20 00.34	U	1
Toluene	108-88-3	<0.000996	0.00498	0.000996	mg/kg	03.25.20 00.34	U	1
Ethylbenzene	100-41-4	<0.000334	0.000996	0.000334	mg/kg	03.25.20 00.34	U	1
m,p-Xylenes	179601-23-1	<0.000435	0.00199	0.000435	mg/kg	03.25.20 00.34	U	1
o-Xylene	95-47-6	<0.000981	0.000996	0.000981	mg/kg	03.25.20 00.34	U	1
Total Xylenes	1330-20-7	<0.000435	0.000996	0.000435	mg/kg	03.25.20 00.34	U	1
Total BTEX		<0.000206	0.000996	0.000206	mg/kg	03.25.20 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.25.20 00.34	
1,2-Dichloroethane-D4	17060-07-0	113	%	53-150	03.25.20 00.34	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 00.34	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-014

Date Collected: 03.16.20 15.07

Sample Depth: 3.5 - 4 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.270	3.98	0.270	mg/kg	03.26.20 02.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	107	%	76-123	03.26.20 02.42			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.26.20 02.42			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-1 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-015

Date Collected: 03.16.20 15.39

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.19	9.96	0.353	mg/kg	03.23.20 21.32	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.24.20 13.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.24.20 13.44	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	155	%	65-144	03.24.20 13.44	**
n-Triacontane	638-68-6	186	%	46-152	03.24.20 13.44	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.25.20 00.53	U	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.25.20 00.53	U	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.25.20 00.53	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.25.20 00.53	U	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.25.20 00.53	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 00.53	U	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.25.20 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	53-142	03.25.20 00.53	
1,2-Dichloroethane-D4	17060-07-0	109	%	53-150	03.25.20 00.53	
Toluene-D8	2037-26-5	104	%	70-130	03.25.20 00.53	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-1 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-015

Date Collected: 03.16.20 15.39

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.260	3.83	0.260	mg/kg	03.26.20 03.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	99	%	76-123	03.26.20 03.07			
a,a,a-Trifluorotoluene	98-08-8	94	%	69-120	03.26.20 03.07			



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Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-1 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-016

Date Collected: 03.16.20 15.52

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.8	9.98	0.353	mg/kg	03.23.20 21.44		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	03.24.20 14.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	03.24.20 14.28	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	128	%	65-144	03.24.20 14.28	
n-Triacontane	638-68-6	149	%	46-152	03.24.20 14.28	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000996	0.000206	mg/kg	03.25.20 01.11	U	1
Toluene	108-88-3	<0.000996	0.00498	0.000996	mg/kg	03.25.20 01.11	U	1
Ethylbenzene	100-41-4	<0.000334	0.000996	0.000334	mg/kg	03.25.20 01.11	U	1
m,p-Xylenes	179601-23-1	<0.000435	0.00199	0.000435	mg/kg	03.25.20 01.11	U	1
o-Xylene	95-47-6	<0.000981	0.000996	0.000981	mg/kg	03.25.20 01.11	U	1
Total Xylenes	1330-20-7	<0.000435	0.000996	0.000435	mg/kg	03.25.20 01.11	U	1
Total BTEX		<0.000206	0.000996	0.000206	mg/kg	03.25.20 01.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	53-142	03.25.20 01.11	
1,2-Dichloroethane-D4	17060-07-0	117	%	53-150	03.25.20 01.11	
Toluene-D8	2037-26-5	104	%	70-130	03.25.20 01.11	



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Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-1 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-016

Date Collected: 03.16.20 15.52

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.260	3.83	0.260	mg/kg	03.26.20 03.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	106	%	76-123	03.26.20 03.31			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.26.20 03.31			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-5 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-017

Date Collected: 03.16.20 16.04

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.84	10.0	0.355	mg/kg	03.23.20 21.57	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 11.15

Basis: Wet Weight

Seq Number: 3120961

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.42	24.8	7.42	mg/kg	03.24.20 15.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.42	24.8	7.42	mg/kg	03.24.20 15.11	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	140	%	65-144	03.24.20 15.11	
n-Triacontane	638-68-6	170	%	46-152	03.24.20 15.11	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000994	0.000206	mg/kg	03.25.20 01.30	U	1
Toluene	108-88-3	<0.000994	0.00497	0.000994	mg/kg	03.25.20 01.30	U	1
Ethylbenzene	100-41-4	<0.000334	0.000994	0.000334	mg/kg	03.25.20 01.30	U	1
m,p-Xylenes	179601-23-1	<0.000434	0.00199	0.000434	mg/kg	03.25.20 01.30	U	1
o-Xylene	95-47-6	<0.000979	0.000994	0.000979	mg/kg	03.25.20 01.30	U	1
Total Xylenes	1330-20-7	<0.000434	0.000994	0.000434	mg/kg	03.25.20 01.30	U	1
Total BTEX		<0.000206	0.000994	0.000206	mg/kg	03.25.20 01.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	53-142	03.25.20 01.30	
1,2-Dichloroethane-D4	17060-07-0	106	%	53-150	03.25.20 01.30	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 01.30	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-017

Date Collected: 03.16.20 16.04

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.261	3.85	0.261	mg/kg	03.26.20 03.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	94	%	76-123	03.26.20 03.56			
a,a,a-Trifluorotoluene	98-08-8	95	%	69-120	03.26.20 03.56			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-5 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-018

Date Collected: 03.16.20 16.09

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.9	10.2	0.360	mg/kg	03.23.20 22.09		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	03.24.20 23.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	03.24.20 23.32	ULX	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	140	%	65-144	03.24.20 23.32	
n-Triacontane	638-68-6	155	%	46-152	03.24.20 23.32	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000994	0.000206	mg/kg	03.25.20 01.49	U	1
Toluene	108-88-3	<0.000994	0.00497	0.000994	mg/kg	03.25.20 01.49	U	1
Ethylbenzene	100-41-4	<0.000334	0.000994	0.000334	mg/kg	03.25.20 01.49	U	1
m,p-Xylenes	179601-23-1	<0.000434	0.00199	0.000434	mg/kg	03.25.20 01.49	U	1
o-Xylene	95-47-6	<0.000979	0.000994	0.000979	mg/kg	03.25.20 01.49	U	1
Total Xylenes	1330-20-7	<0.000434	0.000994	0.000434	mg/kg	03.25.20 01.49	U	1
Total BTEX		<0.000206	0.000994	0.000206	mg/kg	03.25.20 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.25.20 01.49	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.25.20 01.49	
Toluene-D8	2037-26-5	103	%	70-130	03.25.20 01.49	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-5 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-018

Date Collected: 03.16.20 16.09

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.236	3.48	0.236	mg/kg	03.26.20 04.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	90	%	76-123	03.26.20 04.20			
a,a,a-Trifluorotoluene	98-08-8	89	%	69-120	03.26.20 04.20			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-5 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-019

Date Collected: 03.16.20 16.17

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.0	10.0	0.355	mg/kg	03.23.20 22.21		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	03.25.20 02.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	03.25.20 02.24	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	126	%	65-144	03.25.20 02.24	
n-Triacontane	638-68-6	137	%	46-152	03.25.20 02.24	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000990	0.000205	mg/kg	03.25.20 02.07	U	1
Toluene	108-88-3	<0.000990	0.00495	0.000990	mg/kg	03.25.20 02.07	U	1
Ethylbenzene	100-41-4	<0.000332	0.000990	0.000332	mg/kg	03.25.20 02.07	U	1
m,p-Xylenes	179601-23-1	<0.000432	0.00198	0.000432	mg/kg	03.25.20 02.07	U	1
o-Xylene	95-47-6	<0.000975	0.000990	0.000975	mg/kg	03.25.20 02.07	U	1
Total Xylenes	1330-20-7	<0.000432	0.000990	0.000432	mg/kg	03.25.20 02.07	U	1
Total BTEX		<0.000205	0.000990	0.000205	mg/kg	03.25.20 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	110	%	53-142	03.25.20 02.07	
1,2-Dichloroethane-D4	17060-07-0	117	%	53-150	03.25.20 02.07	
Toluene-D8	2037-26-5	104	%	70-130	03.25.20 02.07	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

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

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-019

Date Collected: 03.16.20 16.17

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.248	3.66	0.248	mg/kg	03.26.20 04.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	108	%	76-123	03.26.20 04.44			
a,a,a-Trifluorotoluene	98-08-8	108	%	69-120	03.26.20 04.44			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HS-5 (3.5-4)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-020

Date Collected: 03.16.20 16.22

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture: 0

Analyst: JYM

Date Prep: 03.23.20 16.04

Basis: Dry Weight

Seq Number: 3120662

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.4	9.88	0.350	mg/kg	03.23.20 22.33		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	03.25.20 03.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	03.25.20 03.08	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	135	%	65-144	03.25.20 03.08	
n-Triacontane	638-68-6	150	%	46-152	03.25.20 03.08	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.000998	0.000207	mg/kg	03.25.20 02.25	U	1
Toluene	108-88-3	<0.000998	0.00499	0.000998	mg/kg	03.25.20 02.25	U	1
Ethylbenzene	100-41-4	<0.000335	0.000998	0.000335	mg/kg	03.25.20 02.25	U	1
m,p-Xylenes	179601-23-1	<0.000436	0.00200	0.000436	mg/kg	03.25.20 02.25	U	1
o-Xylene	95-47-6	<0.000983	0.000998	0.000983	mg/kg	03.25.20 02.25	U	1
Total Xylenes	1330-20-7	<0.000436	0.000998	0.000436	mg/kg	03.25.20 02.25	U	1
Total BTEX		<0.000207	0.000998	0.000207	mg/kg	03.25.20 02.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	53-142	03.25.20 02.25	
1,2-Dichloroethane-D4	17060-07-0	112	%	53-150	03.25.20 02.25	
Toluene-D8	2037-26-5	103	%	70-130	03.25.20 02.25	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HS-5 (3.5-4)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-020

Date Collected: 03.16.20 16.22

Sample Depth: 3.5 - 4 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120974

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.95	0.268	mg/kg	03.26.20 05.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	107	%	76-123	03.26.20 05.08			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.26.20 05.08			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-021

Date Collected: 03.16.20 16.32

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.23.20 14.41

Basis: Wet Weight

Seq Number: 3120665

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.65	9.84	0.348	mg/kg	03.23.20 20.33	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.52	25.1	7.52	mg/kg	03.25.20 03.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.52	25.1	7.52	mg/kg	03.25.20 03.51	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	133	%	65-144	03.25.20 03.51	
n-Triacontane	638-68-6	146	%	46-152	03.25.20 03.51	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00100	0.000208	mg/kg	03.24.20 11.43	U	1
Toluene	108-88-3	<0.00100	0.00502	0.00100	mg/kg	03.24.20 11.43	U	1
Ethylbenzene	100-41-4	<0.000337	0.00100	0.000337	mg/kg	03.24.20 11.43	U	1
m,p-Xylenes	179601-23-1	<0.000438	0.00201	0.000438	mg/kg	03.24.20 11.43	U	1
o-Xylene	95-47-6	<0.000989	0.00100	0.000989	mg/kg	03.24.20 11.43	U	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.24.20 11.43	U	1
Total BTEX		<0.000208	0.00100	0.000208	mg/kg	03.24.20 11.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	53-142	03.24.20 11.43	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 11.43	
Toluene-D8	2037-26-5	106	%	70-130	03.24.20 11.43	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-021

Date Collected: 03.16.20 16.32

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.258	3.81	0.258	mg/kg	03.26.20 18.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	111	%	76-123	03.26.20 18.27			
a,a,a-Trifluorotoluene	98-08-8	108	%	69-120	03.26.20 18.27			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-022

Date Collected: 03.16.20 16.37

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.23.20 14.41

Basis: Wet Weight

Seq Number: 3120665

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.3	9.90	0.350	mg/kg	03.23.20 20.45		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.1	7.49	mg/kg	03.25.20 04.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.1	7.49	mg/kg	03.25.20 04.36	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	131	%	65-144	03.25.20 04.36	
n-Triacontane	638-68-6	147	%	46-152	03.25.20 04.36	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000994	0.000206	mg/kg	03.24.20 12.01	U	1
Toluene	108-88-3	<0.000994	0.00497	0.000994	mg/kg	03.24.20 12.01	U	1
Ethylbenzene	100-41-4	<0.000334	0.000994	0.000334	mg/kg	03.24.20 12.01	U	1
m,p-Xylenes	179601-23-1	<0.000434	0.00199	0.000434	mg/kg	03.24.20 12.01	U	1
o-Xylene	95-47-6	<0.000979	0.000994	0.000979	mg/kg	03.24.20 12.01	U	1
Total Xylenes	1330-20-7	<0.000434	0.000994	0.000434	mg/kg	03.24.20 12.01	U	1
Total BTEX		<0.000206	0.000994	0.000206	mg/kg	03.24.20 12.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	53-142	03.24.20 12.01	
1,2-Dichloroethane-D4	17060-07-0	110	%	53-150	03.24.20 12.01	
Toluene-D8	2037-26-5	107	%	70-130	03.24.20 12.01	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-022

Date Collected: 03.16.20 16.37

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.250	3.68	0.250	mg/kg	03.26.20 20.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	102	%	76-123	03.26.20 20.04			
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	03.26.20 20.04			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-023

Date Collected: 03.16.20 16.44

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.23.20 14.41

Basis: Wet Weight

Seq Number: 3120665

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.60	10.0	0.355	mg/kg	03.23.20 20.57	J	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.47	25.0	7.47	mg/kg	03.25.20 05.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.47	25.0	7.47	mg/kg	03.25.20 05.21	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	143	%	65-144	03.25.20 05.21	
n-Triacontane	638-68-6	161	%	46-152	03.25.20 05.21	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.000998	0.000207	mg/kg	03.24.20 12.31	U	1
Toluene	108-88-3	<0.000998	0.00499	0.000998	mg/kg	03.24.20 12.31	U	1
Ethylbenzene	100-41-4	<0.000335	0.000998	0.000335	mg/kg	03.24.20 12.31	U	1
m,p-Xylenes	179601-23-1	<0.000436	0.00200	0.000436	mg/kg	03.24.20 12.31	U	1
o-Xylene	95-47-6	<0.000983	0.000998	0.000983	mg/kg	03.24.20 12.31	U	1
Total Xylenes	1330-20-7	<0.000436	0.000998	0.000436	mg/kg	03.24.20 12.31	U	1
Total BTEX		<0.000207	0.000998	0.000207	mg/kg	03.24.20 12.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	104	%	53-142	03.24.20 12.31	
1,2-Dichloroethane-D4	17060-07-0	112	%	53-150	03.24.20 12.31	
Toluene-D8	2037-26-5	108	%	70-130	03.24.20 12.31	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-023

Date Collected: 03.16.20 16.44

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.258	3.80	0.258	mg/kg	03.26.20 20.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	103	%	76-123	03.26.20 20.27			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.26.20 20.27			



Certificate of Analytical Results 656398



Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (3.5-4)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-024

Date Collected: 03.16.20 17.19

Sample Depth: 3.5 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.23.20 14.41

Basis: Wet Weight

Seq Number: 3120665

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.5	9.98	0.353	mg/kg	03.23.20 21.10		1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.23.20 12.00

Basis: Wet Weight

Seq Number: 3120963

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.44	24.9	7.44	mg/kg	03.25.20 06.03	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.44	24.9	7.44	mg/kg	03.25.20 06.03	UL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	133	%	65-144	03.25.20 06.03	
n-Triacontane	638-68-6	154	%	46-152	03.25.20 06.03	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.24.20 11.00

Basis: Wet Weight

Seq Number: 3120750

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000990	0.000205	mg/kg	03.24.20 12.50	U	1
Toluene	108-88-3	<0.000990	0.00495	0.000990	mg/kg	03.24.20 12.50	U	1
Ethylbenzene	100-41-4	<0.000332	0.000990	0.000332	mg/kg	03.24.20 12.50	U	1
m,p-Xylenes	179601-23-1	<0.000432	0.00198	0.000432	mg/kg	03.24.20 12.50	U	1
o-Xylene	95-47-6	<0.000975	0.000990	0.000975	mg/kg	03.24.20 12.50	U	1
Total Xylenes	1330-20-7	<0.000432	0.000990	0.000432	mg/kg	03.24.20 12.50	U	1
Total BTEX		<0.000205	0.000990	0.000205	mg/kg	03.24.20 12.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	53-142	03.24.20 12.50	
1,2-Dichloroethane-D4	17060-07-0	108	%	53-150	03.24.20 12.50	
Toluene-D8	2037-26-5	104	%	70-130	03.24.20 12.50	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: TXCS-2 (3.5-4)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-024

Date Collected: 03.16.20 17.19

Sample Depth: 3.5 - 4 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.234	3.45	0.234	mg/kg	03.26.20 20.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	104	%	76-123	03.26.20 20.51			
a,a,a-Trifluorotoluene	98-08-8	99	%	69-120	03.26.20 20.51			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-12 (0-0.5)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-025

Date Collected: 02.06.20 15.25

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.98	9.96	0.353	mg/kg	03.25.20 11.43	JK	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	13.1	25.0	7.48	mg/kg	03.26.20 21.06	JK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.48	25.0	7.48	mg/kg	03.26.20 21.06	UKLX	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	160	%	65-144	03.26.20 21.06	**
n-Triacontane	638-68-6	182	%	46-152	03.26.20 21.06	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.25.20 02.44	UK	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.25.20 02.44	UK	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.25.20 02.44	UK	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.25.20 02.44	UK	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.25.20 02.44	UK	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 02.44	UK	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.25.20 02.44	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	53-142	03.25.20 02.44	
1,2-Dichloroethane-D4	17060-07-0	109	%	53-150	03.25.20 02.44	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 02.44	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-12 (0-0.5)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-025

Date Collected: 02.06.20 15.25

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	0.546	3.56	0.241	mg/kg	03.26.20 21.16	JK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	111	%	76-123	03.26.20 21.16			
a,a,a-Trifluorotoluene	98-08-8	104	%	69-120	03.26.20 21.16			



Certificate of Analytical Results 656398



Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-12 (0.5-1)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-026

Date Collected: 02.06.20 15.35

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.03	10.0	0.355	mg/kg	03.25.20 12.20	JK	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	03.27.20 14.15	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	03.27.20 14.15	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	124	%	65-144	03.27.20 14.15	
n-Triacontane	638-68-6	132	%	46-152	03.27.20 14.15	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000205	0.000992	0.000205	mg/kg	03.25.20 03.03	UK	1
Toluene	108-88-3	<0.000992	0.00496	0.000992	mg/kg	03.25.20 03.03	UK	1
Ethylbenzene	100-41-4	<0.000333	0.000992	0.000333	mg/kg	03.25.20 03.03	UK	1
m,p-Xylenes	179601-23-1	<0.000433	0.00198	0.000433	mg/kg	03.25.20 03.03	UK	1
o-Xylene	95-47-6	<0.000977	0.000992	0.000977	mg/kg	03.25.20 03.03	UK	1
Total Xylenes	1330-20-7	<0.000433	0.000992	0.000433	mg/kg	03.25.20 03.03	UK	1
Total BTEX		<0.000205	0.000992	0.000205	mg/kg	03.25.20 03.03	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	109	%	53-142	03.25.20 03.03	
1,2-Dichloroethane-D4	17060-07-0	113	%	53-150	03.25.20 03.03	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 03.03	



Certificate of Analytical Results 656398



Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-12 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-026

Date Collected: 02.06.20 15.35

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.244	3.60	0.244	mg/kg	03.26.20 21.40	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	107	%	76-123	03.26.20 21.40			
a,a,a-Trifluorotoluene	98-08-8	108	%	69-120	03.26.20 21.40			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-12 (1.5-2)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-027

Date Collected: 02.06.20 15.45

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	9.96	0.353	mg/kg	03.25.20 12.33	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.53	25.2	7.53	mg/kg	03.27.20 00.32	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.53	25.2	7.53	mg/kg	03.27.20 00.32	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	127	%	65-144	03.27.20 00.32	
n-Triacontane	638-68-6	150	%	46-152	03.27.20 00.32	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.25.20 03.21	UK	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.25.20 03.21	UK	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.25.20 03.21	UK	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.25.20 03.21	UK	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.25.20 03.21	UK	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 03.21	UK	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.25.20 03.21	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	53-142	03.25.20 03.21	
1,2-Dichloroethane-D4	17060-07-0	108	%	53-150	03.25.20 03.21	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 03.21	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-12 (1.5-2)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-027

Date Collected: 02.06.20 15.45

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.268	3.96	0.268	mg/kg	03.26.20 22.04	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	109	%	76-123	03.26.20 22.04			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.26.20 22.04			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: HA-13 (0-0.5)

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-028

Date Collected: 02.06.20 14.55

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.7	9.84	0.348	mg/kg	03.25.20 12.45	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.46	24.9	7.46	mg/kg	03.27.20 01.15	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.46	24.9	7.46	mg/kg	03.27.20 01.15	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	96	%	65-144	03.27.20 01.15	
n-Triacontane	638-68-6	119	%	46-152	03.27.20 01.15	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000209	0.00101	0.000209	mg/kg	03.25.20 03.40	UK	1
Toluene	108-88-3	<0.00101	0.00504	0.00101	mg/kg	03.25.20 03.40	UK	1
Ethylbenzene	100-41-4	<0.000338	0.00101	0.000338	mg/kg	03.25.20 03.40	UK	1
m,p-Xylenes	179601-23-1	<0.000440	0.00202	0.000440	mg/kg	03.25.20 03.40	UK	1
o-Xylene	95-47-6	<0.000993	0.00101	0.000993	mg/kg	03.25.20 03.40	UK	1
Total Xylenes	1330-20-7	<0.000440	0.00101	0.000440	mg/kg	03.25.20 03.40	UK	1
Total BTEX		<0.000209	0.00101	0.000209	mg/kg	03.25.20 03.40	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	53-142	03.25.20 03.40	
1,2-Dichloroethane-D4	17060-07-0	108	%	53-150	03.25.20 03.40	
Toluene-D8	2037-26-5	106	%	70-130	03.25.20 03.40	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-13 (0-0.5)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-028

Date Collected: 02.06.20 14.55

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.251	3.71	0.251	mg/kg	03.26.20 22.29	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	108	%	76-123	03.26.20 22.29			
a,a,a-Trifluorotoluene	98-08-8	108	%	69-120	03.26.20 22.29			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-13 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-029

Date Collected: 02.06.20 15.05

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.2	10.0	0.355	mg/kg	03.25.20 12.57	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.49	25.0	7.49	mg/kg	03.27.20 11.49	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.49	25.0	7.49	mg/kg	03.27.20 11.49	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	120	%	65-144	03.27.20 11.49	
n-Triacontane	638-68-6	130	%	46-152	03.27.20 11.49	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000207	0.00100	0.000207	mg/kg	03.25.20 03.58	UK	1
Toluene	108-88-3	<0.00100	0.00501	0.00100	mg/kg	03.25.20 03.58	UK	1
Ethylbenzene	100-41-4	<0.000336	0.00100	0.000336	mg/kg	03.25.20 03.58	UK	1
m,p-Xylenes	179601-23-1	<0.000438	0.00200	0.000438	mg/kg	03.25.20 03.58	UK	1
o-Xylene	95-47-6	<0.000987	0.00100	0.000987	mg/kg	03.25.20 03.58	UK	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 03.58	UK	1
Total BTEX		<0.000207	0.00100	0.000207	mg/kg	03.25.20 03.58	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	109	%	53-142	03.25.20 03.58	
1,2-Dichloroethane-D4	17060-07-0	115	%	53-150	03.25.20 03.58	
Toluene-D8	2037-26-5	103	%	70-130	03.25.20 03.58	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-13 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-029

Date Collected: 02.06.20 15.05

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	03.26.20 22.53	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	110	%	76-123	03.26.20 22.53			
a,a,a-Trifluorotoluene	98-08-8	106	%	69-120	03.26.20 22.53			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-13 (1.5-2)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-030

Date Collected: 02.06.20 15.15

Sample Depth: 1.5 - 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.3	9.88	0.350	mg/kg	03.25.20 13.34	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.27.20 12.25	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.27.20 12.25	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	139	%	65-144	03.27.20 12.25	
n-Triacontane	638-68-6	130	%	46-152	03.27.20 12.25	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00100	0.000208	mg/kg	03.25.20 04.17	UK	1
Toluene	108-88-3	<0.00100	0.00502	0.00100	mg/kg	03.25.20 04.17	UK	1
Ethylbenzene	100-41-4	<0.000337	0.00100	0.000337	mg/kg	03.25.20 04.17	UK	1
m,p-Xylenes	179601-23-1	<0.000438	0.00201	0.000438	mg/kg	03.25.20 04.17	UK	1
o-Xylene	95-47-6	<0.000989	0.00100	0.000989	mg/kg	03.25.20 04.17	UK	1
Total Xylenes	1330-20-7	<0.000438	0.00100	0.000438	mg/kg	03.25.20 04.17	UK	1
Total BTEX		<0.000208	0.00100	0.000208	mg/kg	03.25.20 04.17	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	109	%	53-142	03.25.20 04.17	
1,2-Dichloroethane-D4	17060-07-0	111	%	53-150	03.25.20 04.17	
Toluene-D8	2037-26-5	104	%	70-130	03.25.20 04.17	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-13 (1.5-2)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-030

Date Collected: 02.06.20 15.15

Sample Depth: 1.5 - 2 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.259	3.82	0.259	mg/kg	03.26.20 23.17	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	99	%	76-123	03.26.20 23.17			
a,a,a-Trifluorotoluene	98-08-8	98	%	69-120	03.26.20 23.17			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-14 (0-0.5)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-031

Date Collected: 02.06.20 14.39

Sample Depth: 0 - 0.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.8	9.98	0.353	mg/kg	03.25.20 13.47	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.45	24.9	7.45	mg/kg	03.27.20 13.00	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.45	24.9	7.45	mg/kg	03.27.20 13.00	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	145	%	65-144	03.27.20 13.00	**
n-Triacontane	638-68-6	159	%	46-152	03.27.20 13.00	**

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: CRL

% Moisture:

Analyst: CRL

Date Prep: 03.24.20 16.00

Basis: Wet Weight

Seq Number: 3120824

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000206	0.000994	0.000206	mg/kg	03.25.20 04.36	UK	1
Toluene	108-88-3	<0.000994	0.00497	0.000994	mg/kg	03.25.20 04.36	UK	1
Ethylbenzene	100-41-4	<0.000334	0.000994	0.000334	mg/kg	03.25.20 04.36	UK	1
m,p-Xylenes	179601-23-1	<0.000434	0.00199	0.000434	mg/kg	03.25.20 04.36	UK	1
o-Xylene	95-47-6	<0.000979	0.000994	0.000979	mg/kg	03.25.20 04.36	UK	1
Total Xylenes	1330-20-7	<0.000434	0.000994	0.000434	mg/kg	03.25.20 04.36	UK	1
Total BTEX		<0.000206	0.000994	0.000206	mg/kg	03.25.20 04.36	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	53-142	03.25.20 04.36	
1,2-Dichloroethane-D4	17060-07-0	111	%	53-150	03.25.20 04.36	
Toluene-D8	2037-26-5	105	%	70-130	03.25.20 04.36	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-14 (0-0.5)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-031

Date Collected: 02.06.20 14.39

Sample Depth: 0 - 0.5 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.253	3.74	0.253	mg/kg	03.27.20 00.54	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	109	%	76-123	03.27.20 00.54			
a,a,a-Trifluorotoluene	98-08-8	105	%	69-120	03.27.20 00.54			



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-14 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-032

Date Collected: 02.06.20 14.45

Sample Depth: 0.5 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 03.25.20 11.30

Basis: Wet Weight

Seq Number: 3120893

SUB: T104704215-19-30

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.8	10.0	0.354	mg/kg	03.25.20 13.59	K	1

Analytical Method: DRO-ORO By SW8015B

Prep Method: SW8015P

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.24.20 10.10

Basis: Wet Weight

Seq Number: 3121335

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Diesel Range Organics (DRO)	C10C28DRO	<7.51	25.1	7.51	mg/kg	03.27.20 13.38	UK	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<7.51	25.1	7.51	mg/kg	03.27.20 13.38	UKL	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Tricosane	638-67-5	118	%	65-144	03.27.20 13.38	
n-Triacontane	638-68-6	135	%	46-152	03.27.20 13.38	

Analytical Method: BTEX by SW 8260C

Prep Method: SW5035A

Tech: NAL

% Moisture:

Analyst: NAL

Date Prep: 03.25.20 08.00

Basis: Wet Weight

Seq Number: 3120885

SUB: T104704215-19-30

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000208	0.00101	0.000208	mg/kg	03.25.20 12.23	UK	1
Toluene	108-88-3	<0.00101	0.00503	0.00101	mg/kg	03.25.20 12.23	UK	1
Ethylbenzene	100-41-4	<0.000338	0.00101	0.000338	mg/kg	03.25.20 12.23	UKXF	1
m,p-Xylenes	179601-23-1	<0.000439	0.00201	0.000439	mg/kg	03.25.20 12.23	UKXF	1
o-Xylene	95-47-6	<0.000991	0.00101	0.000991	mg/kg	03.25.20 12.23	UKXF	1
Total Xylenes	1330-20-7	<0.000439	0.00101	0.000439	mg/kg	03.25.20 12.23	UK	1
Total BTEX		<0.000208	0.00101	0.000208	mg/kg	03.25.20 12.23	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	108	%	53-142	03.25.20 12.23	
1,2-Dichloroethane-D4	17060-07-0	111	%	53-150	03.25.20 12.23	
Toluene-D8	2037-26-5	107	%	70-130	03.25.20 12.23	



Certificate of Analytical Results 656398

Terracon-Lubbock, Lubbock, TX

Stella Blue

Sample Id: **HA-14 (0.5-1)**

Matrix: Soil

Date Received: 03.20.20 11.10

Lab Sample Id: 656398-032

Date Collected: 02.06.20 14.45

Sample Depth: 0.5 - 1 ft

Analytical Method: TPH GRO by EPA 8015 Mod.

Prep Method: SW5030B

Tech: MIT

% Moisture:

Analyst: MIT

Date Prep: 03.26.20 13.00

Basis: Wet Weight

Seq Number: 3121109

Draft

Parameter	Cas Number	Result	RL	MDL	Units	Analysis Date	Flag	Dil
TPH-GRO	8006-61-9	<0.264	3.89	0.264	mg/kg	03.27.20 01.18	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
4-Bromofluorobenzene	460-00-4	99	%	76-123	03.27.20 01.18			
a,a,a-Trifluorotoluene	98-08-8	97	%	69-120	03.27.20 01.18			



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Terracon-Lubbock Stella Blue

Analytical Method: Chloride by EPA 300

Seq Number: 3120665

MB Sample Id: 7699524-1-BLK

Matrix: Solid

LCS Sample Id: 7699524-1-BKS

Prep Method: E300P

Date Prep: 03.23.20

LCSD Sample Id: 7699524-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	105	105	104	104	80-120	1	20	mg/kg	03.23.20 19:31	

Draft

Analytical Method: Chloride by EPA 300

Seq Number: 3120662

MB Sample Id: 7699538-1-BLK

Matrix: Solid

LCS Sample Id: 7699538-1-BKS

Prep Method: E300P

Date Prep: 03.23.20

LCSD Sample Id: 7699538-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	107	107	107	107	80-120	0	20	mg/kg	03.23.20 16:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3120893

MB Sample Id: 7699686-1-BLK

Matrix: Solid

LCS Sample Id: 7699686-1-BKS

Prep Method: E300P

Date Prep: 03.25.20

LCSD Sample Id: 7699686-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	104	104	104	104	80-120	0	20	mg/kg	03.25.20 11:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3120665

Parent Sample Id: 656400-003

Matrix: Soil

MS Sample Id: 656400-003 S

Prep Method: E300P

Date Prep: 03.23.20

MSD Sample Id: 656400-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.5	100	113	99	112	98	80-120	1	20	mg/kg	03.23.20 22:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3120665

Parent Sample Id: 656463-009

Matrix: Soil

MS Sample Id: 656463-009 S

Prep Method: E300P

Date Prep: 03.23.20

MSD Sample Id: 656463-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2330	99.4	2410	80	2430	100	80-120	1	20	mg/kg	03.23.20 20:08	

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

Stella Blue

Analytical Method: Chloride by EPA 300

Seq Number: 3120662

Parent Sample Id: 656398-001

Matrix: Soil

MS Sample Id: 656398-001 S

Prep Method: E300P

Date Prep: 03.23.20

MSD Sample Id: 656398-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.3	100	115	105	115	105	80-120	0	20	mg/kg	03.23.20 17:15	

Draft

Analytical Method: Chloride by EPA 300

Seq Number: 3120662

Parent Sample Id: 656398-011

Matrix: Soil

MS Sample Id: 656398-011 S

Prep Method: E300P

Date Prep: 03.23.20

MSD Sample Id: 656398-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.3	100	115	105	115	105	80-120	0	20	mg/kg	03.23.20 20:07	

Analytical Method: Chloride by EPA 300

Seq Number: 3120893

Parent Sample Id: 654904-005

Matrix: Soil

MS Sample Id: 654904-005 S

Prep Method: SW9056P

Date Prep: 03.25.20

MSD Sample Id: 654904-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5760	110	5890	118	5880	109	80-120	0	20	mg/kg	03.25.20 17:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3120893

Parent Sample Id: 656398-025

Matrix: Soil

MS Sample Id: 656398-025 S

Prep Method: E300P

Date Prep: 03.25.20

MSD Sample Id: 656398-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.98	99.8	105	97	105	97	80-120	0	20	mg/kg	03.25.20 11:56	

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3120961

MB Sample Id: 7699760-1-BLK

Matrix: Solid

LCS Sample Id: 7699760-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.20

LCSD Sample Id: 7699760-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	102	102	116	116	63-139	13	20	mg/kg	03.23.20 19:22	
Oil Range Hydrocarbons (ORO)	<7.48	100	<7.48	0	<7.48	0	63-139	NC	20	mg/kg	03.23.20 19:22	L

Surrogate

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Tricosane	138		143		129		65-144	%	03.23.20 19:22
n-Triacontane	147		150		136		46-152	%	03.23.20 19:22

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

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

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

Stella Blue

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3120963

MB Sample Id: 7699761-1-BLK

Matrix: Solid

LCS Sample Id: 7699761-1-BKS

Prep Method: SW8015P

Date Prep: 03.23.20

LCSD Sample Id: 7699761-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	108	108	91.2	91	63-139	17	20	mg/kg	03.24.20 19:18	
Oil Range Hydrocarbons (ORO)	<7.48	100	<7.48	0	<7.48	0	63-139	NC	20	mg/kg	03.24.20 19:18	L
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
Tricosane	128		136		136		65-144	%	03.24.20 19:18			
n-Triacontane	144		152		150		46-152	%	03.24.20 19:18			

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3121335

MB Sample Id: 7700046-1-BLK

Matrix: Solid

LCS Sample Id: 7700046-1-BKS

Prep Method: SW8015P

Date Prep: 03.24.20

LCSD Sample Id: 7700046-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.48	100	111	111	95.4	95	63-139	15	20	mg/kg	03.27.20 15:49	
Oil Range Hydrocarbons (ORO)	<7.48	100	<7.48	0	<7.48	0	63-139	NC	20	mg/kg	03.27.20 15:49	L
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
Tricosane	136		155	**	142		65-144	%	03.27.20 15:49			
n-Triacontane	150		165	**	156	**	46-152	%	03.27.20 15:49			

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3120961

Parent Sample Id: 656224-001

Matrix: Soil

MS Sample Id: 656224-001 S

Prep Method: SW8015P

Date Prep: 03.23.20

MSD Sample Id: 656224-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.56	101	120	119	123	123	63-139	2	20	mg/kg	03.24.20 00:24	
Oil Range Hydrocarbons (ORO)	<7.56	101	<7.56	0	<7.46	0	63-139	NC	20	mg/kg	03.24.20 00:24	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
Tricosane			112		128		65-144	%	03.24.20 00:24			
n-Triacontane			121		141		46-152	%	03.24.20 00:24			

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

Stella Blue

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3120963

Parent Sample Id: 656398-018

Matrix: Soil

MS Sample Id: 656398-018 S

Prep Method: SW8015P

Date Prep: 03.23.20

MSD Sample Id: 656398-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	<7.42	99.2	97.6	98	107	107	63-139	9	20	mg/kg	03.25.20 00:14	
Oil Range Hydrocarbons (ORO)	<7.42	99.2	<7.42	0	<7.47	0	63-139	NC	20	mg/kg	03.25.20 00:14	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
Tricosane			109		72		65-144			%	03.25.20 00:14	
n-Triacontane			119		78		46-152			%	03.25.20 00:14	

Analytical Method: DRO-ORO By SW8015B

Seq Number: 3121335

Parent Sample Id: 656398-025

Matrix: Soil

MS Sample Id: 656398-025 S

Prep Method: SW8015P

Date Prep: 03.24.20

MSD Sample Id: 656398-025 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Diesel Range Organics (DRO)	13.1	101	108	94	128	115	63-139	17	20	mg/kg	03.26.20 21:47	
Oil Range Hydrocarbons (ORO)	<7.52	101	<7.52	0	<7.46	0	63-139	NC	20	mg/kg	03.26.20 21:47	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
Tricosane			136		137		65-144			%	03.26.20 21:47	
n-Triacontane			156	**	161	**	46-152			%	03.26.20 21:47	

Analytical Method: BTEX by SW 8260C

Seq Number: 3120750

MB Sample Id: 7699621-1-BLK

Matrix: Solid

LCS Sample Id: 7699621-1-BKS

Prep Method: SW5035A

Date Prep: 03.24.20

LCSD Sample Id: 7699621-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000207	0.0500	0.0435	87	0.0560	112	62-132	25	25	mg/kg	03.24.20 08:47	
Toluene	<0.00100	0.0500	0.0456	91	0.0587	117	66-124	25	25	mg/kg	03.24.20 08:47	
Ethylbenzene	<0.000336	0.0500	0.0466	93	0.0594	119	71-134	24	25	mg/kg	03.24.20 08:47	
m,p-Xylenes	<0.000437	0.100	0.0940	94	0.120	120	69-128	24	25	mg/kg	03.24.20 08:47	
o-Xylene	<0.000985	0.0500	0.0484	97	0.0625	125	72-131	25	25	mg/kg	03.24.20 08:47	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
Dibromofluoromethane	98		100		100		53-142			%	03.24.20 08:47	
1,2-Dichloroethane-D4	110		102		104		53-150			%	03.24.20 08:47	
Toluene-D8	106		107		106		70-130			%	03.24.20 08:47	

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
Stella Blue

Analytical Method: BTEX by SW 8260C

Seq Number: 3120824

MB Sample Id: 7699665-1-BLK

Matrix: Solid

LCS Sample Id: 7699665-1-BKS

Prep Method: SW5035A

Date Prep: 03.24.20

LCSD Sample Id: 7699665-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000207	0.0500	0.0472	94	0.0498	100	62-132	5	25	mg/kg	03.24.20 20:34	
Toluene	<0.00100	0.0500	0.0508	102	0.0532	106	66-124	5	25	mg/kg	03.24.20 20:34	
Ethylbenzene	<0.000336	0.0500	0.0512	102	0.0532	106	71-134	4	25	mg/kg	03.24.20 20:34	
m,p-Xylenes	<0.000437	0.100	0.103	103	0.109	109	69-128	6	25	mg/kg	03.24.20 20:34	
o-Xylene	<0.000985	0.0500	0.0515	103	0.0553	111	72-131	7	25	mg/kg	03.24.20 20:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		96		95		53-142	%	03.24.20 20:34
1,2-Dichloroethane-D4	111		99		99		53-150	%	03.24.20 20:34
Toluene-D8	105		106		106		70-130	%	03.24.20 20:34

Analytical Method: BTEX by SW 8260C

Seq Number: 3120885

MB Sample Id: 7699705-1-BLK

Matrix: Solid

LCS Sample Id: 7699705-1-BKS

Prep Method: SW5035A

Date Prep: 03.25.20

LCSD Sample Id: 7699705-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000207	0.0500	0.0480	96	0.0493	99	62-132	3	25	mg/kg	03.25.20 09:19	
Toluene	<0.00100	0.0500	0.0502	100	0.0518	104	66-124	3	25	mg/kg	03.25.20 09:19	
Ethylbenzene	<0.000336	0.0500	0.0512	102	0.0524	105	71-134	2	25	mg/kg	03.25.20 09:19	
m,p-Xylenes	<0.000437	0.100	0.104	104	0.106	106	69-128	2	25	mg/kg	03.25.20 09:19	
o-Xylene	<0.000985	0.0500	0.0526	105	0.0549	110	72-131	4	25	mg/kg	03.25.20 09:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		100		102		53-142	%	03.25.20 09:19
1,2-Dichloroethane-D4	109		106		106		53-150	%	03.25.20 09:19
Toluene-D8	106		108		107		70-130	%	03.25.20 09:19

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 Stella Blue

Analytical Method: BTEX by SW 8260C

Seq Number: 3120750

Parent Sample Id: 656398-021

Matrix: Soil

MS Sample Id: 656398-021 S

Prep Method: SW5035A

Date Prep: 03.24.20

MSD Sample Id: 656398-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000208	0.0503	0.0394	78	0.0364	73	62-132	8	25	mg/kg	03.24.20 09:31	
Toluene	<0.00101	0.0503	0.0393	78	0.0382	76	66-124	3	25	mg/kg	03.24.20 09:31	
Ethylbenzene	<0.000338	0.0503	0.0391	78	0.0382	76	71-134	2	25	mg/kg	03.24.20 09:31	
m,p-Xylenes	<0.000439	0.101	0.0780	77	0.0765	77	69-128	2	25	mg/kg	03.24.20 09:31	
o-Xylene	<0.000991	0.0503	0.0410	82	0.0397	79	72-131	3	25	mg/kg	03.24.20 09:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		103		53-142	%	03.24.20 09:31
1,2-Dichloroethane-D4	104		106		53-150	%	03.24.20 09:31
Toluene-D8	107		106		70-130	%	03.24.20 09:31

Analytical Method: BTEX by SW 8260C

Seq Number: 3120885

Parent Sample Id: 656398-032

Matrix: Soil

MS Sample Id: 656398-032 S

Prep Method: SW5035A

Date Prep: 03.25.20

MSD Sample Id: 656398-032 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000208	0.0502	0.0368	73	0.0404	80	62-132	9	25	mg/kg	03.25.20 10:30	
Toluene	<0.00100	0.0502	0.0347	69	0.0416	83	66-124	18	25	mg/kg	03.25.20 10:30	
Ethylbenzene	<0.000337	0.0502	0.0287	57	0.0413	82	71-134	36	25	mg/kg	03.25.20 10:30	XF
m,p-Xylenes	<0.000438	0.100	0.0564	56	0.0830	83	69-128	38	25	mg/kg	03.25.20 10:30	XF
o-Xylene	<0.000989	0.0502	0.0297	59	0.0420	84	72-131	34	25	mg/kg	03.25.20 10:30	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		97		53-142	%	03.25.20 10:30
1,2-Dichloroethane-D4	104		100		53-150	%	03.25.20 10:30
Toluene-D8	107		106		70-130	%	03.25.20 10:30

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

Stella Blue

Analytical Method: BTEX by SW 8260C

Seq Number: 3120824

Parent Sample Id: 656398-008

Matrix: Soil

MS Sample Id: 656398-008 S

Prep Method: SW5035A

Date Prep: 03.24.20

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.000207	0.0501	0.0407	81	62-132	mg/kg	03.24.20 21:30	
Toluene	<0.00100	0.0501	0.0404	81	66-124	mg/kg	03.24.20 21:30	
Ethylbenzene	<0.000336	0.0501	0.0361	72	71-134	mg/kg	03.24.20 21:30	
m,p-Xylenes	<0.000438	0.100	0.0707	71	69-128	mg/kg	03.24.20 21:30	
o-Xylene	<0.000987	0.0501	0.0365	73	72-131	mg/kg	03.24.20 21:30	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	99		53-142	%	03.24.20 21:30
1,2-Dichloroethane-D4	105		53-150	%	03.24.20 21:30
Toluene-D8	108		70-130	%	03.24.20 21:30

Analytical Method: TPH GRO by EPA 8015 Mod.

Seq Number: 3120974

MB Sample Id: 7699768-1-BLK

Matrix: Solid

LCS Sample Id: 7699768-1-BKS

Prep Method: SW5030B

Date Prep: 03.25.20

LCSD Sample Id: 7699768-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.0136	1.00	1.13	113	1.19	119	35-129	5	20	mg/kg	03.25.20 17:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		145	**	151	**	76-123	%	03.25.20 17:02
a,a,a-Trifluorotoluene	101		100		103		69-120	%	03.25.20 17:02

Analytical Method: TPH GRO by EPA 8015 Mod.

Seq Number: 3121109

MB Sample Id: 7699879-1-BLK

Matrix: Solid

LCS Sample Id: 7699879-1-BKS

Prep Method: SW5030B

Date Prep: 03.26.20

LCSD Sample Id: 7699879-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.0136	1.00	1.20	120	1.17	117	35-129	3	20	mg/kg	03.26.20 16:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		149	**	147	**	76-123	%	03.26.20 16:26
a,a,a-Trifluorotoluene	98		102		102		69-120	%	03.26.20 16:26

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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
Stella Blue

Analytical Method: TPH GRO by EPA 8015 Mod.

Seq Number: 3120974

Parent Sample Id: 656398-001

Matrix: Soil

MS Sample Id: 656398-001 S

Prep Method: SW5030B

Date Prep: 03.25.20

MSD Sample Id: 656398-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.266	19.6	16.9	86	20.9	107	35-129	21	20	mg/kg	03.25.20 19:27	F

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	139	**	143	**	76-123	%	03.25.20 19:27
a,a,a-Trifluorotoluene	105		110		69-120	%	03.25.20 19:27

Analytical Method: TPH GRO by EPA 8015 Mod.

Seq Number: 3121109

Parent Sample Id: 656398-021

Matrix: Soil

MS Sample Id: 656398-021 S

Prep Method: SW5030B

Date Prep: 03.26.20

MSD Sample Id: 656398-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO	<0.253	18.7	17.8	95	21.2	107	35-129	17	20	mg/kg	03.26.20 18:51	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	143	**	149	**	76-123	%	03.26.20 18:51
a,a,a-Trifluorotoluene	109		113		69-120	%	03.26.20 18:51

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

6056398

Terracon										CHAIN OF CUSTODY RECORD				
Laboratory: Xenco Address: 6701 Aberdeen Lubbock, Texas 79424 Phone: _____ Contact: Joseph Guesnier (806-544-9276) SRS #: _____ Sampler's Signature: _____										ANALYSIS REQUESTED Chloride (EPA Method 300) ☐ BTEX (EPA Method 8260B) ☐ TPH Extended 8015 ☐ Hold ☐				LAB USE ONLY DUE DATE: 1.01/1.1
Office Location: Lubbock Project Manager: Joseph Guesnier Sampler's Name: Charles Cannon Project Number: AR197123 Project Name: Stella Blue										TEMP OF COOLER WHEN RECEIVED (°C) 40.1	Page 1 of 23			
Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	No. Type of Containers	Lab Sample ID					
S	3/16/2020	13:21	X		HS-1 (0-0.5)	0	0.5'	40 ml VOA	1					
S	3/16/2020	13:26	X		HS-1 (0.5-1)	0.5'	1'	5035 kit	2					
S	3/16/2020	13:33	X		HS-1 (1.5-2)	1.5'	2'	4 oz Glass	3					
S	3/16/2020	14:03	X		HS-2 (0-0.5)	0.5'		2 oz Glass	4					
S	3/16/2020	14:06	X		HS-2 (0.5-1)	0.5'	1'		5					
S	3/16/2020	14:16	X		HS-2 (1.5-2)	1.5'	2'		6					
S	3/16/2020	14:25	X		HS-3 (0-0.5)	0.5'			7					
S	3/16/2020	14:29	X		HS-3 (0.5-1)	0.5'	1'		8					
S	3/16/2020	14:35	X		HS-3 (1.5-2)	1.5'	2'		9					
S	3/16/2020	14:44	X		HS-3 (3.5-4)	3.5'	4'		10					
S	3/16/2020	14:50	X		HS-4 (0-0.5)	0.5'			11					
S	3/16/2020	14:54	X		HS-4 (0.5-1)	0.5'	1'		12					
S	3/16/2020	15:00	X		HS-4 (1.5-2)	1.5'	2'		13					
S	3/16/2020	15:07	X		HS-4 (3.5-4)	3.5'	4'		14					

TURNAROUND TIME				TRRP Laboratory Review Checklist			
Relinquished by (Signature)	Date: 3/20/20	Time: 11:15	Received by (Signature)	Date:	Time:	Notes: Client:	Yes ☐ No ☐
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:	e-mail results to:	
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:		
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date:	Time:		

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

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

Responsive ■ Resourceful ■ Reliable

Fr. 44+0.1

[illegible]

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



Chain of Custody

Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Casabad, NM (409) 782-2222
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 861-1111

Work Order No.:

656398

Project Manager: <u>Tenacore</u>		Bill to: (if different)		Company Name:		Address:		City, State ZIP:		Phone:	
Company Name:		Company Name:		Address:		City, State ZIP:		Email:			
Address:		Address:		City, State ZIP:		City, State ZIP:					
City, State ZIP:		City, State ZIP:		City, State ZIP:		City, State ZIP:					
Phone:		Phone:		Phone:		Phone:					
Project Name:		Project Name:		Project Name:		Project Name:					
Project Number:		Project Number:		Project Number:		Project Number:					
Project Location:		Project Location:		Project Location:		Project Location:					
Sampler's Name:		Sampler's Name:		Sampler's Name:		Sampler's Name:					
PO #:		PO #:		PO #:		PO #:					
SAMPLE RECEIPT		SAMPLE RECEIPT		SAMPLE RECEIPT		SAMPLE RECEIPT					
Temperature (°C):		Temperature (°C):		Temperature (°C):		Temperature (°C):					
Received Intact:		Received Intact:		Received Intact:		Received Intact:					
Cooler Custody Seals:		Cooler Custody Seals:		Cooler Custody Seals:		Cooler Custody Seals:					
Sample Custody Seals:		Sample Custody Seals:		Sample Custody Seals:		Sample Custody Seals:					
Temp Blank:		Temp Blank:		Temp Blank:		Temp Blank:					
Wet Ice:		Wet Ice:		Wet Ice:		Wet Ice:					
Thermometer ID:		Thermometer ID:		Thermometer ID:		Thermometer ID:					
Correction Factor:		Correction Factor:		Correction Factor:		Correction Factor:					
Total Containers:		Total Containers:		Total Containers:		Total Containers:					
Sample Identification		Sample Identification		Sample Identification		Sample Identification					
Matrix		Matrix		Matrix		Matrix					
Date Sampled		Date Sampled		Date Sampled		Date Sampled					
Time Sampled		Time Sampled		Time Sampled		Time Sampled					
Depth		Depth		Depth		Depth					
HA-12		HA-12		HA-12		HA-12					
HA-12		HA-12		HA-12		HA-12					
HA-12		HA-12		HA-12		HA-12					
HA-13		HA-13		HA-13		HA-13					
HA-13		HA-13		HA-13		HA-13					
HA-13		HA-13		HA-13		HA-13					
HA-14		HA-14		HA-14		HA-14					
HA-14		HA-14		HA-14		HA-14					
HA-14		HA-14		HA-14		HA-14					
Turn Around		Turn Around		Turn Around		Turn Around					
Routine		Routine		Routine		Routine					
Rush:		Rush:		Rush:		Rush:					
Due Date:		Due Date:		Due Date:		Due Date:					
Quote #:		Quote #:		Quote #:		Quote #:					
Project Name:		Project Name:		Project Name:		Project Name:					
Project Number:		Project Number:		Project Number:		Project Number:					
Project Location:		Project Location:		Project Location:		Project Location:					
Sampler's Name:		Sampler's Name:		Sampler's Name:		Sampler's Name:					
PO #:		PO #:		PO #:		PO #:					
SAMPLE RECEIPT		SAMPLE RECEIPT		SAMPLE RECEIPT		SAMPLE RECEIPT					
Temperature (°C):		Temperature (°C):		Temperature (°C):		Temperature (°C):					
Received Intact:		Received Intact:		Received Intact:		Received Intact:					
Cooler Custody Seals:		Cooler Custody Seals:		Cooler Custody Seals:		Cooler Custody Seals:					
Sample Custody Seals:		Sample Custody Seals:		Sample Custody Seals:		Sample Custody Seals:					
Temp Blank:		Temp Blank:		Temp Blank:		Temp Blank:					
Wet Ice:		Wet Ice:		Wet Ice:		Wet Ice:					
Thermometer ID:		Thermometer ID:		Thermometer ID:		Thermometer ID:					
Correction Factor:		Correction Factor:		Correction Factor:		Correction Factor:					
Total Containers:		Total Containers:		Total Containers:		Total Containers:					
Sample Identification		Sample Identification		Sample Identification		Sample Identification					
Matrix		Matrix		Matrix		Matrix					
Date Sampled		Date Sampled		Date Sampled		Date Sampled					
Time Sampled		Time Sampled		Time Sampled		Time Sampled					
Depth		Depth		Depth		Depth					
HA-12		HA-12		HA-12		HA-12					
HA-12		HA-12		HA-12		HA-12					
HA-12		HA-12		HA-12		HA-12					
HA-13		HA-13		HA-13		HA-13					
HA-13		HA-13		HA-13		HA-13					
HA-13		HA-13		HA-13		HA-13					
HA-14		HA-14									

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	<i>Dorenda Ward</i>	<i>3/20/11:10</i>	<i>2</i>	<i>Joseph</i>	<i>3/23/2020</i>
			<i>4</i>	<i>Add to Joseph's run out of Hotel</i>	
			<i>6</i>	<i>Came</i>	

Revised Date 03/26/00 Page 0040

Inter-Office Shipment

IOS Number : **60697**

Date/Time: 03.20.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770075494237

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
656398-001	S	HS-1 (0-0.5)	03.16.2020 13:21	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-001	S	HS-1 (0-0.5)	03.16.2020 13:21	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-002	S	HS-1 (0.5-1)	03.16.2020 13:26	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-002	S	HS-1 (0.5-1)	03.16.2020 13:26	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-003	S	HS-1 (1.5-2)	03.16.2020 13:33	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-003	S	HS-1 (1.5-2)	03.16.2020 13:33	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-004	S	HS-2 (0-0.5)	03.16.2020 14:03	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-004	S	HS-2 (0-0.5)	03.16.2020 14:03	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-005	S	HS-2 (0.5-1)	03.16.2020 14:06	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-005	S	HS-2 (0.5-1)	03.16.2020 14:06	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-006	S	HS-2 (1.5-2)	03.16.2020 14:16	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-006	S	HS-2 (1.5-2)	03.16.2020 14:16	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-007	S	HS-3 (0-0.5)	03.16.2020 14:25	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-007	S	HS-3 (0-0.5)	03.16.2020 14:25	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-008	S	HS-3 (0.5-1)	03.16.2020 14:29	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-008	S	HS-3 (0.5-1)	03.16.2020 14:29	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-009	S	HS-3 (1.5-2)	03.16.2020 14:35	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-009	S	HS-3 (1.5-2)	03.16.2020 14:35	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-010	S	HS-3 (3.5-4)	03.16.2020 14:44	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-010	S	HS-3 (3.5-4)	03.16.2020 14:44	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-011	S	HS-4 (0-0.5)	03.16.2020 14:50	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-011	S	HS-4 (0-0.5)	03.16.2020 14:50	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-012	S	HS-4 (0.5-1)	03.16.2020 14:54	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-012	S	HS-4 (0.5-1)	03.16.2020 14:54	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-013	S	HS-4 (1.5-2)	03.16.2020 15:00	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	

Inter-Office Shipment

IOS Number : **60697**

Date/Time: 03.20.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770075494237

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
656398-013	S	HS-4 (1.5-2)	03.16.2020 15:00	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-014	S	HS-4 (3.5-4)	03.16.2020 15:07	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-014	S	HS-4 (3.5-4)	03.16.2020 15:07	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-015	S	TXCS-1 (0-0.5)	03.16.2020 15:39	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-015	S	TXCS-1 (0-0.5)	03.16.2020 15:39	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-016	S	TXCS-1 (0.5-1)	03.16.2020 15:52	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-016	S	TXCS-1 (0.5-1)	03.16.2020 15:52	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-017	S	HS-5 (0-0.5)	03.16.2020 16:04	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-017	S	HS-5 (0-0.5)	03.16.2020 16:04	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-018	S	HS-5 (0.5-1)	03.16.2020 16:09	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-018	S	HS-5 (0.5-1)	03.16.2020 16:09	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-019	S	HS-5 (1.5-2)	03.16.2020 16:17	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-019	S	HS-5 (1.5-2)	03.16.2020 16:17	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-020	S	HS-5 (3.5-4)	03.16.2020 16:22	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-020	S	HS-5 (3.5-4)	03.16.2020 16:22	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-021	S	TXCS-2 (0-0.5)	03.16.2020 16:32	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-021	S	TXCS-2 (0-0.5)	03.16.2020 16:32	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-022	S	TXCS-2 (0.5-1)	03.16.2020 16:37	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-022	S	TXCS-2 (0.5-1)	03.16.2020 16:37	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-023	S	TXCS-2 (1.5-2)	03.16.2020 16:44	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-023	S	TXCS-2 (1.5-2)	03.16.2020 16:44	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-024	S	TXCS-2 (3.5-4)	03.16.2020 17:19	E300_CL	Chloride by EPA 300	03.26.2020	04.13.2020	JKR	CL	
656398-024	S	TXCS-2 (3.5-4)	03.16.2020 17:19	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	03.30.2020	JKR	BZ BZME EBZ XYLENE	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:25	JKR	CL	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:25	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Added 8 more samples to COC and IOS 03/23/2020. Okay to run out of hold time per Joseph.

Inter-Office Shipment

IOS Number : **60697**

Date/Time: 03.20.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770075494237

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:25	JKR	BZ BZME EBZ XYLENE	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:25	JKR	BZ BZME EBZ XYLENE	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:25	JKR	CL	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:25	JKR	CL	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:25	JKR	CL	
656398-025	S	HA-12 (0-0.5)	02.06.2020 15:25	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:25	JKR	BZ BZME EBZ XYLENE	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:35	JKR	CL	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:35	JKR	BZ BZME EBZ XYLENE	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:35	JKR	BZ BZME EBZ XYLENE	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:35	JKR	CL	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:35	JKR	BZ BZME EBZ XYLENE	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:35	JKR	CL	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:35	JKR	CL	
656398-026	S	HA-12 (0.5-1)	02.06.2020 15:35	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:35	JKR	BZ BZME EBZ XYLENE	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:45	JKR	CL	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:45	JKR	BZ BZME EBZ XYLENE	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:45	JKR	CL	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:45	JKR	BZ BZME EBZ XYLENE	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:45	JKR	BZ BZME EBZ XYLENE	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:45	JKR	CL	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:45	JKR	BZ BZME EBZ XYLENE	
656398-027	S	HA-12 (1.5-2)	02.06.2020 15:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:45	JKR	CL	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:55	JKR	BZ BZME EBZ XYLENE	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:55	JKR	CL	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:55	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Inter-Office Shipment

IOS Number : **60697**

Date/Time: 03.20.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770075494237

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:55	JKR	CL	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:55	JKR	CL	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:55	JKR	BZ BZME EBZ XYLENE	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:55	JKR	CL	
656398-028	S	HA-13 (0-0.5)	02.06.2020 14:55	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:55	JKR	BZ BZME EBZ XYLENE	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:05	JKR	CL	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:05	JKR	BZ BZME EBZ XYLENE	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:05	JKR	BZ BZME EBZ XYLENE	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:05	JKR	BZ BZME EBZ XYLENE	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:05	JKR	CL	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:05	JKR	CL	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:05	JKR	BZ BZME EBZ XYLENE	
656398-029	S	HA-13 (0.5-1)	02.06.2020 15:05	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:05	JKR	CL	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:15	JKR	BZ BZME EBZ XYLENE	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:15	JKR	CL	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:15	JKR	BZ BZME EBZ XYLENE	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:15	JKR	BZ BZME EBZ XYLENE	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:15	JKR	CL	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:15	JKR	CL	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 15:15	JKR	CL	
656398-030	S	HA-13 (1.5-2)	02.06.2020 15:15	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 15:15	JKR	BZ BZME EBZ XYLENE	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:39	JKR	CL	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:39	JKR	BZ BZME EBZ XYLENE	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:39	JKR	BZ BZME EBZ XYLENE	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:39	JKR	CL	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Date Received:

Inter-Office Shipment

IOS Number : **60697**

Date/Time: 03.20.2020

Created by: Brenda Ward

Please send report to: Jessica Kramer

Lab# From: **Lubbock**

Delivery Priority:

Address: 6701 Aberdeen, Suite 9 Lubbock, TX 79424

Lab# To: **Houston**

Air Bill No.: 770075494237

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:39	JKR	BZ BZME EBZ XYLENE	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:39	JKR	CL	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:39	JKR	CL	
656398-031	S	HA-14 (0-0.5)	02.06.2020 14:39	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:39	JKR	BZ BZME EBZ XYLENE	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:45	JKR	BZ BZME EBZ XYLENE	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:45	JKR	CL	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:45	JKR	BZ BZME EBZ XYLENE	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:45	JKR	BZ BZME EBZ XYLENE	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:45	JKR	CL	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:45	JKR	CL	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	SW8260CBTEX	BTEX by SW 8260C	03.26.2020	02.20.2020 14:45	JKR	BZ BZME EBZ XYLENE	
656398-032	S	HA-14 (0.5-1)	02.06.2020 14:45	E300_CL	Chloride by EPA 300	03.26.2020	03.05.2020 14:45	JKR	CL	

Inter Office Shipment or Sample Comments:



Brenda Ward

03.20.2020



Jose Londono

03.21.2020

Cooler Temperature: 0.5



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 60697

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Brenda Ward

Date Sent: 03.20.2020 01.57 PM

Received By: Jose Londono

Date Received: 03.21.2020 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.5
#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:

Jose Londono

Date: 03.21.2020

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Terracon-Lubbock

Date/ Time Received: 03.20.2020 11.10.00 AM

Work Order #: 656398

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
#18 Water VOC samples have zero headspace?	N/A

BTEX and Chloride sent to Stafford

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

Analyst:

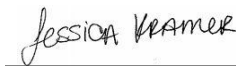
PH Device/Lot#:

Checklist completed by:


 Brenda Ward

Date: 03.20.2020

Checklist reviewed by:


 Jessica Kramer

Date: 03.25.2020

APPENDIX E

Standard of Care, Limitations, and Reliance Policies

Standard of Care

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

Additional Scope Limitations

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

Reliance

This report has been prepared for the exclusive use of Solaris Water Midstream, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Solaris Water Midstream and Terracon. Any unauthorized distribution or reuse is at Solaris Water Midstream sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal and Solaris Water Midstream and Terracon's Master Services Agreement. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Solaris Water Midstream and all relying parties unless otherwise agreed in writing.